System Release 2.8.5
MOTOTRBO™ CPS

MOTOTRBO CPS Radio Management User Guide

NOVEMBER 2017

MN003733A01-AB

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- Before any software reload.
- To confirm troubleshooting results and analysis before removing and replacing a Field Replaceable Unit (FRU) and Field Replaceable Entity (FRE) to repair the system.

For...	Phone
United States Calls	**800-221-7144**
International Calls	**302-444-9800**

North America Parts Organization

For assistance in ordering replacement parts or identifying a part number, contact the Motorola Solutions Parts organization. Your first response when troubleshooting your system is to call the Motorola SSC.

For...	Phone
Phone Orders	**800-422-4210** (US and Canada Orders) For help identifying an item or part number, select choice 3 from the menu.
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Document History

Version	Description	Date
MN003733A01-AA	Original release of the *MOTOTRBO™ CPS Radio Management User Guide*	July 2017
MN003733A01-AB	Updated the *MOTOTRBO CPS Radio Management User Guide* for MOTOTRBO Systems 2.8.5 release.	November 2017

Table of Contents

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About This Guide

This manual provides user information for the MOTOTRBO ^{TM} CPS and Radio Management Template Mode software.

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What is Covered in This Guide

This guide contains the following chapters:

- Introduction to CPS
- Purchasing Radio Features
- Purchasing Application Features
- IP Site Connect Features
- Troubleshooting Section
- Use Cases
- Radio Features

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Helpful Background Information

Motorola Solutions offers various courses designed to assist in learning about the system. For information, go to http://www.motorolasolutions.com/training to view the current course offerings and technology paths.

Related Information	Purpose
Radio Management Deployment Guide	Distributed on the MOTOTRBO™ CPS and tools' CD.
MOTOTRBO CPS, Tuner, AirTracer, and RDAC Applications Installation Guide	Provides installation, operations, and troubleshooting information for the CPS and its tools. Distributed on the CPS and tools' CD.
MOTOTRBO CPS and AirTracer Applications Installation Guide	Provides installation, operations, and troubleshooting information for the CPS and its tools. Only for selected region. Distributed on the CPS and tools' CD.
MOTOTRBO Tuner Application Installation Guide	Provides installation, operations, and troubleshooting information for the Tuner application. Only for selected region. Distributed on the CPS and tools' CD.
MOTOTRBO RDAC Application Installation Guide	Provides installation, operations, and troubleshooting information for the RDAC application. Only for selected region. Distributed on the CPS and tools' CD.
MOTOTRBBO Radio Management User Guide	Provides introduction, common tasks, and description on each features in Radio Management Configuration Mode. Also available in online help version.
MOTOTRBBO CPS Radio Management User Guide	Provides introduction, common tasks, and description on each features in CPS and Radio Management Template Mode. Also available in online help version.
MOTOTRBBO Tuner Online Help	Provides introduction, common tasks, and description on each features in Tuner.
MOTOTRBBO RDAC User Guide	Provides introduction, common tasks, and description on each features in RDAC. Also available in online help version.

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Welcome to MOTOTRBO™ Customer Programming Software (CPS)

MOTOTRBO CPS is a radio programming software for dealers and service technicians who need to configure the MOTOTRBO radios. The CPS allows the user to access and program (e.g. read, write or clone) the codeplug of the MOTOTRBO subscriber and repeater in the available systems.

- MOTOTRBO Conventional system (supports Analog and Digital Conventional mode)
- MOTOTRBO Capacity Plus - Single Site system (supports Digital Trunking mode)
- 3600 Trunking system (supports Analog Conventional and Trunking mode)
- IP Site Connect system

The CPS also allows the user to update or recover the radio's codeplug and firmware. In addition, the CPS integrates with a Radio Management application to provide a centralized management of programming radios in-the-field.

- Introduction to the CPS (Overview of the CPS, Exploring the CPS, Radio Management)
- Overview of Radio Features (MOTOTRBO radios codeplug, 3600 Trunking capable radios codeplug)
- Configuring Radio Features

Feature Classifications:

These icons will be displayed next to the CPS Radio Features within the Help to identify radios and/or modes for which a feature is enabled.

Symbol	Types and Modes Available in MOTOTRBO Radios
	Portable
	Mobile
	Repeater and Base Station
	Analog mode
	Digital mode

Introduction to CPS

Introduction to CPS

The layout of the MOTOTRBO CPS is similar to the CPS used for other Motorola products. The MOTOTRBO CPS contains some unique features that users may not be familiar with. For example, MOTOTRBO radios communicate via a USB IP-based connection to the PC as compared to previous products that relied on Serial Ports and Radio Interface Boxes (RIB). For more details on this and other MOTOTRBO CPS features, explore the links below.

Overview of the CPS:

- Getting Around the CPS.
- Getting Help with the CPS.
- Keyboard Shortcuts.

Exploring the CPS:

- Link Establishment System: Creating a Link Establishment System, Archive Password, System Settings and Master Settings.
- Files: Opening a File, Closing a File, Saving a File.
- Editing: Adding Items, Cutting and Pasting Items, Copying and Pasting Items, Deleting Items, Renaming Items, Sorting Items, Undo/Redo, Load the Software System Keys (3600 Trunking capable radios), View the Software System Keys (3600 Trunking capable radios).
- Views: Basic and Expert Views, Adding or Editing Custom Views, Deleting Custom Views, Adding Features (Custom View), Removing Features (Custom View), Adding Selected Members (Custom View), Removing Selected Members (Custom View).
- Radio Programming: Reading from a Radio, Writing to a Radio, Cloning Radios, Loading Language Packs, Deleting Language Packs, Updating a Radio, Recovering a Radio, Retrieving the Firmware Update Package; Converting from 3600 Trunking Capable Radios to MOTOTRBO Conventional Radios.
- Dealer Settings: Dealer Information, Preferences.
- Generating Reports: Selecting a Report, E-mailing a Report, Printing a Report, Saving a Report.
- Radio Features: Overview of Radio Features, Configuring Radio Features.
- Exit: Exiting CPS.

Radio Management:

- Introduction to Radio Management
- The Radio Management Control
- The Device Programmer/Device Monitor Module
- The Job Processor Service
- The RM Server
- Common Tasks

Feature Demo Video:

The following videos demonstrate some of MOTOTRBO radio features:

- Intelligent Audio
- Acoustic Feedback (AF) Suppressor
- Voice Announcements
- Trill Enhancement
- User Selectable Audio Profiles

The following videos demonstrate the correct and incorrect ways of handling the MOTOTRBO accessories:

- Accessory Use-Position - Hand 1" - 2" from mouth (Correct)
- Accessory Use-Position - Hand 9" - 12" from mouth (Incorrect)

Overview of the CPS

Getting Around the CPS

Description

This section describes the different views available in the CPS window. This topic also briefly introduces the control bars available in the CPS.

View	Description
Tree	The frame on the left that shows the folders consisting of hierarchical groupings of the radio features.
Configuration	The frame on the right (or upper right if the Help View is enabled) that displays the features of the selected folder. There are options for the user to view some or all of the features under the selected folder by switching between the Basic, Expert or Custom View at the menu bar.
Help	The frame on the bottom right that displays the help information for each feature in the Configuration View. This view can be enabled or disabled by toggling the **View->Help Pane** option at the menu bar.

Control Bar	Description
Menu	The bar at the top of the CPS window that displays list of commands.
Tool	The row below the menu bar that provides quick access to the commonly used CPS commands. This bar can be enabled or disabled by toggling the **View->Tool Bar** at the menu bar.
Search	The search results for matching radio features are displayed in the frame at the bottom of the application. The search result lists the screen and the field in individual rows, if available in the current view and active archive. Double-click on the desired row to be directed to the selected screen and field. The search bar can be enabled or disabled by toggling the **Edit->Search** option at the menu bar, or by pressing Ctrl+F.
Status	The row at the bottom of the CPS that shows information about the user's current/last actions and the current selected view. This bar also provides information regarding the NUM/CAPS/SCROLL lock settings. This bar can be enabled or disabled by toggling the **View->Status Bar** at the menu bar.

Getting Help with the CPS

Description

This section describes how to get help within the CPS application. In addition to the traditional help browser, a context-sensitive Help Pane is available at the bottom right of the CPS window (if enabled).

To Access	Steps
Help Contents	Select **Help**->**Contents and Index...** at the menu bar, or press **F1**.
Help on a Specific CPS Feature	Click on a control in the configuration view to display its help information in the Help Pane. If you cannot see the Help Pane, select **View**->**Help Pane** at the menu bar.

Keyboard Shortcuts

Description

This section describes the common keyboard shortcuts in the CPS.

Action	Keyboard Shortcut
Open a codeplug file	Ctrl+O
Save a codeplug file	Ctrl+S
Clone a radio	Ctrl+F3
Read codeplug data from the radio	Ctrl+R
Write codeplug data to the radio	Ctrl+W
Undo	Ctrl+Z
Redo	Ctrl+Y
Cut the current item(s) to the clipboard	Ctrl+X
Copy the highlighted item(s) to the clipboard	Ctrl+C
Paste item(s) from the clipboard	Ctrl+V
Open Search	Ctrl+F
Delete the selected item(s) from the Tree View	Del
Rename the selected item in the Tree View	F2
Open Help	F1
Insert an Infinity symbol	Alt+F12
Add a new Zone	Ctrl+F2

Add a new 5 Tone Channel	Shift+F4
Add a new Analog Channel	Shift+F5
Add a new Digital Channel	Shift+F6
Add a new Conventional Channel	Shift+F1
Add a new Trunking Personality	Shift+F2
Add a new Capacity Plus - Single Site Personality	Shift+F7
Add a new Capacity Plus - Single Site Voice Channel	Shift+F8
Add a new Capacity Plus - Single Site Data Channel	Shift+F9
Add a new Capacity Plus - Multi Site Personality	Ctrl+Shift+F7
Add a new Capacity Plus - Multi Site Voice Channel	Ctrl+Shift+F8
Add a new Capacity Plus - Multi Site Data Channel	Ctrl+Shift+F9
Add a new Dynamic Mixed Mode Channel	Shift+F11
Add a new Conventional Scan List	Ctrl+L
Add a new Group Call	Ctrl+F7
Add a new Private Call	Ctrl+F8
Add a new All Call	Ctrl+F9
Add a new Dispatch Call	Ctrl+F10
Add a new PC Call	Ctrl+F11
Add a new Quick Call II	Ctrl+F6
Add a new Phone Call	Ctrl+F1
Add a new 5 Tone Call	Ctrl+F5
Add a new Capacity Plus - Single Site Data List	Ctrl+T
Add a new Capacity Plus - Single Site Voice List	Ctrl+P
Add a new Capacity Plus - Single Site Site List	Ctrl+H
Add a new System	Ctrl+M
Add a new IP Site System	Ctrl+N
Add a new Peer	Ctrl+E
Add a new Roam List	Ctrl+I
Add a new Priority Monitor Scan List	Ctrl+A
Add a new RX Group List	Ctrl+G
Add a new Talk Group Scan List	Ctrl+K

Add a new Scan List	Ctrl+L
Add a new Vote Scan List	Ctrl+Shift+V
Add a new Sequence	Ctrl+Q
Add a new Telegram	Ctrl+U
Add a new Definition	Ctrl+D
Add a new Auto Acknowledge	Ctrl+K

Exploring the CPS

Files

Creating a Link Establishment System

For a quick walkthrough on how to create a new Link Establishment System, the user may follow the steps below. For a complete training program, the user must attend the system training to learn how to program the radio. System training also covers programming of the radio's advanced features and fleet mapping training for programming a fleet of radios.

The Link Establishment System connects multiple repeaters in different geographical locations through a network (IP Site Connect, Capacity Plus - Single Site , etc.) so that voice/data calls can be made across multiple sites. Each site has multiple Repeaters known as Peers which are controlled by a single Master.

Steps to create a Link Establishment System:

1. Select **File** -> **New Link Establishment System...** at the menu bar, or press Ctrl+N.
2. Save your file type as *.mtb.
3. In the Tree View on the left, right-click the Master icon and select **Add** to add Peers. A Master can have up to 15 Peers.
4. To rename the Master or any of the Peers, right-click on the selected item you wish to rename and select **Rename**, or press F2.
5. The user may want to enter the **Model Number** and **Serial Number** of the Repeater. Only clone operations are allowed when these fields are left blank.
6. For more information on setting the individual fields, please refer to the respective help pages or the Help Pane.
7. Write or clone to the Repeater.
8. Disconnect the USB cable.

Tip: The user can learn the basic and advance features of the CPS and the radio by watching demonstrations in the system training. The training also provides the user with scenarios and hands-on learning experience.

Notes:

- Master with default settings will be created when a new link establishment system is created.

Link Establishment System

Master

Archive Password 

Description

This feature sets a password to protect the IP Site system archive. The password prompt appears the next time the archive is opened. The user may enter up to 8 characters, consisting of alphanumerics, spaces, and special characters. Trailing spaces are ignored. The password is masked by solid dots.

Note

- There is no known method to retrieve a lost or forgotten password.
- This feature is supported in Digital mode only.

System Settings

Authentication Key (Master) 

Description

This feature allows the user to specify the private key value in a repeater using Link Establishment. All repeaters within the same Link Establishment system must share the same Authentication Key. The user may enter up to a maximum of 40 characters. Valid characters are 0-9 and A-F. Setting this value to blank indicates that the Authentication is disabled. Setting this key value as forty "F", or Ø indicates that the current value on the targeted repeater is to be preserved during write/clone operations.

For security reasons, if the codeplug is read from a radio, its Authentication Key value is shown as Ø.

This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Link Type** is set *Peer* and **Master Archive File** is specified.
- This feature is supported in Digital mode only.

Master IP (Master)

Description

This feature specifies the IP Address of the Master within the Link Establishment system. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Note

- This feature is supported in Digital mode only.

Master UDP Port (Master)

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Master within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is enabled when **Link Type** is set *Peer* and **Master Archive File** is left blank.
- This feature is supported in Digital mode only.

Peer Firewall Open Timer (sec) (Master)

Description

This feature displays and allows the user to select a firewall open message timer for Peer to Peer Protocol (P2P) messages. This timer is used to keep the connection alive between the application and its peer by having a periodic message sent between them at an interval as defined here. This timer is only applicable to Peers. This is a radio-wide feature.

Range	
Maximum	60 sec
Minimum	5 sec
Increment	1 sec

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Master Archive File** is specified.
- This feature is supported in Digital mode only.

Master Settings

Model Number

Description

Displays a string of alphanumeric characters to represent the type of the radio. Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater.

This paragraph is applicable to MOTOTRBO Conventional radios. By default when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

MAC Address

Description

Displays the repeater's MAC address and the MOTOTRBO SLR series repeater's MAC address. This address serves as a unique device identifier.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Radio ID

Description

Sets an individual ID that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. In the IP Site Connect system, this ID is used to uniquely identify the IP Site peers and the IP Site masters. For a radio that is used as an IP data gateway control station, it is recommended that the Radio ID be set to 16448250 as this number translates to an easy-to-remember radio air interface network IP of 12.250.250.250. If multiple IP data gateway control stations are required in the system, they can be assigned alternative numbers so long as the numbers are unique to each of them. This is a radio-wide feature.

Range	
Maximum	16776415 (for Non-Capacity Plus - Single Site system), 65535 (for Capacity Plus - Single Site System).
Minimum	1
Increment	1

Note

- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Ethernet IP

Description

This feature assigns an Ethernet IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). When DHCP is disabled for the Master, the Master's Ethernet IP is set as the Peer's Master IP in the Link Establishment system. This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway IP

Description

This feature assigns a Gateway IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway Netmask

Description

This feature assigns a Gateway Netmask Address for a repeater using Link Establishment. This is a radio-wide feature.

Note

- This feature is disabled when Link Type is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

UDP Port

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Peer within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. The Master's UDP is set as the Peer's Master UDP Port in the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Peer

Model Number

Description

Displays a string of alphanumeric characters to represent the type of the radio. Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater.

This paragraph is applicable to MOTOTRBO Conventional radios. By default when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

MAC Address

Description

Displays the repeater's MAC address and the MOTOTRBO SLR series repeater's MAC address. This address serves as a unique device identifier.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Radio ID

Description

Sets an individual ID that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. In the IP Site Connect system, this ID is used to uniquely identify the IP Site peers and the IP Site masters. For a radio that is used as an IP data gateway control station, it is recommended that the Radio ID be set to 16448250 as this number translates to an easy-to-remember radio air interface network IP of 12.250.250.250. If multiple IP data gateway control stations are required in the system, they can be assigned alternative numbers so long as the numbers are unique to each of them. This is a radio-wide feature.

Range	
Maximum	16776415 (for Non-Capacity Plus - Single Site system), 65535 (for Capacity Plus - Single Site System).
Minimum	1
Increment	1

Note

- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Ethernet IP

Description

This feature assigns an Ethernet IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). When DHCP is disabled for the Master, the Master's Ethernet IP is set as the Peer's Master IP in the Link Establishment system. This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway IP

Description

This feature assigns a Gateway IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway Netmask

Description

This feature assigns a Gateway Netmask Address for a repeater using Link Establishment. This is a radio-wide feature.

Note

- This feature is disabled when Link Type is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

UDP Port 

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Peer within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. The Master's UDP is set as the Peer's Master UDP Port in the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Opening a File

Description

Allows the user to retrieve and display an archived file (document).There are multiple ways to open a file.

To open a file:

- Select **File->Open...** at the menu bar, or click  at the tool bar, or press **Ctrl**+**O**. A dialog box appears for the user to select the desired file, OR
- Under the File menu, select one from a list of the last 4 files that were opened, OR
- Double-click on an archived file in Windows Explorer, OR
- Drag and drop an archived file from Windows Explorer onto the CPS.

Note

- If multisite master archive is set when opening an archive, the archive will be validated. An invalid archive will cause the Multisite master archive field to be set to blank.
- If multisite master archive is set when opening an archive but the value does not match, the user will be prompted with three options: Keep the original values with master archive field set to blank; Update with the latest values retrieved from the selected master archive; Abort the open operation.
- For 3600 Trunking capable radios, during file open operation, if the System ID of the current trunking system does not match the System ID setting in any of the loaded software system key files, all the related software system key protected controls will be disabled.

Closing a File

Description

Allows the user to close the active file (document). Select **File**->**Close** at the menu bar to close a file.

Saving a File

Description

Allows the user to store a file (document) at a desired location.

To save a document:

- Select **File**->**Save** at the menu bar, or click  from the tool bar, or press **Ctrl**+**S**. If the currently selected document is a new or read-only document, **Save** acts like **Save As**. The **Save As** dialog box appears instead.

OR

To save a document with another file name or at another location:

- Select **File**->**Save As at** the menu bar. A dialog box appears for the user to choose a file to replace or specify a file name to save under.

Note:

- For Save As...option, Starting in CPS version 10.7, if the active archive was created in a CPS version before 10.7, it shows a dialog box informing you that after saving, the new archive will be incompatible with previous CPS versions. The dialog box allows you to decide whether or not to continue with the save operation.

Launch Radio Management

Description

Clicking the **Radio Management...** selection launches the Radio Management (RM) tool to the Radio Management Control's Radio View window. The Radio Management feature facilitates the creation of an extremely efficient radio programming template. Programming templates can be designed to apply to the entire fleet of radios.

Exiting CPS

Description

Allows the user to terminate the CPS application. Select **File**->**Exit** at the menu bar to exit CPS.

Editing

Adding Items

Description

Allows the user to create a new item under a folder. In the Tree View, the user can only add one item at a time. The new item will be inserted at the end. There are multiple ways to add an item.

To add an item:

1. Click on a folder in the Tree View.
2. Select **Edit**->**Add** at the menu bar. Then, select the item to be added.

OR

1. Right-click a folder in the Tree View.
2. Select **Add** from the drop-down list. Then, select the item to be added.

Cutting and Pasting Items

Description

Allows you to remove selected item(s) from one document and insert the item(s) into another document or into another location in the same document. There are multiple ways to cut and paste the item(s).

To cut an item:

1. Click the item in the Tree View or highlight the item in the Configuration View (note that to highlight the entire row in a table, the user can click the row header).
2. Select **Edit**->**Cut** at the menu bar, or click  at the tool bar, or press **Ctrl**+**X**.

OR

1. Right-click the item in the Tree View.
2. Select **Cut** from the drop-down list.

OR

1. Highlight the item in the Configuration View.
2. Right-click and select **Cut** from the drop-down list.

To paste an item:

1. In the document where the copied item is to be pasted, click on the location.
2. Select **Edit**->**Paste** at the menu bar, or click  at the tool bar, or press **Ctrl**+**V**.

OR

1. In the document where the cut item is to be pasted into, right-click the location.
2. Select **Paste** from the drop-down list.

Alternatively, the user can also copy and paste by dragging and dropping the item. However, this method only works when copying from one document to another, and not within the same document.

To drag and drop:

1. Point at an item and press the left mouse button.
2. While pressing the mouse button, move the mouse to the folder where the item is to be inserted in another document.
3. Release the mouse button. The item will be pasted there. The pasting method follows the Copy and Paste rules.

Note

- When an item exists in the destination folder with the same name as the pasted item, and if the source folder is the same as the destination folder, the pasted item will be added at the end with a new default name. If the source folder is different than the destination folder, the item in the destination folder will be overwritten.
- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

Copying and Pasting Items

Description

Allows the user to duplicate selected item(s) and node(s) to the clipboard. The duplicated item(s) and node(s) can be pasted into another document or into another location in the same document. There are multiple ways to copy and paste the item/node.

To copy an item/node:

1. Click the item in the Tree View or highlight the item in the Configuration View (note that to highlight the entire row in a table, the user can click the row header).
2. Select **Edit**->**Copy** at the menu bar, or click  at the tool bar, or press **Ctrl**+**C**.

OR

1. Right-click the item in the Tree View.
2. Select **Copy** from the drop-down list.

OR

1. Highlight the item in the Configuration View.
2. Right-click and select **Copy** from the drop-down list.

To paste an item/node:

1. In the document where the copied item is to be pasted, click on the location.
2. Select **Edit**->**Paste** at the menu bar, or click  at the tool bar, or press **Ctrl**+**V**.

OR

1. In the document where the copied item is to be pasted into, right-click the location.
2. Select **Paste** from the drop-down list.

Alternatively, the user can also copy and paste by dragging and dropping the item. However, this method only works when copying from one document to another, and not within the same document.

To drag and drop:

1. Point at an item and press the left mouse button.
2. While pressing the mouse button, move the mouse to the folder where the item is to be inserted in another document.
3. Release the mouse button. The item will be pasted there. The pasting method follows the Copy and Paste rules.

Note

- When an item exists in the destination folder with the same name as the pasted item, and if the source folder is the same as the destination folder, the pasted item will be added at the end with a new default name. If the source folder is different than the destination folder, the item in the destination folder will be overwritten.
- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

Deleting Items

Description

Allows the user to remove the selected item(s) from the list. There are multiple ways to delete the item(s).

To delete an item:

1. Click the item in the Tree View.
2. Select **Edit**->**Delete** at the menu bar, or click  at the tool bar, or press **Delete**.

OR

1. Right-click the item in the Tree View.
2. Select **Delete** from the drop-down list.

OR

1. Highlight the item in the Configuration View.
2. Right-click and select **Delete** from the drop-down list.

Note

- If the item deleted is referenced elsewhere, the feature(s) associated with the deleted item will return to the default value. For example, if **Channel1**->**Scan List** is set to *List2*, and *List2* is deleted from the Scan List folder, **Channel1**->**Scan List** will be set back to *None*.

- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key down while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

Renaming Items

Description

Allows the user to change the name of the selected item. There are multiple ways to rename an item.

To rename an item:

1. Click the item in the Tree View.
2. Select **Edit**->**Rename** at the menu bar, or press **F2**.

OR

1. Right-click the item in the Tree View.
2. Select **Rename** from the drop-down list.
3. Rename the item.

Note

- A maximum of 16 characters is allowed.
- Names must contain at least one valid character.
- Valid characters are alphanumerics, spaces and special characters.
- Names consisting of solely spaces are not allowed.

Sorting Items

Description

Allows the user to rearrange the order of items under a folder. There are 3 sorting styles. However, not all of these styles apply for all folders. The styles are:

- **By Name** - Sorts items according to standard alphanumeric order. An example of a sorted list is "1call2, call1, call11, call12, call13, call2" etc.
- **By Position** - Sorts items according to channel position. Only applicable for Zone1, Zone2, etc.
- **By Type** - Sorts the same type of folders alphabetically. For example, when the user clicks sort by type on a Channel folder, all the analog channels are grouped together. Then, these analog channels are sorted alphabetically before they are displayed in the tree. See **By Name** for alphabetical sort.

To sort items:

1. Click the folder in the Tree View.
2. Select **Edit**->**Sort** at the menu bar. Then, select an option to define sorting style.

OR

1. Right-click on a folder in the tree view.
2. Select **Sort** at the drop-down list. Then, select an option to define sorting style.

Note

- By default, items are displayed in the order they were added.
- The Sort feature is only applicable while the current document is open. Reopening the document, changing the view or Undo/Redo resets it to the default order.

Undo/Redo

Description

Undo allows the user to cancel their last action and reinstate the previous setting(s). If the user decides not to Undo, they can choose Redo. Undo/Redo only works on the last user action. The Redo feature is only valid after an undo.

To undo:

- Select **Edit**->**Undo** at the menu bar, or press **Ctrl**+**Z**. The last action is reversed.

To redo:

- Select **Edit**->**Redo** at he menu bar, or press **Ctrl**+**Y**. The last action is executed again.

Note

- This feature is only supported on file/document modifications, and not on radio read/write/clone, load/delete language packs, update/recover, Custom View, Offset and load software system keys. Once the modified file/document is saved, this feature is reset.
- If this operation is performed while having multiple tree nodes selected, it defaults to the first node selected before the operation.

Load the Software System Keys

Description

The software system keys provide a mechanism to restrict both the accessibility and range of trunking system parameters within the CPS. This allows large system owners to partition their system and provide restricted programming access to certain system users.

There are two ways that the software system keys can be loaded onto the CPS. The first is for the CPS to automatically load the software system keys from the specified location upon launching. The default location to load the software system key files is specified in the application registry, C:\Program Files\Common Files\Motorola\SysKeys\. However, the user can change the default software system key file location at The Software System Key Files Location setting under Preferences. and the corresponding registry setting will be updated accordingly. The CPS then loads the software system keys from the newly specified location automatically without relaunching itself.

The second way is for the user to manually load the Software System Key(s) from files(s) after the CPS is launched. Steps to manually load a key(s):

1. Ensure that there are valid keys in the location as specified by The Software System Key Files Location setting under Preferences. Select **Edit**->**Software System Keys**->**Load...**. The Open dialog box appears.

2. In the Open dialog box, select the folder where the key(s) are stored. Select the key(s) to be loaded from the folder list. Upon selection, the Open dialog box closes and the keys are loaded to the application. The configuration view is refreshed.

For both ways, the CPS enables the software system key protected parameters in the trunking system when the System ID setting of the current trunking system matches the System ID setting in one of the loaded software system key files.

Note

- All the software system key protected parameters including certain menu commands like Add and Delete of the following items: Trunking System, Control Channel List Entry, Site List Entry, Trunking Personality, Talkgroup List Entry, and Preferred Site List Entry are disabled when there is no software system key that is loaded onto the CPS.
- Only software system key files with ".KEY " extension are supported.

See Also

- View the Software System Keys to view all the Software System Keys.

View the Software System Keys

Description

Displays all the Software System keys for the user to view.

To view a key:

1. Select **Edit**->**Software System Keys**->**View...**. The Software System Keys dialog box appears, listing all the loaded keys.

Note

- The list is empty if there is no Software System Key loaded.

See Also

- Load the Software System Keys to load the Software System Keys.

Views

Basic and Expert Views

Description

The Basic View displays most of the features that are commonly used in a radio. The Expert View displays the radio's advanced features in addition to all the features found in the Basic View. When the user launches the CPS for the first time after installation, the CPS opens up in the Basic View. The user can then toggle between the Basic and Expert View by selecting **View**->**Basic**/**Expert** at the menu bar. The CPS also defaults to the Basic View if a Custom View that is selected is not found. The status bar on the bottom right side indicates the current view that is selected. The CPS opens up in the last selected view on subsequent launches.

Custom View

Adding or Editing Custom Views

Description

Custom View allows the user to pick the desired feature(s), regardless of whether they are basic or expert feature(s), to be displayed on the CPS window, and save the settings for repeated use on any opened document.

To add or edit a Custom View:

1. Select **Edit**->**Custom View...** at the menu bar. A Custom View dialog box appears.
2. Click the **Add** button to create a new view. The user will be prompted to enter a unique view name.

   OR

2. Select a view from the list and click the **Edit** button to edit an existing view.
3. Click the **OK** button. A window opens up with the features that can be configured to be displayed or hidden.
4. Select the desired product view to configure from the choices below the Tree View. Once selected, the Tree View and Configuration View get updated to the selected product view.
5. Click any tree folders in the Tree View.
6. On the Configuration View, select the feature in the **View Items** box and click the **Remove** button to hide the feature.

   OR

7. Select the feature in the **Available Items** box and click the **Add** button to display the feature.
8. Repeat steps 4 and 5 for the rest of the tree folders.
9. After completing the configuration, click the **Save** button to save the settings under the same view name or click the **Save As** button to save the settings with a different name, which creates another view.

   OR

10. Click the **Cancel** button to exit the configuration. No view will be created or no change will take place on the existing view.

To enable a custom view after creation:

- Select **View->[Custom view name]**. This feature will take immediate effect on any opened window.

Note

- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.

  OR, Hold down the **Shift** key while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

See Also

- Deleting Custom Views.

Deleting Custom Views

Description

Custom View(s) may be deleted if they are no longer needed.

To delete a custom view:

1. Select **Edit**->**Custom View...** at the menu bar. A Custom View dialog box appears.
2. Select the view that the user would like to delete from the **Select View to Edit:** box.
3. Click the **Delete** button.
4. Click the **Yes** button when prompted with a confirmation box. The view is removed.

Note

- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key down while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

Custom View Features

Adding Features (Custom View)

Description

Adds the selected feature(s) from the **Available Items** list. The feature(s) will be moved to the **View Items** list and will be displayed.

To add a feature:

1. Select the feature or multiple features to be added from the **Available Items** list.
2. Click the **Add** button.

Note

- This feature is disabled if no feature is selected in the **Available Items** list or if the list is empty.
- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

See Also

- Removing Features (Custom View).

Available Items (Custom View)

Description

This list contains all features that will not be displayed for this view. The user may select some features and click the **Add** button to display the features.

Note

- Adding features to the View Items that are listed in more than one Tree folders causes those features to be added to all applicable Tree folders. These features will be displayed on all applicable screens when this view is selected.
- Features that are listed in the **Available Items** are model dependent. Therefore, features that are added to the **View Items**, may not be displayed for this view if they are not applicable for the current model.

See Also

- Adding Features.

View Items (Custom View)

Description

This list contains all features that will be displayed for this view. The user may select some features and click the **Remove** button to hide those features.

Note

- Removing features from the **View Items** that are listed in more than one Tree folders causes those features to be removed from all Tree folders. These features will no longer be displayed on any screens when this view is selected.
- Features that are listed in the **View Items** are model dependent. Therefore, features that are listed in the **View Items**, may not be displayed for this view if they are not applicable for the model.

See Also

- Removing Features.

Removing Features (Custom View)

Description

Removes the selected feature(s) from the **View Items** list. The feature(s) will be returned to the **Available Items** list and will be hidden.

To remove a feature:

1. Select the feature or multiple features to be removed from the **View Items** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no feature is selected in the **View Items** list or if the list is empty.
- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.
  OR, Hold down the **Shift** key down while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

See Also

- Adding Features.

Adding Selected Members (Custom View)

Description

Adds the items in the **Selected** list to create a custom view to display only the selected controls.

To add a member:

1. Select an item to be added from the **Available** list.
2. Click the **Add** button.

Note

- This feature is disabled if no item is selected in the **Available** list or if the list is empty.

Available (Custom View)

Description

Displays all available items that can be added to the **Selected** Members list.

Selected (Custom View)

Description

Lists all members of the list that creates the custom view displaying only the selected controls.

Removing Selected Members (Custom View)

Description

Removes the items from the **Selected** list. This removes the items from the custom view that displays the selected controls.

To remove a member:

1. Select the item to be removed from the **Selected** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no item is selected in the **Selected** list or if the list is empty.

Radio Programming

Reading from a Radio

Description

Allows the user to read the data stored in a radio. If the radio is successfully read, a new document called "Untitled1" is created and all the fields read from the radio are loaded into it.

To read from a radio:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

Portable Hook up

Mobile Hook Up

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Select **Device**->**Read** on the menu bar, or click on the tool bar, or press **Ctrl**+**R**. Enter the password if prompted. If the reading fails during the first try, please repeat this step as the radio may not have been detected yet.
6. A progress bar appears as the radio is read. Upon a successful read, the progress bar disappears and the radio's codeplug appears on the CPS screen. Click **(+)** next to the root folder in the Tree View to expand the view.

Note

- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- For MOTOTRBO Conventional radios, when reading from multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when reading multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- Upon a successful read, Language Packs information will be displayed in the Configuration View under Device Information if the radio has at least one language pack loaded.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- Different controls are displayed according to the available for purchase features which are enabled or disabled in the device.
- A warning message to modify the codeplug in the device is displayed when the available-for-purchase features that are enabled or disabled in the device do not match the codeplug fields in the feature.
- This operation is aborted if the model number in the device does not match with the supported devices, the region for the device is not supported or the user tries to read a device that has a major codeplug version greater than the supported codeplug version of the CPS.
- This operation is aborted if a replacement board serial number is detected on the device. This applies to both boards on a dual board device.

- For 3600 Trunking capable radios, during this operation, if the System ID does not match any of the System ID settings in the loaded key files, System ID setting with all the key protected controls will be disabled.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Reading from a Connected Device (IP Repeater Programming) - applicable for Repeater only.

Writing to a Radio

Description

Allows the user to write data to a radio.

To write to a radio:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

Portable Hook Up

Mobile Hook Up

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Select **Device**->**Write** on the menu bar, or click on the tool bar, or press **Ctrl**+**W**. Enter the password if prompted. If the writing fails during the first try, please repeat this step as the radio may not have been detected yet.
6. A progress bar appears as data is written to the radio. Upon a successful write, the progress bar disappears and a window appears to indicate that the write is successful. The radio is reset.

Note

- Backup the original codeplug file before applying changes (to revert to the original state in case of erroneous programming).
- Never disconnect the programming cable during the write operation until a confirmation dialog box is shown.
- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.

- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- For MOTOTRBO Conventional radios, when writing to multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when writing multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- When the source archive contains enabled available-for-purchase features that are not enabled in the target device, the user is unable to write to the target device. The available-for-purchase features are Capacity Plus - Single Site, IP Site Connect, Digital, and Enhanced Privacy.
- This operation is aborted if the serial number of the target device does not match, model number of the target device does not match with the supported model numbers, region of the target device is not supported, user tries to write to a device that has major codeplug version greater than the supported codeplug version of the CPS.
- If the codeplug version of the target device is less than the archive codeplug version, CPS downgrades the archive codeplug version and write to radio. Any missing values will be set to the default.
- If the codeplug version of the target device is greater than the archive codeplug version, CPS upgrades the archive codeplug version and write to radio. Any missing values will be set to the default.
- This operation is aborted if a replacement board serial number is detected on the target device. This applies to both boards on a dual board device.
- Upon a successful device write operation, locked or disabled radio(s) are enabled.
- For repeater(s), upon a successful device write operation, locked or disabled repeater(s) are enabled. The retries to 0 for locking are also reset if the retries has reached its maximum limit. CPS also programs the first channel in the zone to be the default channel.
- In Multisite configuration, the Write menu is enabled if the Model number and Serial number of the master or peer is set to <Clone to associate>.
- During this operation of an archive with master archive file set, it validates the settings of HMAC and Firewall Open Timer. If the file does not exist or it is not a valid master file, it always provide the option to write the radio with the current setting but the archive file field will be blank. If the values of these fields do not match, the user have the options to write with the current values, write with the latest values or abort the write operation.
- In Multisite configuration, during write operation, it also programs the system settings defined in the master to peers.
- Write is disabled if multiple peers are selected in a multi-site archive.
- After this operation for multisite system configuration archive only, **Model number** and **Serial number** get changed if they were set to <Clone to associate>.
- For repeaters, it displays an error message and abort the write operation if the user tries to write an archive where there are one or more Digital Personalities in Zone1, Zone2... that have IP Site Connect set to a value other than *None* and where Operation Mode is not set to *Digital Satellite Receiver*. This dependency is only applicable when the IP Site Connect feature is *Disabled*.
- For MOTOTRBO and MOTOTRBO 2.0, it displays an error message and abort the write operation if the user tries to write an archive where Check for Password applicable and set to *Read Only* or *Read/Write* and Codeplug Password is set to blank.
- For MOTOTRBO SLR Series repeaters, repeater codeplug dependencies are available if the dependencies are not related with Network or Link Establishment in radio wide.

- For MOTOTRBO SLR Series repeaters, it displays an error message and abort the write operation if the user tries to write an archive where there are one or more Capacity Plus - Single Site Voice, Capacity Plus - Single Site Data, Capacity Plus - Multi Site Voice or Capacity Plus - Multi Site Data Personalities in Zone1, Zone2 and where Link Establishment selected Link Establishment Profile Link Type is not set to *Master* or *Peer*.
- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to write a digital archive to the radio with digital feature not purchased and firmware type is analog only.
- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to write an archive to the radio with digital feature purchased and firmware type is analog only.
- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to write a digital archive to the radio with digital feature purchased and firmware type is analog only.
- An error message appears and the write operation is aborted if the user tries to write an archive where there is at least one Wi-Fi access point configuration where Security Type is set to a value other than "None" and Encrypted Network Password is blank.
- If the user writes an archive where IP Address is applicable and the first three octets are set to the same value as the three octets of Radio IP, an error prompt appears and the writing operation is aborted.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Writing to a Connected Device (IP Repeater Programming) - applicable for Repeater only.

Cloning Radios

Description

Allows the user to copy the configuration of a radio to another radio of the same model.

To clone a radio from an archive file:

1. Select **File**->**Open** at the menu bar, or click  at the tool bar, or press **Ctrl+O** to open an archived file. A dialog box appears for the user to select the desired file.
2. Browse for the file and click the **Open** button. Enter the password if prompted.
3. Make sure that the destination radio is powered off before attaching a programming cable.
4. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

	
Portable Hook up	**Mobile Hook Up**

5. Power up the destination radio using the ON/OFF/Volume knob.
6. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
7. Select **Device**->**Clone** on the menu bar, or click on the tool bar, or press **Ctrl+F5**. If cloning fails during the first try, please repeat this step as the radio may not have been detected yet. The Connected Devices dialog box appears, displaying the IP Address and Serial Number of the destination radio. Make sure that the serial number of the source and destination radios are different.
8. Select the destination radio to be cloned. Press and hold **Shift** or **Ctrl** when selecting multiple radios. Click the **OK** button.
9. A progress bar appears as data is cloned into the radio. Upon a successful clone, the progress bar disappears and a window appears indicating that the clone is successful. Click the **OK** button. The radio is reset.

Note

- Never disconnect the programming cable during the cloning operation until a confirmation dialog box is shown.
- There is no support for direct radio-to-radio cloning. In order to do that, the user needs to read from a radio, save the file into an archive and follow the steps "To clone a radio from an archive file:" as mentioned above.
- To preserve the value of the **Radio Name**, **Radio ID**, Radio IP, and Accessory IP identity features currently in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.
- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- For MOTOTRBO Conventional radios, when cloning multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when cloning multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.

- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- When the source archive contains enabled available-for-purchase features that are not enabled in the target device, the user is unable to write to the target device. The available-for-purchase features are Capacity Plus - Single Site, IP Site Connect, Digital, and Enhanced Privacy.
- This operation is aborted if a replacement board serial number(s) is/are detected on the target device(s). This applies to both boards on a dual board device(s).
- New field will be set to the default value while cloning archive to the radio with different codeplug versions.
- Upon a successful device update operation, disabled radio(s) are enabled.
- For repeater(s), upon a succesful device update operation, locked or disabled repeater(s) are enabled. The retries to 0 for locking are also reset if the retries has reached its maximum limit. CPS also programs the first channel in the zone to be the default channel.
- During this operation, if the target radio(s) does not support enhanced privacy and the source has enhanced privacy set, it sets basic privacy to the target. If the target does not support any privacy, it sets to *None*.
- In Multisite configuration, during this operation, it also programs the system settings defined in the master to peers.
- In Multisite configuration, the Clone menu is enabled if the Model number and Serial number of the master or peer is set to <Clone to associate>. Clone of an archive will also be allowed if the archive that is used to clone is associated with a different master or peer.
- In Multisite configuration, during clone operation, if the Clone Radio Identity is checked in **Preferences**, it will not preserve the Radio ID if it is not unique in the multisite system.
- During this operation of an archive with master archive file set, it validates the settings of HMAC, Multisite Master IP, Multisite Master UDP, and Multisite Firewall Open Timer. If the file does not exist or it is not a valid master file, it always provide the option to clone the radio with the current setting but the archive file field will be blank. If the values of these fields do not match, the user have the options to clone with the current values, clone with the latest values or abort the clone operation.
- Clone is disabled if multiple peers are selected in a multi-site archive.
- After this operation for multisite system configuration archive only, **Model number** and **Serial number** get changed if they were set to <Clone to associate>.
- For 3600 Trunking capable radios, this operation is aborted if there is an unmatched System ID setting in any of the existing trunking systems.
- For repeaters, it displays an error message and abort the clone operation if the user tries to clone an archive where there are one or more Digital Personalities in Zone1, Zone2... that have IP Site Connect set to a value other than *None* and where Operation Mode is not set to *Digital Satellite Receiver*. This dependency is only applicable when the IP Site Connect feature is *Disabled*.
- For MOTOTRBO and MOTOTRBO 2.0, it displays an error message and abort the clone operation if the user tries to clone an archive where Check for Password is applicable and set to *Read Only* or *Read/Write* and Codeplug Password is set to blank.
- For MOTOTRBO SLR Series repeaters, when opening the Link Establishment archive, it will prompt the user through an error message and abort the clone operation.
- For MOTOTRBO SLR Series repeaters, repeater codeplug dependencies are available if the dependencies are not related with Network or Link Establishment in radio wide.
- For MOTOTRBO SLR Series repeaters, it displays an error message and abort the write operation if the user tries to write an archive where there are one or more Capacity Plus - Single Site Voice, Capacity Plus - Single Site Data, Capacity Plus - Multi Site Voice or Capacity Plus - Multi Site Data Personalities in Zone1, Zone2 and where Link Establishment selected Link Establishment Profile Link Type is not set to *Master* or *Peer*.
- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to clone a digital archive to the radio with digital feature not purchased and firmware type is analog only.

- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to clone an archive to the radio with digital feature purchased and firmware type is analog only.
- For MOTOTRBO Conventional analog radios, an error message appears if the user tries to clone a digital archive to the radio with digital feature purchased and firmware type is analog only.
- An error message appears and the write operation is aborted if the user tries to write an archive where there is at least one Wi-Fi access point configuration where Security Type is set to a value other than "None" and Encrypted Network Password is blank.
- If the user writes an archive where IP Address is applicable and the first three octets are set to the same value as the three octets of Radio IP, an error prompt appears and the writing operation is aborted.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Preferences.

Loading Language Packs

Description

Allows the user to load different language packs into the radio.

To load a language pack:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

 **Portable Hook up**	 **Mobile Hook Up**

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Read the radio. Enter the password if prompted. Select **Device**->**Load language Pack(s)...** on the menu bar. Enter the password if prompted. The Load Language Pack dialog box appears.
6. Select the desired language to load. Click the **Load** button. A progress bar appears as the language pack is loaded into the radio. Upon a successful load, the progress bar disappears and a window appears to indicate that the load is successful. Click the **OK** button. Note that if the codeplug is opened from an archive, make sure that the serial number matches with the destination radio before clicking the **Load** button.
7. Click the **Close** button in the Load Language Pack dialog box to return to the CPS main screen. The user can go to the radio's **Menu**->**Utilities**->**Radio Settings**->**Language** to select the desired language.

Note

- The user may need to delete a different language pack if the size of the selected language pack is larger than the available memory size of the radio, as indicated by Free Space.
- CPS will always overwrite the language pack(s) even if the language pack(s) id in the source and destination are the same
- CPS will load the language pack(s) with higher version if the user multiple selects the language packs which have the same language pack id but with different version numbers.
- The archive opened must be for a display model.
- This operation is disabled for repeater model.
- This operation is aborted if a replacement board serial number is detected on the target device.

- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- For MOTOTRBO Conventional radios, when loading language packs into multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when loading language packs into multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- If the radio already has at least one language pack loaded, the Language Packs information will be displayed in the Configuration View under Device Information the next time the radio is read.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.

  OR, Hold down the **Shift** key down while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

See Also

- Reading from a Radio.

Deleting Language Packs

Description

Allows the user to remove unwanted language pack(s) from the radio.

To delete a language pack:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

	
Portable Hook up	**Mobile Hook Up**

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Read the radio. Enter the password if prompted. Select **Device**->**Delete Language Pack(s)...** on the menu bar. Enter the password if prompted. The Delete Language Pack dialog box appears.
6. Select the desired language to delete. Click on the **Delete** button. Click **Yes** when prompted with a confirmation box. A progress bar appears as the language pack is deleted from the radio. Upon a successful deletion, the progress bar disappears and a window appears to indicate that the deletion is successful. Click the **OK** button.
7. Click the **Close** button in the Delete Language Pack dialog box to return to the CPS main screen. The user can go to the radio's **Menu**->**Utilities**->**Radio Settings**->**Language** to verify that the language pack is deleted.

Note

- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- When deleting language packs from multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- Serial number must match with the destination radio.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- This operation is disabled for repeater model.
- This operation is aborted if a replacement board serial number is detected on the target device.

- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items.

  OR, Hold down the **Shift** key down while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

See Also

- Reading from a Radio.

Retrieving the Firmware and Codeplug Update Package

Description

To retrieve the Firmware and Codeplug update package:

1. Launch the web browser.
2. Log onto the Motorola Online website (http://businessonline.motorolasolutions.com).
3. Click the Resource Center link and type MOTOTRBO in the Search area.
4. Select the update package from the available list.
5. Save the update package (compressed or zipped) onto the desktop.
6. Extract the compressed folder to the device update folder located in the directory where the CPS is installed. The default path is C:\Program Files\Motorola\MOTOTRBO CPS\deviceupdate.

Note

- The default path where the CPS is installed may differ if the CPS is installed on a different drive.

See Also

- Updating a Radio.
- Recovering a Radio.
- Convert to 3600 Trunking

Updating a Radio

Updating a Radio

Description

Allows the user to write a newer firmware or Field Programmable Gate Array (FPGA) image to the radio. In this procedure, the radio's tuning block is first preserved.

To update a radio:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

	
Portable Hook up	**Mobile Hook Up**

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Select **Device**->**Update** on the menu bar. Enter the password if prompted. The Update Radio dialog box appears, listing the available firmware and codeplug packages. These packages are located at the default path where the CPS is installed.
6. Select the desired package to write into the radio. Click on the **OK** button.
7. A progress bar appears as data is written to the radio. Upon a successful write, the progress bar disappears and a window appears indicating that the update is successful. The radio is reset.

Note

- Never disconnect the programming cable during the update operation until a confirmation dialog box is shown.
- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- When using this feature for the first time, the **Found New Hardware Wizard** box appears together with another message box to prompt the user to reset the radio. The user is required to install the FlashZap driver and reset the radio. The user then waits a few seconds to allow time for the PC to detect the radio before clicking **Device**->**Update** again.
- For MOTOTRBO Conventional radios, when updating multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when updating multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- Avoid updating multiple radios using multiple CPS applications on the same PC.
- This operation is aborted if a replacement board serial number(s) is/are detected on the target device(s). This applies to both boards on a dual board device(s).
- Upon a successful device update operation, disabled radio(s) are enabled.
- Upon a successful device update operation, locked or disabled repeater(s) are enabled. The retries to 0 for locking are also reset.

- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- The language packs are also updated during the Device Update operation.
- FPGA upgrade operation is only available for MTR3000 base radio/repeater. When there are matching packages for FPGA upgrade, the FPGA tab will be shown. The user can select the FPGA type and FPGA version to update the FPGA image.
- If the target codeplug version selected by the user is less than the current codeplug version in the radio, it prompts the user through an error message and abort the update operation.
- After upgrading, the Check for Password value is determined based on the dependencies for that field, as if the Codeplug Password value had just been changed by the user.
- For MOTOTRBO Conventional analog radios, the user can purchase the digital feature and update the radio from analog only firmware to analog and digital firmware.
- After the update operation is completed, the Last Programmed Date and Time is reset to the current time.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Troubleshooting - Installing the FlashZap driver.
- Retrieving the Firmware Update Package.
- Updating a Connected Device (IP Repeater Programming) - applicable for Repeater only.

Device Update Grid

Description

Allows user to select codeplug and firmware versions to update or recover devices.

Notes

- This control lists all the connected devices Model Number and Serial Number that match to the corresponding available packages installed.
- If one or more connected devices cannot be read successfully, an error shall be known and no devices shall be displayed.

FPGA Update Grid

Description

Allows user to select FPGA type and FPGA version to update or recover devices' FPGA image.

Note

- If one or more connected devices cannot be read successfully, an error shall be known and no devices shall be displayed.

Available Packages

Model Number

Description

Displays a string of alphanumeric characters to represent the type of the radio. Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater. By default when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating an IP Site Connect system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Note

- This feature is applicable to MOTOTRBO Conventional radios only.

Firmware Version

Description

Displays the firmware version programmed in the radio. Firmware is the software that controls the internal hardware components of the radio.

Codeplug Version

Description

Displays the codeplug version programmed in the radio. Codeplug is the information (data) that supports the firmware and hardware configuration.

FPGA Type

Description

Displays the Field Programmable Gate Array (FPGA) types available for the connected device based on the package and installed board of the device(s) connected.

FPGA Version

Description

Displays the Field Programmable Gate Array (FPGA) versions available or factory FPGA version for the connected device(s) based on the package or factory FPGA image version, installed board of the device(s) connected and **FPGA Type** selected for a device. If the **FPGA Type** is selected as *None*, the available choice for this feature is only *None*.

Recovering a Radio

Recovering a Radio

Description

Allows the user to revive a failed radio or Field Programmable Gate Array (FPGA) image due to data corruption by rewriting a good firmware or FPGA image into the radio. In this procedure, the CPS will try to preserve the radio's tuning block. In the event that it fails, the default codeplug (with the default tuning block) will be written.

To recover a radio:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

	
Portable Hook up	**Mobile Hook Up**

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Select **Device**->**Recover** on the menu bar. Enter the password if prompted. The Recover Radio dialog box appears, listing the available firmware and codeplug packages. These packages are located at the default path where the CPS is installed.
6. Select the desired package to write into the radio. Only one package can be selected at a time. Click on the **OK** button.
7. A progress bar appears as data is written to the radio. Upon a successful recover, the progress bar disappears and a window appears indicating that the recover is successful. The radio is reset.

Note

- Never disconnect the programming cable during the recover operation until a confirmation dialog box is shown.
- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- When using this feature for the first time, the **Found New Hardware Wizard** box appears together with another message box to prompt the user to reset the radio. The user is required to install the FlashZap driver and reset the radio. The user then waits a few seconds to allow time for the PC to detect the radio before clicking **Device**->**Recover** again.
- For MOTOTRBO Conventional radios, when recovering multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when recovering multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- The language packs are also updated during the Device Recover operation.
- This operation is aborted if a replacement board serial number(s) is/are detected on the target device(s). This applies to both boards on a dual board device(s).
- Upon a successful device recover operation, disabled radio(s) are enabled.

- Upon a successful device recover operation, locked or disabled repeater(s) are enabled. The retries to 0 for locking are also reset.
- For MTR3000 base radio/repeater, upon a successful device recover operation, the device needs to be read and written in order to enable it.
- FPGA recover operation is only available for MTR3000 base radio/repeater. When there are matching packages for FPGA upgrade, the FPGA tab will be shown. The user can select the FPGA type and FPGA version to recover the FPGA image.
- After the recover operation is completed, the Last Programmed Date and Time is reset to the current time.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Troubleshooting - Installing the FlashZap driver.
- Retrieving the Firmware and Codeplug Update Package.

Available Packages

Model Number

Description

Displays a string of alphanumeric characters to represent the type of the radio. Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater. By default when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating an IP Site Connect system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Note

- This feature is applicable to MOTOTRBO Conventional radios only.

Firmware Version

Description

Displays the firmware version programmed in the radio. Firmware is the software that controls the internal hardware components of the radio.

Codeplug Version

Description

Displays the codeplug version programmed in the radio. Codeplug is the information (data) that supports the firmware and hardware configuration.

FPGA Type

Description

Displays the Field Programmable Gate Array (FPGA) types available for the connected device based on the package and installed board of the device(s) connected.

FPGA Version

Description

Displays the Field Programmable Gate Array (FPGA) versions available or factory FPGA version for the connected device(s) based on the package or factory FPGA image version, installed board of the device(s) connected and **FPGA Type** selected for a device. If the **FPGA Type** is selected as *None*, the available choice for this feature is only *None*.

Converting a Radio

Converting between 3600 Trunking Capable Radios and MOTOTRBO Conventional Radios

Description

This feature allows the conversion between the following radios:

- Converts the 3600 Trunking capable radio codeplug and firmware to the MOTOTRBO Conventional radio.

  Note:
  - MOTOTRBO Conventional radios will be Analog mode only radios after converting from the 3600 Trunking capable radios.

- Converts the MOTOTRBO Conventional radio codeplug and firmware to the 3600 Trunking capable radio.

  Note:
  - This feature is applicable to 800/900 MHz band models only.
  - This feature is available only when the Convert to 3600 Trunking feature is enabled in the device.

To convert a radio:

1. Make sure that the destination radio is powered off before attaching a programming cable.
2. Connect the destination radio to the Universal Serial Bus (USB) port of the PC using a programming cable as shown in the picture below.

Portable Hook up

Mobile Hook Up

3. Power up the destination radio using the ON/OFF/Volume knob.
4. Wait a few seconds after connecting the radio to allow time for the PC to detect the radio.
5. Select **Device**->**Convert** on the menu bar. Enter the password if prompted. The Convert List dialog box appears, listing the available firmware and codeplug packages. These packages are located at the default path where the CPS is installed.
6. Select the desired package and configure the items under the package to write into the radio. Click on the **OK** button.

7. A progress bar appears as data is written to the radio. Upon a successful write, the progress bar disappears and a window appears indicating that the conversion is successful. The radio is reset.

Note

- Never disconnect the programming cable during the conversion operation until a confirmation dialog box is shown.
- When the radio is connected and the **Found New Hardware Wizard** box appears, the user is required to install the MOTOTRBO driver.
- Upon changing USB ports or connecting to a different type of radio, the **Found New Hardware Wizard** box may appear. The user is required to install the MOTOTRBO driver.
- When using this feature for the first time, the **Found New Hardware Wizard** box appears together with another message box to prompt the user to reset the radio. The user is required to install the FlashZap driver and reset the radio. The user then waits a few seconds to allow time for the PC to detect the radio before clicking **Device**->**Convert** again.
- For MOTOTRBO Conventional radios, when converting multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when converting multiple radios connected to the PC, if the **Radio IP** address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the **Radio IP** for each radio must be unique; If the **Radio IP** address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the **Radio IP** for each radio must be unique; And if the **Radio IP** address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the **Radio IP** for each radio must be unique.
- Avoid converting multiple radios using multiple CPS applications on the same PC.
- This operation is aborted if a replacement board serial number(s) is/are detected on the target device(s). This applies to both boards on a dual board device(s).
- Upon a successful conversion operation, disabled radio(s) are enabled.
- For Mobile, the front connector takes the precedence always. If both the front and rear cables are connected and after removal of the front cable, a hard reset is required for the rear connection to be detected by the PC.
- The language packs are also updated during the conversion operation.

See Also

- Troubleshooting - Unable to Read from or Write to the Radio.
- Troubleshooting - Installing the MOTOTRBO Driver.
- Troubleshooting - Installing the FlashZap driver.
- Retrieving the Firmware Update Package.

Available Packages

Model Number

Description

Lists the model numbers of all the connected radios. Model number is a string of alphanumeric characters to represent the type of the radio.

Tanapa Number

Description

Lists the tanapa numbers of all the connected radios. Each radio has a unique tanapa number.

Serial Number

Description

Lists the serial numbers of all the connected radios. Serial number is a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number.

Current Make

Description

Displays whether the connected radio is a MOTOTRBO Conventional or 3600 Trunking capable radio.

Firmware Version

Description

Lists the firmware version of all the connected radios that matches the corresponding packages installed and Model Number of the connected radios. Firmware is the software that controls the internal hardware components of the radio.

Codeplug Version

Description

Lists the codeplug version of all the connected radios that matches the corresponding packages installed, Model Number of the connected radios connected and **Firmware Version** selected for the radios. Codeplug is the information (data) that supports the device firmware and hardware configuration.

IP Repeater Programming

Overview of IP Repeater Programming

The IP Repeater Programming feature allows a system operator to configure the networked repeaters from a physical location which is different than where the repeater resides. A networked repeater is a repeater that is connected to a backend IP network. The system operator is allowed to perform four different operations through a networked CPS:

- Read: Allows the operator to view codeplug parameters currently configured in the repeater.
- Write: Allows the operator to write updated codeplug parameters back to the repeater.
- Update: Allows the operator to update the firmware and codeplug parameters to a newer version. All existing codeplug and tuning parameters are preserved during the update.
- Purchase Radio Features: Allows the operator to remotely enable a chargeable feature within the repeater.

Start with configuring the IP Repeater Programming settings for CPS and the Link Establishment parameters for each of the Repeater which will support IP Repeater Programming feature. Currently the IP Repeater Programming feature is supported in Capacity Plus - Single Site , IP Site Connect, and Single Site Conventional modes. In order for the Single Site Conventional repeater to support IP Repeater Programming, it is required that the Repeater is configured to be a Master.

The CPS/Repeater connection utilizes a TCP/IP connection which is inbound to CPS. If the CPS resides behind a firewall, then the system administrator must ensure the inbound TCP port is routed to the correct CPS instance. For more details, please refer to the system planner.

When programming the Repeaters within an IP Site Connect or Capacity Plus - Single Site system, where there exist multiple Peers, it is recommended to start with the Peers followed by the Master last, since all requests for programming are routed through the Master. The user can then proceed with the following IP Repeater Programming operations:

- Reading from a Connected Device
- Writing to a Connected Device
- Updating a Connected Device

For added security, a codeplug password can be configured into each Repeater. If configured, the user will have to enter in the codeplug password for all IP Repeater Programming operations.

Note

- The CPS and RDAC (Repeater Diagnostics and Control) applications can both be connected to the same system but the applications ID and UDP Port number must be different from each other.

- The IP Repeater Programming feature can only connect to one system at a time.
- The IP Repeater Programming feature is supported only on Repeaters which have the higher memory (i.e. 32MB Repeaters). Please refer to the MOTOTRBO Repeater Basic Service Manual for the Repeater model specification.

Configuring the IP Repeater Programming Settings

Configuring the IP Repeater Programming Settings

Description

Allows the user to configure and save system settings for up to 50 existing systems (i.e. single site, IP site connect and Capacity Plus - Single Site systems) for IP Repeater Programming.

To configure the settings:

1. Select **Remote**->**IP System Settings...** on the menu bar. An IP System Settings dialog box appears. See the individual help topic for the parameters configurable in this dialog box.
2. Click the **OK** button to save the system settings after completing the configuration.

See Also

- Connecting to a System (IP Repeater Programming)

IP Repeater System Settin

CPS TCP Port

Description

Allows the user to configure the CPS application TCP port to which network repeaters will connect in IP Repeater Programming. The default value is 50000.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- CPS will only have one TCP port for IP Repeater Programming operations.

IP System Alias (IP Repeater Programming)

Description

Displays the list of system aliases. The range for each alias in the list is up to 16 UCS-2 characters. The default system names are assigned as Sys1, Sys2,....

Note

- The list will always have one system selected, unless the **IP System Alias** list is empty.
- The item in the list is displayed in the order it is added.
- Mutiple selection is supported but Drag and Drop is not allowed.

Adding an IP System (IP Repeater Programming)

Description

This button allows the user to create a new IP site system and adds it to the IP System Alias list when clicked. As systems are added, each name is added as (Sys1, Sys2, Sys3, etc.). A maximum of 50 systems are allowed to be added.

To add an IP system for IP Repeater Programming:

1. Click the **Add** button to create a new alias. A default CPS alias is created.
2. Configure the parameters on the right pane for the IP system just created. See the individual help topic for the parameters configurable in this dialog box.

Note

- To select multiple and consecutive items, hold down the **Shift** key while clicking the desired items or hold down the **Shift** key while pressing the up or down arrow keys to select one item at a time.
- To select multiple and non-consecutive items, hold down the **Ctrl** key while clicking the desired items.

Renaming an IP System (IP Repeater Programming)

Description

This button allows the user to change the name of the IP system in the IP System Alias list when clicked. Alternately, select the system and press F2 to rename it.

To rename an IP system:

1. Select the item to be renamed from the **IP System Alias** list box.

2. Click the **Rename** button.

Note

- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This button is disabled if multiple items are selected in the list.

Deleting an IP System (IP Repeater Programming)

Description

This button allows the user to delete IP systems from the IP System Alias list if they are no longer in use when clicked. After deletion, the system will no longer be available for connection in IP Repeater Programming.

To delete an IP system from IP Repeater Programming:

1. Select the item(s) to be deleted from the **IP System Alias** list box.
2. Click the **Delete** button. A confirmation box appears.
3. Click the **Yes** button to continue with deletion. The selected items are removed from the list.

Note

- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.

Master IP Address

Description

Configures the IP Address of the master in IP Repeater Programming. The format and range for the address are (000-255).(000-255).(000-255).(000-255). The default value is 0.0.0.0.

The **Master IP Address** does not need to be unique across all systems, but the combination of the **Master IP Address** and the Master UDP Port must be unique across systems.

Note

- This feature value must be unique across systems.
- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This feature is disabled if multiple items are selected in the **IP System Alias** list.

Master UDP Port

Description

Configures the User Datagram Protocol (UDP) Port number of the Master in IP Repeater Programming. The default value is 50000.

The **Master UDP Port** does not need to be unique across all systems, but the combination of the **Master IP Address** and the **Master UDP Port** must be unique across systems.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature value must be unique across systems.
- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This feature is disabled if multiple items are selected in the **IP System Alias** list.

CPS ID

Description

Configures a unique CPS application Peer ID which will be used in Peer to Peer Protocol (P2P) messages to identify the application on the network in IP Repeater Programming. The default value is 1.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This feature is disabled if multiple items are selected in the **IP System Alias** list.

CPS UDP Port

Description

Configures a unique CPS application Peer Port number which will be used in Peer to Peer Protocol (P2P) messages to identify the application on the network in IP Repeater Programming. The default value is 50000.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This feature is disabled if multiple items are selected in the **IP System Alias** list.

Authentication Key (IP Repeater Programming)

Description

Sets an authentication key for Peer to Peer Protocol (P2P) messages in IP Repeater Programming. If Peer packet authentication is enabled, all P2P messages sent and received by the application will be authenticated. This key is 20 bytes in length and is a shared authentication key that must be the same in all radios/peers including the PC belonging to the same system. The default value is 0.

For security reasons, once the authentication key is saved, its value is shown as Ø.

Range	
Maximum	FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF (Hex)
Minimum	00000000000000000000000000000000000000000 (Hex)
Increment	1 (Hex)

Note

- Authentication of P2P messages is disabled if this feature value is set to 0 or a string of 0s.
- This feature is disabled if the selected system is currently connected or the **IP System Alias** list is empty.
- Multiple selection is not supported. This feature is disabled if multiple items are selected in the **IP System Alias** list.

Connecting to an IP System (IP Repeater Programming)

Description

Allows CPS to establish connection with any existing system(s) that had been added into the IP System Alias list for IP Repeater Programming. The status bar displays the current connection status to a system. Once the application connects to a system, a green icon is displayed. If the connection is subsequently lost, a red icon is displayed.

To connect to a system for IP Repeater Programming:

1. Select **Remote**->**Connect...** at the menu bar. A Connect dialog box appears.
2. Select a system to connect from the list of available systems to connect to.
3. Click the **Connect** button to start the connection with the selected system.

To disconnect from a system:

1. Select **Remote**->**Disconnect** at the menu bar to terminate the connection with the currently connected system.

See Also

- Configuring the IP Repeater Programming Settings

Reading from a Connected Device (IP Repeater Programming)

Description

Allows the user to view codeplug parameters configured in the Repeater(s). The Repeater(s) could be connected to the PC locally (via USB) or from a physical remote location (via backend IP network).

To read from a connected device in IP Repeater Programming:

1. Ensure that the IP Repeater Programming Settings had been configured and an IP system successfully connected to the PC. See topics Configuring the IP Repeater Programming Settings and Connecting to a System (IP Repeater Programming).
2. Select **Device**->**Read** at the menu bar, or click  at the tool bar, or press **Ctrl**+**R**. If CPS is connected to a device(s) physically and to a master remotely using IP Repeater Programming, a Mode Selection dialog box appears for the user to choose the type of connection. Proceed to Step 3. If CPS is only connected to a master remotely using IP Repeater Programming, the Remote mode Available Devices dialog box appears to list all the available devices and information about the devices. Proceed to Step 4.
3. Click the **Local** button if the user wishes to read from locally connected device. The Local mode Connected Devices dialog box appears to list all the available devices and information about the devices if multiple devices are connected.

   OR

3. Click the **Remote** button if the user wishes to perform the read operation through a remotely connected master using the IP Repeater Programming feature. The Remote mode Available Devices dialog box appears to list all the available devices and information about the devices.
4. Select the device to read from.
5. Click the **OK** button to connect to the selected device.
6. A progress bar appears as the device is read. Upon a successful read, the progress bar disappears and the device's codeplug appears on the CPS screen.

Note

- If you connect the CPS to a device or devices physically, and to a master remotely by using IP Repeater Programming, the CPS prompts you with the Mode Selection Dialog.

Writing to a Connected Device (IP Repeater Programming)

Description

Allows the user to write updated codeplug parameters back to the Repeater(s).

To write to a connected device in IP Repeater Programming:

1. Ensure that the IP Repeater Programming Settings had been configured and an IP system successfully connected to the PC. See topics Configuring the IP Repeater Programming Settings and Connecting to a System (IP Repeater Programming).
2. Select **Device**->**Write** at the menu bar, or click  at the tool bar, or press **Ctrl**+**W**. If CPS is connected to a master remotely using IP Repeater Programming, and if all the physically connected devices do not match with the archive, the Remote mode Available Devices dialog box appears to list all the available devices and information about the devices. Proceed to Step

3. If there is a device that is physically connected that matches with the archive, proceed to Step 5.

3. Select the device to write to.
4. Click the **OK** button to connect to the selected device.
5. A progress bar appears as data is written to the device. Upon a successful write, the progress bar disappears and a window appears indicating that the write is successful. The device is reset.

Updating a Connected Device (IP Repeater Programming)

Description

Allows the user to update the Repeater(s) firmware and codeplug parameters to a newer version. All existing codeplug and tuning parameters are preserved during the update.

To update a connected device in IP Repeater Programming:

1. Ensure that the IP Repeater Programming Settings had been configured and an IP system successfully connected to the PC. See topics Configuring the IP Repeater Programming Settings and Connecting to a System (IP Repeater Programming).
2. Select **Device->Update** at the menu bar. If CPS is connected to a device(s) physically and to a master remotely using IP Repeater Programming, a Mode Selection dialog box appears for the user to choose the type of connection. Proceed to Step 3. If CPS is only connected to a master remotely using IP Repeater Programming, the Remote mode Available Devices dialog box appears to list all the available devices and information about the devices. Proceed to Step 4.
3. Click the **Local** button if the user wishes to update a locally connected device. The Available Packages dialog box appears to list all the available packages and information about the packages. Proceed to Step 6.

   OR

3. Click the **Remote** button if the user wishes to perform the update operation through a remotely connected master using the IP Repeater Programming feature. The Remote mode Available Devices dialog box appears to list all the available devices and information about the devices.
4. Select the device to update to.
5. Click the **OK** button. The Available Packages dialog box appears to list all the available packages and information about the packages.
6. Select the package to update to.
7. Click the **OK** button to connect to the selected device.
8. A progress bar appears as data is written to the device. Upon a successful write, the progress bar disappears and a window appears indicating that the update is successful. The device is reset.

Generating a Log

Generating a Log (IP Repeater Programming)

Description

Generates and displays the application log. Click on **Remote**->**Log** at the menu bar. The log window appears.

Select Date Range

Description

Filters the log to only display the log information within the start and end date.

Select System

Description

Selects the system alias to display. If unchecked, the log displays all the available system aliases.

Managing Voice Announcement

Managing Voice Announcement

Description

Allows the user to configure and save the Manage Voice Announcement settings for use in the Voice Announcement feature.

To configure the settings:

1. Select **Device**->**Manage Voice Announcement** on the menu bar. A Manage Voice Announcement dialog box appears. See the individual help topic for the parameters configurable in this dialog box.
2. Click the **Close** button to save the settings after completing the configuration.

See Also

- Manage Voice Announcement.

Manage Voice Announcement Settings

Switch Radio...

Description

Switches the radio to manage the Voice Announcement files. The radio serial number and model number are displayed in the **Files in Radio** section.

See Also

- Manage Voice Announcement.

Files in Radio List

Description

This is the table that lists all of the available Voice Announcement files and duration of the files in the radio.

See Also

- Manage Voice Announcement.

Delete from Radio (Voice Management)

Description

Removes the selected Voice Announcement files from the radio which is specified in the **Files in Radio** section.

Note

- This feature is enabled when at least one row is checked in the Files in Radio List.

See Also

- Manage Voice Announcement.

Save to Disk...

Description

Saves the Voice Announcement files from the radio to the specified location on the disk.

Note

- This feature is enabled when at least one row is checked in the Files in Radio List.

See Also

- Manage Voice Announcement.

Files on Disk List

Description

This is the table that lists all of the available Voice Announcement files and duration of the files stored in the computer.

See Also

- Manage Voice Announcement.

Refresh

Description

Refreshes the Files on Disk List of files.

See Also

- Manage Voice Announcement.

Load to Radio 

Description

Loads the selected pre-recorded or customized Voice Announcement files into the radio which is specified in the **Files in Radio** section.

Note

- This feature is enabled when at least one row is checked in the Files on Disk List.
- Valid voice file format is .mva file with μ-law with 8 bits per sample, 8 KHz sampling rate, mono, with a size of less than or equal to 160 KBytes (20 seconds), or .wav file with 16 bits per sample, 8 KHz sampling rate, mono, with a size of less than or equal to 320 KBytes (20 seconds). For .wav file, the file will be automatically converted into .mva file before being loaded into the radio.
- The sampling rate and volume level of the voice file will not be changed during the conversion of .wav file to .mva file. The recommended voice recording volume level for .wav files is Root Mean Square (RMS) = -16dB (typically peak between -4 dB and -6 dB).
- This feature only loads a total of less than or equal to 500 seconds of Voice Announcement files (i.e. less than or equal to 4 MBytes for .mva file, or less than or equal to 8 MBytes for .wav file).
- The voice file name must not exceed 50 characters.
- The pre-recorded voice announcements used in this software are provided by GM Voices, Inc (www.gmvoices.com).

See Also

- Manage Voice Announcement.

Bluetooth Programming

Description

Allows the user to perform radio programming (i.e. read, write, and clone operations) via Bluetooth.

To use Bluetooth programming mode:

1. Pair the device with the computer.
2. Once the pairing is successful, launch the CPS.
3. Select **Device**->**Bluetooth** on the menu bar, or click 

on the tool bar. The IP Address textbox is enabled.
4. Enter the radio's Bluetooth IP. The default value is 192.168.11.1.
5. Once the Bluetooth IP is entered, when the user triggers a read, write, or clone request, the CPS will perform the operations via Bluetooth.

Note

- Bluetooth operations take precedence over USB operations.
- Bluetooth is currently available for subscriber models only.

See Also

- **Bluetooth IP**

Dealer Settings

Dealer Information

Description

Adds the Dealer information to a Customer Handout Report using a template provided in the CPS.

To modify the Dealer Information:

1. Select **Edit**->**Dealer Info...** at the menu bar.
2. Enter the information into the text boxes according to the template given.
3. Click the **OK** button.

Preferences

Description

Allows the user to configure the CPS settings of Sound, Clone Radio Identity and Language. The user can access these features by selecting **Edit**->**Preferences...** at the menu bar.

The Sound setting allows the user to enable or disable the CPS's tones. If this setting is checked, sounds are played when the CPS launches as well as when success or failure messages are displayed.

The Clone Radio Identity setting allows the user to enable or disable the cloning of Radio Name, Digital Radio ID, **Radio IP**, and Accessory IP features that uniquely identify a radio. During cloning, if this setting is checked, the radio identity features from the archive will be cloned into the radio. Unchecking this setting will preserve the current identity features in the radio during cloning (ignoring the archive identity features). Unchecking this setting will speed up the process of cloning a fleet of radios based on a single archive template without the need to change the radio identity features. Checking this setting is recommended for first-time cloning, which requires radio identity features to be set uniquely in the archive.

The Language setting allows the user to choose the language used by the CPS. This can be done by selecting a language from the Select Language box. This setting is disabled if there is only one language available. After selecting a new language, the user is prompted to restart the CPS.

The Hide Messages setting allows the user to enable or disable the warning messages. This setting only lists messages that have appeared at least once in the CPS or have the "Don't show again." checkbox.

The Software System Key Files Location setting displays the current software system key files location from the registry and allows the user to change the location. The CPS loads the software system keys from this specified location automatically upon the CPS launching. The user can change this by clicking the **...** button. This opens the standard folder browser that allows the user to select a Software System Key files location from the folder browser dialog and display the location in the Software System Key Files Location.

Generating Reports

Selecting a Report

Description

The CPS offers several different types of reports, such as:

- Channels Summary
- Customer Handout
- Detailed Report

To select a type of report:

1. Select **File->Reports...** at the menu bar, or click  at the tool bar.
2. Click the desired style under the **Select Report:** area in the Reports dialog box.
3. Click the **OK** button.

The user can also change the language of the report:

- Select a language from the **Select Language** box. If only one language is available, the Language Setting will be disabled.

E-mailing a Report

Description

Allows the user to send a report electronically. The user must have a default email application and an email account set up locally on the computer. The report opens in the user's default email application.

To email a report:

- Click the **E-mail** button on the report window. The email application launches and automatically inserts the report into an e-mail.

Printing a Report

Description

To print a report:

- Click the **Print** button on the report window.

The user can also preview a report before printing. To display how each page will look like when printed:

- Click the **Preview** button on the report window.

To also include the Date and Time on the report:

1. Open Internet Explorer and go to **File** -> **Page Setup**.
2. Set the date and time either in the header, footer, or both by using the "&d" option for date and "&t" option for time.
3. Include the model or serial number in the header and footer by using the "&w" option.

Saving a Report

Description

To save a report:

- Click the **Save As** button on the report window. The windows standard file save dialog box opens to allow the user to enter a file name to save the report.

Radio Management

Login to Radio Management

This topic describe how to login to RM and provide troubleshooting tips if login is not successful.

How to Login

The user must log into RM to use the RM application. To log on to RM, follow these steps:

Step	Action
1	In the CPS menu, point to **File**.
2	Click Radio Management from the drop-down submenu. Alternatively, click on the  toolbar or type **Ctrl + Shift + M** **Results:** Settings dialog box appears. RM uses the last successful connection. By default, RM uses "localhost", which is the name of the default connection on the local computer.
3	Enter the appropriate "Port" number. **Results:** Settings dialog box appears.
4	Enter the appropriate Authentication Method/Type.
5	Click **OK**. **Results:** RM main screen appears. **Note:** Tick the “Always Remember” checkbox to store the settings and ensures the window will not appear again when launching the RMC.

If an error message appears, refer to Troubleshooting in Radio Management for possible issues.

Introduction to Radio Management

The Radio Management (RM) application allows the user to manage an entire fleet of radios that are connected to the Radio Management Client (RMC). A single archive can be edited and used as a template for multiple radios. Many individual radio identity settings can be reviewed or edited directly in a user friendly table without having to open or edit an archive. Changes to the template archive or individual settings can be scheduled as programming jobs to push out the new template Over The Air (OTA) or when radios are connected via a USB programming cable (see also Radio Connection Method). To make managing multiple radios more convenient, radios can be put into groups and information can be quickly searched and sorted as well.

RM introduces a client-server model to the traditional CPS whereby multiple RM enabled CPS clients can work on the same set of archive templates and individual radio identity settings from a centralized server.

RM consists of four major components of RM:

Item	Description
Radio Management Client (RMC)	Windows-based desktop application used to manage an entire fleet of radios that are connected to the RMC. Multiple installations of the RMC are supported.
RM Server	Server hosting the system database used to store archives, templates, individual radio identity settings, and job information. **Note:** Only one RM Server is supported per RM system network. The RM Server Utility of the RM Server is used to configure User Authorization access to the RMC application.
RM Device Programmer/RM Device Monitor	A Windows service that performs the read, writes, and switchover jobs that are scheduled in the Job view. Multiple installations of the device programmer are supported. The RM Device Monitor is the user-interface to configure the RM Device Programmer and to view its current operations.
RM Job Processor	A Windows service that processes all scheduled jobs. Multiple installations of the job processor are supported

The Radio Management system components can be installed on a single standalone computer. However, Motorola recommends a separate computer for the RM Server to experience superior power and flexibility. Installing the RM Server on a separate computer allows for multiple RM Clients to remotely share the stored data.

Additionally, many RM Device Programmers can be configured as USB programming stations on separate computers to increase programming power, or simply to make physical access more convenient. When a radio is connected to a programming station, the RM Device Programmer connects to the RM Server. If a job was scheduled for that radio, the radio is programmed with the latest updates.

AutoUpdate RM System Components

Radio Management provides the AutoUpdate Enable for Radio Management feature to ensure that the RM system components are always compatible with the RM Server.

RM1.x to RM2.0 Template Mode Data Upgrade Feature

RM1.x to RM2.0 Template Mode Data Upgrade Feature

Description

The purpose of this document is to describe the RM 2.0 Data Upgrade feature.

Overview

Customer data stored in Radio Management versions that are earlier than 2.0 can optionally be upgraded to the RM 2 system. In order to preserve any Radios, VA's, Firmware, Groups or other data from an earlier version of RM, the upgrade process must be performed.

RM will not be available for use until either the customer either upgrades the old data or chooses not to upgrade. The choice to upgrade will be presented to the first CPS user that clicks on the **RM** button.

Data that is used to recover radios to a previous version is optionally included in the upgrade process. Conversion of this data may take a significant amount of time, in which RM will not be available for use.

A Note About Data Recovery

In RM, a Radio can be set to a previous codeplug version by selecting an earlier Job from within the Radio History dialog and selecting the Recover context menu item. The recover process has some limitations:

• Once a Radio's firmware has been upgraded, all recover jobs that use an earlier firmware version are no longer valid.

• It is difficult to determine what properties of the Template that the radio references have been changed from the Radio History dialog, therefore making the recover feature less useful for older jobs. In many cases, it is easier to assign the last used Template to a Radio and write it than it is to go through the Recover process.

The point is that the recovery data is only marginally useful and the extra time that it will take to upgrade the recovery data (time that RM will not be available) is probably not worthwhile. This is why the upgrade of recovery data is optional.

The Upgrade Process

1. After the customer installs RM2.0, any time the customer clicks on the RM icon from CPS, the **Data Upgrade** dialog box will appear: Note that the option to upgrade data used to recover old radio versions is not checked by default. The fields and buttons descriptions are as follows:

Columns and Buttons	Description
OK	The upgrade will begin.
No and Close	Do not upgrade and return to CPS
Never	RMC will open without upgraded data and there will be no way to upgrade the data in the future

2. If you click the **OK** button, the **Data Upgrade** dialog appears. The **Data Upgrade** dialog contains a grid with each type of RM data that is to be migrated. The red dot in the upper right corner is the **abort** button which will stop the upgrade. The upgrade can be started from the beginning if the abort button is clicked. There is a status bar at the bottom of the grid.

3. RM begins upgrading data by type as described in the Job Name column (column 1) of the grid. The Summary column shows progress for each data type. The Status column will show a green checkbox when a data type upgrade is completed without any problems and a yellow checkbox if one or more of the items in the type could not be converted. It is possible to review the status of each item in the type by clicking on the Details column button. The Details column in Data Upgrade dialog shows a grid containing each Item, Status and Reason. The following table lists the description for each Item, Status, and Reason. The fields and buttons descriptions are as follows:

Columns and Buttons	Description
Item	Item is the name of the datum that was upgraded (in this example, it is Group Name).
Status	Status can be Completed or Failed.
Reason	If Failed, the Reason column will contain an explanation of why the item could not be upgraded.

4. After many items are upgraded, if there are any unused Templates (Templates that are not referenced by a radio), the **Unused Template** dialog will appear.
5. The customer can select which Templates to upgrade by checking the checkbox. By default, the checkboxes for all unused templates are checked.
6. Select **OK** to start upgrade of unused Templates and the **Data Upgrade** dialog will appear, upgrading Templates. **Note:** The next step in the upgrade process will be to schedule a "virtual" read job for each radio. The purpose of this read job is to combine the radio and template data together in a format that RM 2.0 can use. Since the normal RM Read Job mechanism is used for this process, the number of concurrent RM jobs should be set to one at this point in the RM Job Processor Config Utility, in order to avoid a race condition between scheduling of jobs and processing them. Selecting **Concurrent Job** checkbox is optional and the Concurrent Jobs value should only be changed if the customer; 1) has a lot of radios and 2) The "Schedule Upgrade Read Job" item progress bar moves very slowly.
7. After the Schedule Migration Read Job items is complete, a **Data Upgrade Completed** message will appear.
8. At this point, the customer can change the Concurrent Jobs to the maximum value in the RM Job Processor Config utility, which will restart the Job Processor automatically.
9. Data upgrade is now complete and two buttons appear as follows:

Columns and Buttons	Description
OK	Complete the upgrade process and Radio Management will appear
Clear Old Data	Clicking on this button will clear out all of the old RM data which was migrated to RM2.0 format. If the customer is low on disk space, then this button should be pressed.

10. The migration process scheduled a job to virtually read each radio. This Job appears as the newest Job in the Job View.

11. When the Migration Read Job completes, it will then be possible to modify Radios and Templates and to schedule Jobs. Until then, operations on radios that have not yet been read are not possible.

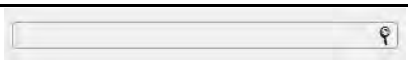
The Radio Management Client

The Radio Management Client

Description

The primary user interface for performing Radio Management (RM) functions is through the Radio Management Control (RMC), which is accessed via **File->Radio Management...** in the CPS menu.

Across the top of the RMC are all the available controls.

Icon	Functionality
	The Actions button contains all the functions and operations that RM supports in a convenient drop down list.
	The Schedule button becomes enabled when one or more radios in the main table are selected and allows Read, Write or Switchover jobs to be scheduled for immediate execution or to occur within some specified window of time.
	The Search window can be used to quickly filter the data shown in the table. Filtering helps to speed up searching of information the user is interested in.
	The View Selector toggles the set of information shown in the table to represent the Radio View when the radio icon is selected or the Job View when the hammer icon is selected.
	The Tasks tab provides a summary of operational jobs performed in the RMC.
	Beneath the row of buttons lies the navigation area to the left and the main table area to the right. The navigation area is primarily used to manage groups of radios (refer to Radio Groups) while the main table area shows information appropriate for the selected view.

The View Selector Tool

Description

The View Selector tool is used to display Radio View or Job View in the RMC. The following table lists the buttons and the descriptions for the View Selector Tool.

Buttons	Description
	Click this button to display the Radio View sets of information in the table.
	Click this button to display the Job View sets of information in the table.

The Search Tool

Description

The user can use the Search tool to filter the data shown in the table. The user can use the Search tool to find a specific radio or job quickly, or to narrow down the results shown in the table based on the characters, words or phrase entered as the search criteria.

Type in a character string, word, or phrase in the Search entry area. A row that contains any part of the word entered into the tool will remain. For example, if a column in a row contains the value "Ready" and "d" is entered in the tool, then the row will remain. Spaces between words in the search tool perform an "and" operation on the table. For example, if the user enters "f g" in the tool, then any rows that contains both "f" and "g" will remain.

The user can use the not symbol (~) in front of a word in the search tool to exclude any row that contains the word. For example, if the user enters "f ~g" in the Search tool, then any rows that contain the word "f", except rows that also contain the word "g", to remain.

Clicking on the Search History magnifying glass icon reveals a drop-down list of the most recent search criteria, these can be clicked-on for reuse of that same search.

Click the Clear Search **X** button to clear the search criteria and restore all the unfiltered information in the table.

The Tasks Tab

Description

Another way to view operational jobs (refer to Job Type Filter Buttons) is through Tasks tab. Task tab contains a summary of all operational jobs. An operational job is an operation that is performed on one or more RM objects that does not involve a programming operation (read, write). For example, if the user selects a hundred radios and select "Delete", the user isperforming an operational job.

A job appears in the Task View whenever the user performs an operation on an RM entity, with the most recent job at the top. The "view only" shows jobs that have occurred during the current RMC session

The following table shows the buttons and columns in the Tasks tab:

Buttons	Description
Job Name	The name of the operational job that was performed in the RMC.
Summary	A summary of the job performed in the RMC.
Actions	The type of operational jobs performed by the RM Server.
Clear	Clears the columns in the Tasks tab.

The user can pin the task bar so that it appears always. Other option includes Floating, Dockable, and Auto Hide.

Row Selection in Radio Management

Description

The selection of items is performed by hovering the pointer to the left of the relevant row and clicking the left mouse button. Hovering the pointer over the first column in a row changes the pointer from a standard pointer to a hand pointer. The SHIFT and CTRL keys are used to select a range of rows or selective rows. Selected rows are highlighted. The following figure shows an example of a selected row.

Arrange and Hide Columns in Radio Management

Description

Columns in the programming pane can be arranged by dragging any column by the header section to a new location. Once a column is selected and dragged, arrows appear above and below the header section to indicate the new location. The columns displayed in the programming pane can be hidden to show only those columns of data that are relevant. To hide columns, right-click over any column header to open the **Field Chooser** window and select only the relevant fields to display.

The Actions Menu

The Actions Menu

Description

The Action Menu provides a way to quickly access the most common functions of the Radio Management Client.

This menu is accessed by clicking the **Actions**  button from the two main Views:  and  .

Certain selections are not available from all Views. For more information about right-click menu of the Radio View, refer to Using Right Click Menu Features.

Menu Selections	Keyboard Shortcut	Definitions
New Radio...	Alt+N	Adds a new radio entry to the RM Server. See also Adding Radios.
Import Radios...	Ctrl+I	Allows the user to add a new radio entry to the RM Server database by importing a codeplug (.mc) file. Refer to Importing Radios.
Import > File to Grid	Ctrl+H	Imports a radio with a minimal amount of information into the RM Server. The default Comma Separated Value (**DEFAULT**.csv) file can be found in the "samples" folder where CPS is installed. Use Notepad or Excel to add Serial Number, Radio ID, CAI, OTAP Authentication Key ID, and OTAP Authentication Key Value for each radio to be imported. Refer to Importing Radios.
Import Templates...	Ctrl+shift+T	Opens the Import Templates dialog box. The user must access Template View to enable this menu selection.
Import Firmwares...	Ctrl+shift+F	Opens the Import Firmwares dialog box. The user must access Firmware View to enable this menu selection.
Import Voice Announcements...	Ctrl+shift+V	Opens the Import Voice Announcement Files dialog box. The user must access Voice Announcement View to enable this menu selection.
Import Text To Speech...		Opens the Import Text To Speech Files dialog box. The user must access Text To Speech View to enable this menu selection.
Import Language Packs...	Ctrl+shift+L	Opens the Import Language Packs Files dialog box. The user must access Language Packs View to enable this menu selection.
Export Radio...	Ctrl+shift+R	Exports the currently selected radio to an archive file (**.ctb**). Refer to the Export Window-Exporting Radio.

Export > Grid to File	Ctrl+shift+S	Exports all of the data shown in the Radio View to an Excel spreadsheet (**.xlsx**) format file. Refer to the Export Window-Exporting Grid to File.
Restore	Shift+R	Allows the user to roll back the selected radio's codeplug to a previous version.
Reset Identifiers	Ctrl+shift+I	Specifies the values that are used to communicate with the radio Over The Air (OTA). **Note:** Only use this feature if having trouble establishing communication with a radio.
Manage Templates	Alt+T	Opens the Manage Templates window. Refer to Manage Templates.
Manage Licenses (Radio Licenses)	Alt+R	Opens the RM License window. Refer to Manage Radio Licenses and Register Radio Licenses.
Manage Licenses (Application Licenses)	Alt+A	Opens the Application Licenses window. Refer to Manage Application Licenses.
Manage Firmware	Alt+F	Opens the Manage Firmware window. Refer to Manage Firmware.
Manage Language Packs	Alt+L	Opens the Manage Language Packages window. Refer to Manage Language Packages.
Manage Voice Announcements	Alt+V	Opens the Manage Voice Announcements window. Refer to Manage Voice Announcements.
Manage Text To Speech	Alt+E	Opens the Manage Text To Speech window. Refer to Manage Text To Speech.
Manage OTAP Keys	Alt+O	Opens the Manage OTAP Keys window. Refer to Manage OTAP Keys.
Manage Privacy Keys	Alt+Y	Opens the Manage Privacy Keys window. Refer to Manage Privacy Keys.
Manage RAS Keys	Alt+M	Opens the Manage RAS Keys window. Refer to Manage RAS Keys.
Manage Symmetric Keys	Alt+X	Opens the Manage Symmetric Keys window. Refer to Manage Symmetric Keys.
Settings	Alt+E	Opens the Settings window. Refer to Server Settings.
View Tasks	Ctrl+T	Opens the Tasks tab. Refer to The Tasks Tab.

New Radio Window

The Actions Menu's "New Radio" selection allows the user to add new radios to the RM Server's database. Once the Serial Number field is entered, all non-template radio-specific values may be read from the radio. Also see Importing Radios.

To launch the New Radio window, follow these steps:

Step	Action
1	Click **Radio View** .
2	From the **Actions**  button, click **New Radio...**. Alternatively, click **Alt+ N**. The New Radio window appears.

The New Radio window appears, prompting for the following parameters:

Included Columns and Buttons	Definitions
Serial Number	This is a required field. Serial Numbers are read from CPS codeplugs, however when adding a new radio from the Radio Management Client (RMC), the serial number is manually entered (refer to Adding Radios to Radio Management).
Radio ID	This is an optional field.
CAI	This is an optional field.
Radio Alias	This is an optional field.
Radio IP	This is an optional field.
OK button	Click this button to confirm parameters.
Cancel button	Click this button to cancel and return to Radio View.

The Import Window

The Import window allows the user to import codeplug data from radios or from **.csv** files. To launch the Import window, follow these steps:

Step	Action
1	Click **Radio View**  .
2	From the **Actions**  button, click **Import...**.

The Import window appears, prompting for the following parameters:

Menu	Definitions
Radios	Clicking this menu launches the Import Radios window. Refer to Importing Radios - How to Import Radios to Radio Management.
File to Grid	Clicking this menu launches the Import CSV window. Refer to Importing Radios - How to Import CSV Files to Radio Management.
Templates	Clicking this menu launches the Open Window to browse to the storage folder for the codeplug archive file(s) to be added to the RM Server. Refer to Managing Templates - Importing Templates.
Firmwares	Clicking this menu imports the available Firmware Package(s) from the install folder to the RM Server. Refer to Importing Firmwares
Voice Announcements	Clicking this menu launches the Open Window to browse to the storage folder for Voice Announcement file(s) to be uploaded to the RM Server. Refer to Importing Voice Announcement Files Manually.
Language Packs	Clicking this menu launches the Window with available Language Packs in the install folder to be uploaded to the RM Server.

The Export Window

The export window allows the user to export codeplug data from radios or from **.csv** files. To launch the Export window, follow these steps:

Step	Action
1	Click **Radio View**  .
2	From the **Actions**  button, click **Export...**.

The Import window appears, prompting for the following parameters:

Menu	Definitions

Radios	Clicking this menu launches the Export Radios window. Refer to Exporting Codeplug Data - Exporting a Radio.
Grid to File	Clicking this menu launches the Export CSV window. Refer to Exporting Codeplug Data - Exporting Grid to File.

The Print Window

The print window allows the user to print the contents of the Radio View. To launch the Print window, follow these steps:

Step	Action
1	Click **Radio View**  .
2	From the **Actions**  button, click **Print...**.

The Print window appears, prompting for the following parameters:

Menu	Definitions
Print Preview	Clicking this menu launches the preview dialog of the Radio View. The following table lists the icons and its definition

Icon	Keyboard Shortcut	Definition
Print	*CTRL + P*	Launches the Print dialog box.
Zoom In	*CTRL + =*	Increase the size of content.
Zoom Out	*CTRL + -*	Decrease the size of content.
100%	*CTRL + 1*	Displays the original size of content.
Page Width	*CTRL + 2*	Displays the page-width size of content.
Whole Page	*CTRL + 3*	Displays the whole page of the content.
Two Pages	*CTRL + 4*	Displays the full content in two pages.

Print	Clicking this menu launches the Print dialog box.

Manage Templates

The Manage Templates Window

Description

The Manage Templates feature allows the user to view list of templates, rename templates, edit templates, delete templates, select different language packs for templates, and upgrade firmware of templates. Template records are stored in the RM Server. Refer to Select Template Window for more

information about the selected template. Refer to Managing Templates for more information about the common tasks associated to this feature.

To access the Manage Templates window, click the Actions  button and select **Manage Templates** from the submenu. The Template View window appears.

Columns in the Template View

The following table shows the components of the Template View window.

Column	Description
Template	This is the name of the template. Templates can be renamed. See Managing Templates.
Model Number	This is the radio model number of the template. Templates can only be shared by radios with the same model number.
Template Firmware Version	This is the firmware version of the radio from which the template was created. **Notes:** • Because firmware information is stored in the radio, "N/A" (not applicable) will appear in this field when a radio is created from an imported archive. • Because a Radio Management template can apply to multiple radios, the template used for a "Write" job may not have been originally read from the current radio, therefore this Template Firmware Version may vary from this radio's actual Firmware Version at the time of the job.
Language Packs	The available language pack for each template. Language Packs determine the language that appears within a radio's display (see also Manage Language Package).
Voice Announcements	The number of Voice Announcement (***.mva**) files stored in the current template, and their total size in kBytes.
Template Codeplug Version	Allows the user to view-only the version number of each template / codeplug. **Note:** • Because a Radio Management template can apply to multiple radios, the template used for a "Write" job may not have been originally read from the current radio, therefore this Template Codeplug Version may vary from this radio's actual Codeplug Version at the time of the job.
Imported Date	This is the date that a template was added to the server. Whenever a template is edited and saved in the main CPS, a new version of the template is created. This is a simple form of version control that is required because there may be pending jobs or templates that need to still reference the original template.
In-Use(Radios)	The number of radios in the RM Server's database that share the current template.
Comments	The user can add any short description about this template row.

The Select Template Window

Description

The Select Template window allows the user to choose a different template to apply to the selected radios. The majority of a radio's codeplug features are contained within a template. This is very similar to how one radio's codeplug can be used as a template and cloned into another radio. The same template can be applied to multiple radios, which is why template-based programming is very efficient. Template codeplug values are modified from the main CPS (see Managing Templates). Non-template radio-specific codeplug values such as Radio IDs and IP Addresses are maintained on a per column basis in the Radio View of the Radio Management Client (RMC).

A radio's template is based on the archive that appears in the Template column plus the individual radio identity columns (Radio Alias, Radio ID, CAI, Radio IP, and Accessory IP). In this way, many radios can share the same Template and the individual settings can be viewed and edited directly in the table without having to open or edit an archive. Apart from the individual radio identity information, all other radio features are controlled by the template.

To launch the Select Template window, follow these steps:

Step	Action
1	From the **Radio View**  , select one or more radios (multiple rows may be selected by holding down the CTRL key and clicking on rows).
2	Right-click and choose **Select Template** from the pop-up menu. Alternatively, click **CTRL+M**.
3	In the Select Template window, select the appropriate template, then click the **OK** button. The selected template is then applied to the selected radio(s). **Note:** • Only those templates which are applicable to the selected radios will appear. For example, if the user has selected a portable radio, the window will not show mobile templates. The same restrictions for cloning apply to template selection so if the user cannot clone a radio from a template it will not be shown in the window. Select the desired template and click the OK button. The selected template is then applied to the selected radios.

The following table lists the components of the Select Template window.

Column	Description
Template	This is the name of the template. Templates can be renamed. See Managing Templates.
Model Number	This is the radio model number of the template. Templates can only be shared by radios with the same model number.
Template Firmware Version	This is the firmware version of the radio from which the template was created.
Template Codeplug Version	This is the codeplug version number of the radio from which the template was created.

Imported Date	This is the date that a template was added to the server. Whenever a template is edited and saved in the main CPS, a new version of the template is created. This is a simple form of version control that is required because there may be pending jobs or template that need to still reference the original template.
In-Use (Radios)	This is the number of radios using the template.
Comments	Allows the user to add comments on a per template file basis.

Manage Licenses

Manage Licenses

Description

The RM feature allows the user to add additional radios to the RM System. User can purchase the RM feature through the Motorola Online (MOL) website. If the purchase is successful, an Entitlement ID (EID) is provided. With this feature, the user specifies the number of radios they want to manage. The radio count associated with each EID is divided across multiple instances of RM Server.

To access the Manage Licenses window, click the Actions  button and select **Manage Licenses** from the submenu. To exit, click the **Radio View** or **Job View** button.

Navigation

There is a navigation pane on the left side of the screen for each of the Radio Management Licenses screen.

Column	Description
Manage Radio Licenses	Refer to Manage Radio Licenses Window.
Register Radio Licenses	Refer to Register Radio Licenses Window.
Register Application Licenses	Refer to Manage Application Licenses Window.

Manage Radio Licenses Window

Description

Manage Licenses allows the user to add additional radios to the RM System. The user can purchase the RM feature through the Motorola Online (MOL) website. If the purchase is successful, an Entitlement ID (EID) is provided. With this feature, the user can specify the number of radios that the user wants to manage. The radio count associated with each EID is divided across multiple instances of RM Server.

The user require radio licenses to use some features in the radio. To know whether or not a radio feature requires radio license, hover over the *Feature Status* column in the Radio View  .

To access the Radio Licenses window, click the Actions  button and select **Manage Licenses** . To learn more about the common tasks that the user can perform in Radio Licenses, refer to Managing Radio Licenses.

Columns in the Radio Licenses View

<table>
<tr><th>Column</th><th>Description</th></tr>
<tr><td>Serial Number</td><td>Allows the user to view-only the Serial Number of the radio for all licensed features. Serial Numbers are read from codeplugs.</td></tr>
<tr><td>Radio Alias</td><td>Allows the user to view-only the radio-user recognizable name of the radio for all licensed features. This field is only modifiable from the Radio Management Radio View.</td></tr>
<tr><td>Model Number</td><td>Allows the user to view-only the Model Number of the radio for all licensed features. Model Numbers are read from codeplugs.</td></tr>
<tr><td>Feature Name</td><td>Allows the user to view-only the Feature's name. In this case the Feature Name is read from the actual license.</td></tr>
<tr><td>Status</td><td>Allows the user to view-only the current status of all radio licenses. The following statuses are supplied by the RM Server.
<table>
<tr><th>Possible Statuses</th><th>Status Explanation</th></tr>
<tr><td>Registered</td><td>The feature is registered for the radio and changes triggered by registering the feature is discarded. The user can use the right-click menu to restore it to Ready for Activation.</td></tr>
<tr><td>Available for Registration</td><td>The feature is not registered for the device, the user can register the feature to the radio.</td></tr>
<tr><td>Ready for Activation</td><td>The feature is registered for the device, and is pending activation for the radio.</td></tr>
<tr><td>Activated - Purchased</td><td>This feature is purchased and activated for the radio.</td></tr>
</table></td></tr>
<tr><td>Comments</td><td>The user can add any short description about this radio license row.</td></tr>
</table>

Register Radio Licenses Window

Description

This window allows the user to submit software license assignment. The Device Licensing window presents a view containing an interface for entering in EIDs, a list for seeing all devices that meet the criteria of the EID license (the list of available devices), and a list for viewing all the devices that are to be associated with the license (the list of selected devices).

To access the Radio Licensing window, click the **Add**  button in the Radio License View. To learn more about the common tasks that the user can perform in Radio Licenses, refer to Registering Radio Licenses.

The following table lists the descriptions for the columns in the Query EID table.

Columns and Buttons	Descriptions
Text Field	
Entitlement ID text box	For the user to type in the EID to be queried.
Radio Licensing Summary	
IsSelected	Allows the user to select all Activation ID (AID) under the queried EID.
Entitlement ID	Allows the user to view-only the Entitlement ID row for each unique license.
Feature Name	Allows the user to view-only the name of each new feature.
Available	Allows the user to view-only the remaining number of feature licenses that are still available to be registered to a radio.
Purchased	Allows the user to view-only the original purchased number of feature licenses.
Available and Selected Radios Tables	
Serial Number	Allows the user to view-only the serial number of the device.
Radio Alias	Displays and allows the direct editing of a radio's Radio Name.
Model Number	Allows the user to view-only the model number of the device.
Buttons	
Query	Clicking this button displays the EID information in the table.
Clear All	Clicking this button deletes previously-queried EIDs.
Add All	Clicking this button adds all devices from the Available Devices table to the Selected Devices table.
Add	Clicking this button adds the selected device from the Available Devices table to the Selected Devices table.
Remove	Clicking this button removes the selected device from the Selected Devices table and back to the Available Devices table.
Remove All	Clicking this button removes all devices from the Selected Devices table to the Available Devices table.
Register	Click this button to register the features selected in the Query ID table to the devices in the Selected Devices table.

Manage Application Licenses Window

Description

The Application Licenses are features that apply to the entire radios in the RM system. The Application Licensing window allows the user to manage easily the Radio Management (RM) licenses for the RM Server that the Radio Management Control (RMC) is currently connected.

To access the Application Licensing window, click the Actions  button and select **Manage Licenses** from the submenu. Alternatively, if the **Register Application Licenses** button is already visible in the lower left-hand side of the window, click on that button. Click the **Radio View** or **Job View** to return to those views.

There are two sections in the Application Licensing window, which are:

- **Licensing Summary**
- **Register Application License**

Licensing Summary

The License Summary section displays the number of licenses committed and the total licenses used from the maximum allowable number.

Columns in the **Licensing Summary** section are as follows:

Column	Description
Feature Name	The name of the feature.
Status (Capacity/Used)	The total number of radio licenses committed to the currently connected RM Server. "Capacity" represents the maximum number of radios the user can have in the RM Server. "Used" represents the number of radio licenses the RM server is using. This represents the number of radios the user has in the RM Server. **Notes:** • Each system comes with ten free licenses. The user must purchase additional licenses through the Motorola ordering system. • The additional purchased licenses are added to the RM server via the Add Licenses from EID table.
Comments	An editable parameter where the user can put in any notes or comments about a radio.

Register Application License

The Regsiter Application License window allows users to query the number of licenses available on an EID (Entitlement ID) and to transfer a specified number of these license to the connected RM server. To launch the Register Application License window, double-click the desired Application License from Application License View.

Columns and buttons in the Add License from EID (Internet Connection Required) table are as follows:

Column and Buttons	Description
EntitlementID	Displays the Entitlement ID (EID) and allows the user to enter an EID.
Feature	The name of the feature.
Purchase	The number of radio licenses that the user purchased.
Available	The number of radio licenses available to be installed on the currently connected RM Server.
Quantity	Configures the number of purchased licenses the user wishes to install on the currently connected RM Server.
Clear button	Clicking this button clears the Entitlement ID (EID) information in the table.
Query button	Clicking this button displays the Entitlement ID (EID) information in the table.
Register button	After entering the quantity of purchase in the Enter Quantity column of the Add License from EID table, clicking this button causes the licenses for the number of radios entered to be transferred to the connected RM Server.

For more information on how to register your application licenses, refer to Registering an Application Feature.

For more information on how to manage the application licenses, refer to Managing Application Licensing.

Manage Resources

Manage Firmware

Description

The Manage Firmware feature allows the user to view automatically-imported versions of firmware stored in the RM Server. Each time a radio is added to the Radio Management (RM), if its firmware version is not currently stored in the RM Server it is automatically added, and is then available to other managed radios (see Adding Radios).

To launch this window, click the **Actions** button and click **Manage...Firmware.**

The following table shows the components of the Manage Firmware window.

Column	Description
Name	Allows the user to view-only the name of all available firmware versions.
Version	Allows the user to view-only the version number of all available firmware versions.
Size (KB)	Allows the user to view-only the file size of all firmware versions.
Imported Date	Allows the user to view-only the actual Date and Time that all firmware versions were imported.
Codeplug	Allows the user to view-only the name of the codeplug version.
In-Use (Radios)	Allows the user to view-only the number of radios using each firmware file.
In-Use Radios (Template Mode)	Displays the number of templates using each firmware file (see Select Template) in Template Mode.
In-Use Radios (Configuration Mode)	Displays the number of radios using each firmware file in Configuration Mode.
Comments	Allows the user to add comments on a per firmware file basis.

For more information on how to manage firmware, refer to Managing Firmware.

Manage Language Packs

Description

The Manage Language Packages feature allows the user to view automatically-imported Language Packages files stored in the RM Server and to manually import new versions of Language Packs to the RM Server. Older versions of the Language Packs are not retained by the Server. To launch this window, click the **Actions** button and click **Manage...Language Packs.**

There are two methods of storing Language Pack files to the RM Server:

Automatic Import: Each time a radio is added to the Radio Management Server, if its Language Packfiles are not currently stored in the RM Server they are automatically added, and are then available to other managed radios (refer to Adding Radios).

Manual Import: Using the Import Language Packs (refer to Importing Language Files Manually).

The following table shows the components of the Manage Language Packs window.

Column	Description
Language	Displays the name of each Language Package file.
Locale	Displays the language and the language's region.
Version	Displays the version number of each Language Package file.
Product Family	Displays the family that each Language Package file belongs to.
Size	Displays the file size of each Language Package file.
Imported Date	Displays the actual Date and Time that all Language Packages files were imported.
In-Use Templates and radios	Displays the number of templates and radios using each Language Package file (refer to Select Template Window).
In-Use Templates (Template Mode)	Displays the number of templates using each Language Package file (refer to Select Template Window) in Template Mode.
In-Use Radios (Configuration Mode)	Displays the number of radios using each Language Package file.
Comments	The user can add any short description on a per Language Package file basis.

Manage Voice Announcements

Description

The Manage Voice Announcement feature allows you to view automatically-imported Voice Announcement files stored in the RM Server, and to manually import new Voice Announcement files to the RM Server. To launch this window, click the **Actions** button and click **Manage...Voice Announcements.**

There are two methods of storing Voice Announcement files to the RM Server:

Automatic Import: Each time a radio is added to the Radio Management Server, if its Voice Announcement files are not currently stored in the RM Server they are automatically added, and are then available to other managed radios (refer to Adding Radios).

Manual Import: Using the Import Voice Files option (refer to Importing Voice Announcement Files Manually).

Note:

Voice Announcement files cannot be automatically or manually imported when a file name match already exists in the RM Server. This is true even if the duration and content of the file are different.

The following table shows the components of the Manage Voice Announcement window.

Column	Description
Name	Displays the name of each Voice Announcement file.
Size	Displays the size of each Voice Announcement file.

Imported Date	Displays the actual Date and Time that all Voice Announcement files were imported.
In-Use Templates and Radios	Displays the number of templates and number of radios using each Voice Announcement file.
In-Use Templates (Template Mode)	Displays the number of templates using each Voice Announcement file (see Select Template) in Template Mode.
In-Use Radios (Configuration Mode)	Displays the number of radios using each Voice Announcement file in Configuration Mode.
Comments	The user can add any short description on a per Voice Announcement file basis.

Manage Text To Speech Packs

Description

The Manage Text To Speech Packs feature allows the user to view automatically-imported Text To Speech Packages files stored in the RM Server and to manually import new versions of Text To Speech Packs to the RM Server. Older versions of the Text To Speech Packs are not retained by the Server. To launch this window, click the **Actions** button and click **Manage...Text To Speech Packs.**

There are two methods of storing Text To Speech Pack files to the RM Server:

Automatic Import: Each time a radio is added to the Radio Management Server, if its Text To Speech Pack files are not currently stored in the RM Server they are automatically added, and are then available to other managed radios (refer to Adding Radios).

Manual Import: Using the Import Text To Speech Packs (refer to Importing Text To Speech Manually).

The following table shows the components of the Manage Text To Speech Packs window.

Column	Description
Name	Displays the name of each Text To Speech Package file.
Size(KB)	Displays the size of each Text To Speech Package file.
Imported Date	Displays the actual Date and Time that all Text To Speech Package files were imported.
In-Use Templates and Radios	Displays the number of templates and number of radios using each Text To Speech Package file
In-Use Templates (Template Mode)	Displays the number of templates using each Text To Speech Package file (refer to Select Template Window) in Template Mode.
In-Use Radios	Displays the number of radios using each Text To Speech Package file.
Comments	The user can add any short description on a per Text To Speech Package file basis.

Manage Symmetric Keys

The Manage Symmetric Keys feature allows the user to view the symmetric keys information, add, edit, and delete the keys. To launch this window, click the **Actions** button and click **Manage...Symmetric Keys.**

The table below shows the components of the Symmetric Keys page.

Column	Description
Key ID	This is an index key that is mapped to the encryption key used for scrambling.
Key Alias	This is the name to identify a symmetric key.
Key Value	This is an encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels.
In-Use Templates and Sets	This is the number of templates and sets using the key.
In-Use Templates (Template Mode)	This is the number of templates using the key in Template mode.
In-Use Sets (Configuration Mode)	This is the number of templates using the key in Configuration mode.
Comments	the user can add any short description about this symmetric keys row.

For more information on how to add, edit, and delete a Symmetric key, refer to Adding, Editing, and Deleting a Symmetric Key.

Manage RAS Keys

Description

The Manage RAS Keys feature allows the user to view the Restricted Access to System (RAS) keys information, add, edit, and delete the keys. To launch this window, click the **Actions** button and click **Manage...RAS Keys.** All radios and repeaters have default RAS Key. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000. To disable RAS, go to Authentication RAS and select *Disable* for repeaters. For radios, go to RAS Alias, select channel in the radio and browse to *None.*

Column	Description
Key Alias	This is the name to identify a RAS key.
Key Value	This is the value used to produce a RAS authentication key for the radio.
In-Use Templates and Sets	This is the number of templates and sets using the key.
In-Use Templates (Template Mode)	This is the number of templates using the key in Template mode.
In-Use Sets (Configuration Mode)	This is the number of sets using the key in Configuration mode.
Comments	The user can add any short description about this RAS key row.

For more information on how to add, edit, and delete a RAS key, refer to Adding, Editing, and Deleting a RAS Key.

Manage Privacy Keys

Description

The Manage Privacy Keys feature allows the user to view the privacy keys information, add, edit, and delete the keys. To launch this window, click the **Actions** button and click **Manage...Privacy Keys.**

Column	Description
Key ID	This is an index key that is mapped to the encryption key used for scrambling.
Key Alias	This is the name to identify a privacy key.
Key Value	This is an encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels.
In-Use Templates and Sets	This is the number of templates and sets using the key.
In-Use Templates (Template Mode)	This is the number of templates using the key in Template mode.
In-Use Sets (Configuration Mode)	This is the number of sets using the key in Configuration mode.
Comments	The user can add any short description about this privacy key row.

For more information on how to add, edit, and delete a Privacy key, refer to Adding, Editing, and Deleting a Privacy Key.

Manage OTAP Keys

Description

The Manage OTAP Keys feature allows the user to view the radio Over-the-air-Programming (OTAP) Keys information, add, edit, and delete the keys. To launch this window, click the **Actions** button and click **Manage...OTAP Keys.**

Column	Description
Key ID	This is the ID together with the key value used to produce an OTAP authentication key for the radio.
Key Alias	This is the name to identify an OTAP key.
Key Value	This is the value together with the key ID used to produce an OTAP authentication key for the radio.
In-Use Templates and Sets	This is the number of templates and sets using the key.
In-Use Templates (Template Mode)	This is the number of templates using the key in Template mode.
Comments	The user can add any short description about this OTAP key row.

For more information on how to add, edit, and delete an OTAP key, refer to Adding, Editing, and Deleting an OTAP Key.

The Settings Window

The **Settings** window allows the user to view or modify communications between the RMC and the RM Server's database, and allows the user to "Recover" Application Licenses and Radio Licenses.

Select **Actions** → **Settings** to launch the **Settings** window.

Tab	Description
Connection	Allows the user to view or modify communications between the Radio Management Client (RMC) and the RM Server's database. Whenever this RMC is launched, it automatically attempts to connect to the RM Server's database using these settings. See Connection Settings.
Licenses	Allows the user to recover radio licenses and application licenses to the RM Server. See Licenses Settings.
User	Allows a non-domain user to change the password. This tab is disabled if the user has logged into RM using Windows Authentication. This tab is enabled when the RMC and RM Server are on different Windows domains. See User Settings.
Button Bar Mode	Specifies the types of mode available for the button bar: Icon mode or Text Mode.

Database Size Info	Specifies the size of the RM Server database.

Connection Settings

Connection Settings allows the user to view or modify communications between the Radio Management Client (RMC) and the RM Server's database. Whenever this RMC is launched, it automatically attempts to connect to the RM Server's database using these settings. Connection Settings is launched from the **Actions** menu by selecting **Settings** → **Connection**.

The table below shows the components of the Connection Settings tab.

Included Fields and Buttons	Functionality
Address	Allows the user to view or modify the IP (Internet Protocol) Address part of the Address-Port combination that is used by the Radio Management Client to communicate with the RM Server's database. This address can be specified by either the IP (Internet Protocol) Address or the DNS (Domain Name System) name.
Port	Defines the Port part of the IP (Internet Protocol) Address-Port combination that is used by the RMC to communicate with the RM Server's database. The default Port value of 443 is used for most deployments. **Note:** • Previous releases of Radio Management used port 8675. Port 8675 is no longer supported as the default port for establishing a connection to the RM Server.

Note

- If the Address and Port fields are set correctly and the RM Client cannot connect to the RM Server, see the Radio Management Connection Problems troubleshooting section.

Licenses Settings

Licenses Settings allows the user to recover Application and Radio Licenses to the RM Server. **Licenses Settings** is launched from the Actions menu by selecting **Settings** → **Licenses**.

Setting	Functionality
Recover Application Licenses	**Only with the "From EID" (Entitlement ID) Method...** When needing to re-image or reformat your RM Server's hard-drive, the "Recover Application Licenses" feature allows the user to recover all radio Application Licences to the RM Server: 1. Verify that the user have an Internet connection. 2. "Enter your Entitlement ID" in the entry field. 3. Select the "Recover Application Licenses" button. 4. Verify in the Application Licences "Available" to transfer to server field that the proper amount of licenses have been retrieved from Motorola Solutions.
Recover Radio Licenses	When needing to re-image or reformat your RM Server's hard-drive, the "Recover Radio Licenses" feature allows the user to recover all Radio Licences to the RM Server.

	1. Once the radio is brought back into Radio Management this "Recover" can be run. 2. Once this Recover process is complete, the user must also run the Manage Radio Licenses "Restore" to order to change the Radio Licences from a Status of "Registered" to "Ready for Activation". **Note:** • To run the Recover Radio Licenses, go to Actions → Manage → Licenses → Radio License View, right click at the desired radio, and select **Restore Licenses**.

User Settings

User Settings allows the user to change the password stored in the RM Server. **User Settings** is launched from the **Actions** menu by selecting **Settings** → **User**.

Note:

- Password value must be at least 15 characters and inclusive of one lowercase and one uppercase alphabetic characters as well as one non-alphanumeric character.
- Password ID allows up to 10 characters that contains the following characters: '0-9', 'A-Z', 'az', '-', and '_'.

Setting	Functionality
Address	Allows the user to only view the IP (Internet Protocol) Address portion of the Address-Port.
Port	Allows the user to only view the Port portion of the IP Address-Port.
User Name	Allows the user to only view the name of the user.
Current Password	Allows the user to type-in the current password.
New Password	Allows the user to type-in the new password.
Confirm New Password	Allows the user to retype the new password.
Change Password button	Click this button to apply the new password.
Cancel button	Click this button to cancel the setting.

View Tasks

The **Tasks** informational window allows the user to view operational jobs.

The Task window contains a summary of all operational jobs. An operational job is an operation that is performed on one or more RM objects that does not involve a programming operation (read, write). For example, if the user selects a hundred radios and select **Delete**, the user is performing an operational job.

A job appears in the **Tasks** window whenever the user performs an operation on an RM entity, with the most recent job at the top. The Task window only shows jobs that have occurred during the current RMC session.

The **Tasks** informational window is launched from the Actions menu by selecting **View Tasks**.

The table below shows the components of the Connection Settings tab.

Column	Description
Job Name	The name of the operational job that was performed in the RMC.
Created Time	The time of the operational job that was created in the RMC.
Summary	A summary of the job performed in the RMC.
Actions	The type of operational jobs performed by the RM Server. A job can be canceled before it is completed by clicking the X.

The Schedule Job Window

Scheduler in Radio Management

The **Scheduler** menu opens the **Schedule Job** window. The **Schedule Job** window allows the user to schedule one or more radios for a Read, Write, or Factory Reset. Jobs can be scheduled to occur immediately or within a specific window of time. See Scheduling Jobs in Radio Management.

Note:

- The **Scheduler** menu is enabled in **Radio View** when one or more radios are selected from the programming pane, have a valid template, and are not waiting for a Job process.

The Job Schedule window contains fields that allow the user to configure the following settings:

Setting	Functionality
Job Type	The following job types are supported: • **Write**: The template data for all selected radios are written to the radios. If the **No Switchover** check box is checked, the radio is not automatically switched over after completion of the Write operation. The **No Switchover** option allows the user to deploy a template to a number of radios and postpone the activation of the template until a Switchover job is sent. • **Read**: The selected radios are read and the template information is updated in the Server.
Connection Method	The following connection methods are supported: • **USB + Wireless (LAN):** Connections are made via a USB port or a Wireless LAN in the RM Device Programmer. This connection method is required for the initial programming of devices. Programming includes template, firmware, feature activation, and device resources (language packs, voice packs, and more). • **Over the air:** Radios can be read or written to through a OTAP wireless connection on RM Device Programmers configured for Over The Air. • **Any**: The RM Device Programmer allows connections to radios using any of the supported connection method types via a control station. Whichever connection that is made first is used to execute the job.
Job Name	Selects a name for the current job. It is recommended that a meaningful name is entered, such as “Wired write for Firestation #3” so that the job can be more easily identified in the Job View.

Time Zone	Selects the time zone in which the current job event will execute in a Device Programmer. This selection applies for the current radio or radios selected for this job(s) in the Schedule Job window.
Start After	Selects the date and time for the start of the job interval. This parameter is optional, and if not specified, the job will execute as soon as possible.
End Before	Selects the date and time for the end of the active job interval. If a scheduled job has not started by this time, the job expires and cannot be executed. This parameter is optional and if nothing is entered, the job will not expire.

Note

- When *Read* is the selected **Job Type**, the Device Programmer retrieves the codeplug of each radio associated with the job. Once the codeplug is uploaded to the Server, the previous template association (see Using Templates) for the selected radio(s) is overwritten.
- When *Write* is the selected **Job Type**, and the **Connection Method** is *Over the Air*, very specific OTAP rules are in force.
- A job's Start After and End Before range defined in this window are also subject to Server to Device Programmer polling (for radio presence) at 30 minute intervals; therefore, the user must define a job Start and End Time range that allows for this 30 minute polling interval.
- Jobs stored in the Server (waiting for radio presence to be detected) use the Time Zone of the Server.
- A radio cannot be selected for more than one job at a time.

Scheduling Jobs in Radio Management

The scheduling of jobs is performed within the **Schedule Job** window of **Radio View**. Jobs can be scheduled to occur immediately or within a specific window of time.

Note:

- The RM Device Programmer processes scheduled jobs when the presence of the radio is detected.

Caution	• When upgrading the radio firmware and modifying the templates, using the USB + Wireless (LAN)connection method, it is highly recommended to perform two separate write jobs. Performing these tasks in a single write job causes the radio to reset twice. • First, upgrade the radio firmware by scheduling a write job. When the firmware write job is complete, register the new feature, configure the radio settings for the new feature, and then schedule a second write job.
IMPORTANT	The user must perform a schedule read before performing a schedule write for new template to take effect.

Procedure:

1	From **Radio View**, select the relevant radio or radios.
2	Select the **Scheduler** menu. **NOTICE**: The **Schedule Job** window can also be opened by right-clicking on the selected radios and selecting **Schedule Job** from the pop-up menu or by selecting the **Schedule job** shortcut above the search field
3	From the **Job Type** section, perform one of the following actions: • Select **Write** to schedule a write job for one or more radios. • Select **Switchover** to schedule a switchover job. • Select **Read** to schedule a read job.
4	Select the preferred **Connection Method**. The following connection methods are supported: • **USB + Wireless (LAN)** • **Over the Air** • **Any** See Scheduler in Radio Management for connection method descriptions. **Note**: • When **Write** is the selected Job Type, and the Connection Method is **Over the Air**, specific OTAP rules are enforced. • Language Packs can only be sent Over The Air in combination with firmware. If the firmware does not need to be updated, a USB connection is required. • The connection method configured for a Scheduled Job must match the connection method configured for the RM Device Programmer. See RM Device Programmer Settings.
5	Optional: To **Suppress ARS after Switchover**, enable the check box.
6	Optional: If **Suppress ARS after Switchover** is enabled, define the Switchover Timer.
7	In the **Job Name** field, enter a relevant name for the job.
8	In the **Time Zone** field, select the relevant time zone from the drop-down list.
9	In the **Start after** fields, select the start date (in day-month-year format) and start time (in a 24-hour format). **Note:** • Clicking in the date field, enables a drop-down arrow that allows the user to select the date from a calendar. The time can be manually entered or selected, in one minute increments, using the up and down arrows.
10	In the **End after** fields, select the end date (in day-month-year format) and end time (in a 24-hour format).
11	Click **OK**.

The Radio View

The Radio View

The **Radio View** window displays radio-specific data for all radios currently stored in the Radio Management Server. See The Radio Management (RM) Server.

When the **Radio View** icon is selected, a list of radios, either imported from codeplugs or read into the RM server, are listed in the table. See Radio View Table.

The following operations are supported in **Radio View**:

- Add and Import Radios
- Edit and Select Templates
- Schedule and Cancel Jobs
- Group Radios

Each row in the table represents a unique radio combination. The RM Job Processor automatically validates and stores all data edits.

When a radio is selected from the list, the programming pane displays shortcuts to **Show Details, Edit Template, Select Template**, and **Schedule Job**. See Row Selection in Radio Management.

The columns displayed in the programming pane can be arranged and hidden to show only those columns of data that are relevant. See Arrange and Hide Columns in Radio Management.

Radio View Table

The radio fields that are listed in columns in the table can be customized by the user. By default, the more common fields are displayed. Fields such as **Serial Number, Radio Alias, Group, Modified, Job Status**, and so on. See Radio View Table.

To see all the fields that are displayed for each radio, select and drag the scroll bar at the bottom of the table to the right. The user can also add and remove field columns from the table by right-clicking on any column heading. See Arrange and Hide Columns in Radio Management.

Operational Buttons in Radio View

The operational buttons allows the user to add, import, delete, or export data to and from the RM Server database. If an operational button is not enabled for the selected row, then the requested operation is not supported.

Button	Description
	The Add button is used to add items to the table.
	Allows the user to add a radio entry to the RM Server database by importing a codeplug byte array (.xpba) file. In some of these buttons, there are two options for the user to create multiple sets and copies. The user can use the **Add Copies** whenever these options are available.

	The Edit button is not supported. Radio properties are unique to each radio and are not editable.
	The Delete button is enabled when a radio is selected and used to remove the selected item from the RM Server database.
	The Grid to File (export) button is enabled when a radio is selected and used to export the radio data for the selected rows to a comma-delimited CVS file.
	The File to Grid (import) button is used to import radio data from a comma-delimited CVS file.

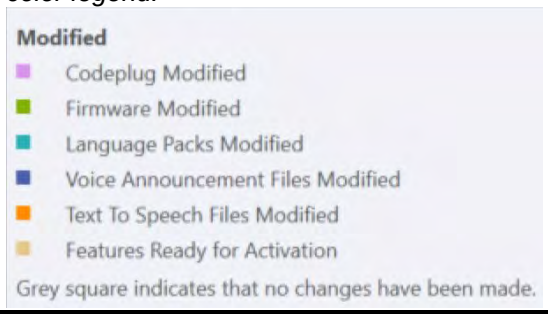
Right-click Operations for Radios

The following operations can be performed on a selected radio:

Operation	Description
Show Details	Displays Radio Information, Job History, and Feature Sets for the selected radio. This operation is also available as a shortcut located above the search field.
Delete	Deletes the selected radio from the RM Server database.
Select Group	Allows the user to assign the selected radio to a radio group. See Radio Groups.
Edit Template	Allows the user to edit the selected template.
Select Template	Allows the user to select a template to edit.
Discard Changes	Allows the user to undo changes made.
Schedule Job	Launches the **Schedule Job** window that allows the user to create a read or write programming job for the selected radio or radios.
Cancel Job	Allows the user to cancel a job for the currently selected radio.
Complete Job	Job is completed.
Export Radio	Allows the user to export the selected radio or radios to a codeplug byte array file (*.xpba) format
Export Grid to File	Allows the user to export the selected radio or radios to a comma delimited file (*.csv) format.
Export GWCFG	Allows the user to export configuration files from the **Configuration View**.
Modify Radio Password	Launches the Modify Radio Password window that allows the user to override the current codeplug password for the template for the radio.

Radio View Table

The following table defines all the column fields that are supported in **Radio View**.

Column	Description	Notes
Serial Number	*Displays the serial number of the radio stored in the RM Server.*	Read-only.
Radio Alias	*Displays and allows the direct editing of the Radio Name.*	This field can be edited.
Template	*A unique file that resides on the RM Server and contains all the assigned Sets for the radio.*	
Group	*See Radio Groups*	
Modified	*Displays the color-based indicators alerting the user of a certain modified status for the radio. The user can hover on the word "Modified" in the column header to retrieve the color legend:* 	
Job Status	*Displays the non-editable status of the radio and any current job that may be associated with the radio.*	
Job Name	*Displays the non-editable name given to the Job when the job was created. The value is not editable once a Job has been created.*	
Model Number	*Displays the non-editable model number of the radio.*	Only radios with the same model number may share a template.
Configure Password Per Device	*Displays whether or not a password was set for the radio. The password is required to edit the template of a radio.*	
Check for Password	*Displays the configured access (**Read** or **ReadWrite**) for radios supporting the **Modify Radio Password** feature. If no password is assigned to the radio, then None is displayed.*	Read-only.
Radio ID	*Displays and allows the direct editing of a radio's Radio ID. This field supports fill up/down operation (Series and Copy).*	
CAI	*Common Air Interface is editable and is used by radios during digital communications. This field supports fill up/down operation (Series and Copy).*	
WAVE User Name	This text box allows the user to enter the WAVE™ user ID. This is a radio-wide feature.	
WAVE Password	This text box allows the user to enter the WAVE password. This is a radio-wide feature.	

Radio IP and Accessory IP	*The Accessory IP is the IP address that is given to a computer that has a radio plugged into it via USB. It is not directly editable but is derived from the Radio IP which is editable. Changing the Radio IP will cause the Accessory IP to change automatically.*	
Firmware Version	*Displays the non-editable firmware version of the radio.*	Firmware versions generally control which features are available on a radio. Typically a newer firmware version will support new or improved features than an older version.
Codeplug Version	*Displays the non-editable codeplug version of the radio.*	Codeplug versions describe the format of the template information that is programmed into a radio and are generally tied to specific firmware versions.
Feature Status	*Displays the non-editable list of software features and their statuses, whether the listed feature is free or available for purchase.*	
Comments	An editable parameter where the user can put in any notes or comments about a radio. For example, the user could use this to enter a customer's name. Since the information entered is searchable, it would provide a quick way to look for all the radios for a specific customer. This field supports fill up/down operation (Copy).	

The Radio Groups

Description

Radios listed in the table can be arranged into groups. From the navigation pane in Radio View, the user can create and manage radio groups. Selecting **All** displays all radios in the system regardless of the group assignment. Radio groups can be created, deleted, or renamed. The assignment of radios to a radio group is performed under the **Group** column for each radio listed in the table. See Creating and Managing Radio Groups.

Note:

- A radio can only be assigned to one radio group. Radio groups are visible in **Radio View**.

Selection	Description
New Group	Allows the user to add a group.
Delete	Allows the user to delete an existing radio group. When a radio group containing

	radios is deleted, a confirmation window opens and warns the user that only the radio group will be deleted. All radios assigned to the group are removed from the group and display **None** under the **Group** column in the table.
Rename	Allows the user to rename an existing radio group.

The Radio Details Window

Description

The Radio Details window allows the user to view the status of all jobs associated with a radio. The Radio Details window is commonly used to see all jobs that were run for a given radio and can also be used to restore a radio to a previous codeplug version (see Restore Button).

Launch the Radio Details window:

1. From the Radio View, select any radios.
2. Right-click and select **Show Details.**.

The following table shows radio information displayed above the Radio Details table:

Column	Description
Alias	Displays and allows the direct editing of a radio's Radio Name.
Serial Number	Displays non-editable radio serial numbers.
Model Number	Displays the non-editable model number of the radio.
Last Programmed Date	Displays the last date and time at which the radio was programmed.
Job Count	Number of jobs in the table.
Comments	Displays the comments that the user has input from the Radio View.
History	Contains information about all of the programming jobs (read or write) that have been run on the radio. The columns in this grid are reduntdant to the Job Details in Job View, but are also located in the History column so that the user can view all jobs that have been run for a specific radio.
The Edit Tools	The Edit buttons allows the user to quickly add, edit, delete or export data.
Search Tool	The Search window can be used to quickly filter the data shown in the table. Filtering helps to speed up searching of information the user is interested in.

The following table shows the buttons and columns in the Radio Details window:

Columns and Buttons	Description
Job Name	The name of the job as entered in the Schedule Job Window.

<table>
<tr><td>Executed Date</td><td>The date that the job was completed. This column will be blank if the job has not executed.</td></tr>
<tr><td>Job Status</td><td>The following table lists the possible job statuses and its explanations

<table>
<tr><th>Possible Statuses</th><th>Status Explanation</th></tr>
<tr><td>Pending</td><td>A Scheduled Job has not started, due to a radio not being detected on a Device Programmer or the Job Processor is busy processing another job.</td></tr>
<tr><td>Waiting</td><td>The radio has been detected on a Device Programmer. However the job is waiting to be manually started on the Device Programmer Monitor (see the Automatically Process Jobs parameter).</td></tr>
<tr><td>Running</td><td>The job for this radio has started and is in progress.</td></tr>
<tr><td>Cancelled</td><td>The job has been canceled.</td></tr>
<tr><td>Performed</td><td>The job has successfully completed.</td></tr>
<tr><td>Failed</td><td>The job has failed. The reason for the failure is described in the Failure Reason column.</td></tr>
<tr><td>Expired</td><td>The job’s End Time has passed and the programming operations of the radio has not been executed.</td></tr>
</table>
</td></tr>
<tr><td>Job Type</td><td>The type of job as selected in the Schedule Job Window. It can be Read, Write, Write with Switchover, or Switchover.</td></tr>
<tr><td>Creation Date</td><td>The date the job was created by pressing OK in the Schedule Job Window.</td></tr>
<tr><td>Start Time</td><td>The date and time entered into the Start After parameter in the Schedule Job Window.</td></tr>
<tr><td>End Time</td><td>The date and time entered into the End Before parameter in the Schedule Job Window.</td></tr>
<tr><td>Codeplug File Name</td><td>The name of template that was used to write the radio.</td></tr>
<tr><td>Firmware Version</td><td>The Firmware Version of the radio.</td></tr>
<tr><td>Codeplug Version</td><td>The Codeplug Version of the radio.</td></tr>
<tr><td>Restore button</td><td>Allows the user to roll back the selected radio's codeplug to a previous version. The Schedule Job window is automatically opened to allow the user to schedule a write job. If the user cancels the job, the radio returns to the state it was before this button was clicked. Restore capability is based on a radio’s current Firmware Version being backward compatible to the archived Codeplug Version.</td></tr>
<tr><td>Cancel button</td><td>Click this button to close the Radio Details window and return to the Radio View.</td></tr>
</table>

The Job View

The Job View

Description

The Job View displays historical information related to all jobs processed and stored in the RM Server. The initial view displays all jobs performed in the system. The View by selection allows the user to filter all jobs by Programming Jobs or Operational Jobs.

Programming Jobs

This selection displays jobs that were processed as either Read, or Write jobs in Schedule Job Window.

Operational Jobs

This selection displays jobs that are operations performed in the RM Client such as importing and exporting radios, scheduling jobs, selecting and deleting template, as well as many others.

The following table shows the Job View fields:

Item	Description
Job Name	The name of the job that was entered in the Schedule Job Window.
Job Type	The type of the job (Read, Write or Switchover) that was entered into the Job Type parameter of the Schedule Job Window.
Created Time	The date and time that the job was created in the Schedule Job Window.
Start Time	The date and time that the job is scheduled to start that was entered in the Start After parameter of the Schedule Job Window. If nothing is entered in the Start After parameter, this parameter will be blank.
End Date	The date and time that the job is scheduled to end that was entered in the End Before parameter of the Schedule Job Window. If nothing is entered in the End Before parameter, this parameter will be blank.

<table>
<tr><td>Actions</td><td>Click "-->" to view the radios that were scheduled within the job container. Each row represents the radio scheduled within the Job. The following table lists the fields for the individual radio within the Job:

<table>
<tr><th>Column</th><th>Description</th></tr>
<tr><td>Item</td><td>The name of the file that was selected as part of the job.</td></tr>
<tr><td>Job Status</td><td>The status of the radio that was selected as part of the job. The following table lists the possible statuses and its explanation.

<table>
<tr><th>Possible Statuses</th><th>Status Explanation</th></tr>
<tr><td>Pending</td><td>A Scheduled Job has not started, due to a radio not being dete Processor is busy processing another job.</td></tr>
<tr><td>Waiting</td><td>The radio has been detected on a Device Programmer. Howeve Device Programmer Monitor.</td></tr>
<tr><td>Running</td><td>The job for this radio has started and is in progress.</td></tr>
<tr><td>Cancelled</td><td>The job has been canceled.</td></tr>
<tr><td>Performed</td><td>The job has successfully completed.</td></tr>
<tr><td>Failed</td><td>The job has failed. The reason for the failure is described in the</td></tr>
<tr><td>Expired</td><td>The job’s End Time has passed and the programming operation</td></tr>
</table>
</td></tr>
<tr><td>Executed Date</td><td>This is the actual date and time for all the radio job within this Job View.</td></tr>
<tr><td>Reason</td><td>This is the reason for all individual radio job failures within this Job View. The Failure Reason is blank if the radio programming operation completes successfully, otherwise a description of why the operation could not be completed appear.</td></tr>
</table>
</td></tr>
<tr><td>Total</td><td>Display the amount o radios that were scheduled within the job container.</td></tr>
<tr><td>Completed</td><td>Displays the total of completed job(s) in the container.</td></tr>
</table>

Arranging Columns in Radio Management

Columns in the table can be arranged by dragging any column by the header section to a new location. Once a column is selected and dragged, arrows appear above and below the header section to indicate the new location.

The RM Server

RM Server

The Radio Management (RM) Server is the central database that stores radio data from read/write operations and job operations in the Radio Management (RM) system. Only one RM Server is allowed per system.

The functions of the RM Server are as follows:

- Stores individual radio identity data, read from the radio or codeplug.
- Stores radio data that can be edited with the Radio Management (RM) Client.
- Stores job details created with the Scheduler in the RM Client.
- Stores all radio-specific read, write, and switchover history that can be viewed in **Radio View**.
- The RM Job Processor and RM Device Programmer use the data in the RM Server to complete the job. Once a job is complete, the job status is stored back into the RM Server.

Notes:

- The RM Server Utility is a component of the RM Server and is always available to view or manage certain server behaviors and database-related jobs. See The RM Server Utility.
- The RM Server Utility is used to configure User Authorization to access the RM Server from the RMC Client.
- Date and time information stored in the RM Server uses the time zone of the server.
- Radio presence detected by the RM Device Programmer causes the RM Server to transfer job instructions and/or job data for relevant **Read**, **Write**, and **Switchover** jobs.
- Because validation of codeplug and template data can be very CPU intensive, it can be beneficial to isolate the RM Server, the Radio Management Client, the RM Device Programmer, and the RM Job Processor on separate CPU devices.
- Many RM Job Processors may exist on several different computers/devices, all of which are connected to the same RM Server.
- Many RM Device Programmers may exist on several different computers/devices, all of which are connected to the same RM Server.
- Many Radio Management Clients may exist on several different computers/devices, all of which are connected to the same RM Server.Date and Time information stored in the RM Server uses the Time Zone of the Server.

See Also

- RM Server Utility
- RM Server Common Tasks

RM Server Utility

To launch the RM Server Utility, from the Window's C Drive ➔ Program Files (x86) ➔Motorola ➔ RM Server Utility ➔ RM Server Utility.

Description

The RM Server Utility allows you to view the current RM Server status and settings, as well as manage RM Server multi-computer access and database backup related tasks.

Navigation

There is a navigation pane on the left side of the screen.

Columns	Description
Status	Refer to RM Server Status.
Database Settings	Refer to RM Server Database Settings.
User Authorization	Refer to User Authorization.
Machine Authorization	Refer to Machine Authorization.
Network Settings	Refer to Network Settings.
Options	Refer to Options.

For the common tasks, refer to RM Server Common Tasks.

RM Server Status

Description

Allows the user to see the servers current stop or start status, as well as stop and re-start the running of the server. The version of the RM System and the RM Server is able to be viewed.

RM Services

The following RM services are supported:

Columns and Buttons	Description
Discovery Server	This service provides authentication functions to Radio Management.
Job Server	This service handles connections to RM Device Programmers and RM Job Processors.
RM Server	This service handles connections to Radio Management Clients
RMServer DB	This service identifies the location and version for the Radio Management database.

Status Table

Each RM service is displayed in a table structure with the following columns:

Columns and Buttons	Description
Service Name	Displays the name of the server.
Location	Displays the location of the server.
Registered Status	Displays the registered of the server. This column can display Available, Unavailable, or Unknown.
Service Status	The status of the server that was selected as part of the job.
Version	Displays the version number of the server.

Status Buttons

The following buttons are supported:

Columns and Buttons	Description
Stop All/Start All button	The **Stop All** button is used to refresh all of the RM services on the computer. This button physically resets all server connections and should only be used when there are no jobs running. Once the services are stopped, the text on the button changes to **Start All**. The **Start All** button restarts all of the RM services.
Refresh button	The **Refresh** button updates the table display to show current settings

RM Server Database Settings

Description

The Database Settings selection is used to back up and restore the RM database as well as clear any RM database locks.

Database Backup

The Database Backup section is used to back up the RM database. This function is used to back up the RM database when other backup capabilities are not available. The RM database cannot be backed up using this function when deployed on a remote database server.

When performing a back up function, do not make updates using the Radio Management application as it may affect the database records. See Backing Up the RM Server Database.

The following fields and buttons are used to perform the backup function:

Columns and Buttons	Description
Destination	Defines the name of a Windows folder, either on the local computer or the full path of a network share.
Browse button	Allows the user to browse for a folder location on the computer or network.
Enable Password Checkbox	Allows the user to enable the database backup password feature. When enabled, the Password field becomes visible and allows the user to add a password for the database backup.
Backup button	Performs the backup function for the RM database to the specified destination. A confirmation message is displayed when selected.

Database Restore

The **Database Restore** section is used to restore the RM database from a backup. See Restoring the RM Server Database.

The following field and buttons are used to perform the restore function:

Columns and Buttons	Description
Source	Defines the name of the Windows folder, either on the local computer or the full path of a network share
Browse button	Allows the user to browse for a source location on the computer or network.
Restore button	Performs the restore function for the RM database from the source location. A confirmation message is displayed when selected.

Clear Database Locks

Locks are applied to shared RM components when they are edited. A user can maintain a lock indefinitely, or an error can lock a shared RM component after editing. RM components that are locked are not available for Jobs.

Columns and Buttons	Description
Clear Locks button	Allows the user to remove the locks on all RM database components.

When the **Clear Locks** button is selected, the user is presented with a warning message to confirm the unlocking of records in the RM database.

Add Local Administrators and Restart the Application

This feature is used to ensure that all administrators of the local machine are assigned the role of RM Administrators. When the **Add** and **Restart** button is selected, all administrators of the local machine are assigned the role of RM Administrators. Once all local administrators are added, the RM Server Utility shuts down and restarts automatically.

Rebuild Database Indexes

When data is added, deleted, or modified in the RM Server database, the database indexes may become fragmented over time. This can lead to poor performance when searching, sorting, or retrieving data. This feature allows an administrator to run a defragmentation of the RM Server database indexes.

Before running this feature, ensure that no jobs are scheduled or running and that no users are accessing the RM Server.

When the **Rebuild Indexes** button is selected, the user is warned that the database indexes will be rebuilt. The user must select **Yes** to continue. An animated progress indicator shows all RM Windows services being stopped while the database indexes are defragmented. Once the process is completed, the RM Server Utility is restarted.

Note:

Perform this operation when functions such as the listing of data from any RM view or the modification of a template is very slow. The duration of the operation is dependent on the amount of data stored on the database and the level of defragmentation that exists. The operation can last from several minutes to half an hour.

User Authorization

Description

The **User Authorization** selection allows an RM administrator to configure users and roles for accessing the RM system. Local machine, domain, or non-domain users can be configured to access the RM system. **User Authorization** displays a list of users or roles that have access to the RM System.

Important:

- The user must be an administrator of the local machine and have an RM Administrator role to enable this feature. See Enabling User Authorization Feature.

The **Allow all Windows Authenticated users** check box, when **checked**, allows all users of the local RM Server computer and any domain users, authenticated by the RM Server, access through the RM Client without having to be added to the RM user list and without having to log on. The ability of the RM Server to authenticate a domain user on the domain controller is dependent on the security settings of the Domain controller

When the **Allow all Windows Authenticated users** check box is **unchecked**, all users must be added to the RM user list in order to access the RM Server through the RM Client. This is the most secure method for controlling access to the RM Server. See Adding Users to the RM System.

Note:

- All non-domain users must be added regardless of the Allow all Windows Authenticated users check box setting.

Users and **Roles** can be viewed by selecting the relevant radio button.

The administrator can **Add**, **Edit**, or **Delete** users and roles from the RM system. Note that by default, the RM Server Utility provides RM Client User and RM **Administrator** roles. In a MOTOTRBO PCR RM system, the RM Client role is reserved for future use. The RM Administrator role allows a user access to the **User Authorization** and **Machine Authorization** screens.

Machine Authorization

Description

The **Machine Authorization** selection opens the **Authorized Computers** window and allows an RM administrator to secure the RM system by allowing only authorized computers to run the RM Device Programmer and/or RM Job Processor Windows services. The table below shows the components of the RM Server Computer Authorization.

It is important to note that the user be an administrator of the local machine and have an RM Administrator role to enable this feature. See Enabling Machine Authorization Feature.

Note:

- By default, any computer running the RMC Client and connected to the RM Server can install and run the RM Device Programmer and/or RM Job Processor services. To prevent unauthorized operation of these RM components, the RM administrator must check the Enable computer authorization check box.

Once the **Enable computer authorization** check box is selected, the administrator can **Add** or **Delete** computers from the RM system. To assign the Device Programmer and/or Job Processor services to an authorized computer, the RM administrator can check one or both services. The assignment of RM components can also be performed by selecting a computer and clicking **Edit.**

Columns and Buttons	Description
Computer Name	Displays the name of the user's computer.
Device Programmer	Enable this checkbox to allow the user to use Device Programmer.
Job Processor	Enable this checkbox to allow the user to use Job Processor.

Network Settings

Network Settings

Description

The **Network Settings** selection allows users to define specific ports and/or a range of ports on the Windows firewall that are open for communication access to the RM Server and Job Server services.

RM Server

This Windows service handles all request coming from the RM Client.

The **Port Range** field is pre configured with common TCP ports that are typically open and available for communication. The following TCP ports and TCP port ranges are defined by default for the RM Server:

- 49202
- 49205-49210
- 51020-51030
- 50003
- 65534

The user can use these default TCP ports or enter specific TCP ports opened on the Windows firewall. The **Apply** button is used to accept new TCP port values.

Note:

- The HTTPS (Port 443) field is only visible for RM Servers running on the following operating systems:
    - Window 8 and above
    - Windows Server 2012 and above

Job Server

This Windows service handles all requests coming from the RM Device Programmer. The Port Range field is pre configured with common TCP ports that are typically open and available for communication. The following TCP ports and TCP port ranges are defined by default for the Job Server:

- 49202
- 49205-49210
- 51020-51030
- 65534

The user can use these default TCP ports or enter specific TCP ports opened on the Windows firewall. The **Apply** button is used to accept new TCP port values.

Note:

- The HTTPS (Port 443) field is only visible for RM Servers running on the following operating systems:
    - Window 8 and above
    - Windows Server 2012 and above

HTTPS (Port 443) - HTTPS Protocol Support

Enabling the **HTTPS (Port 443)** field allows the RM Windows services (RM Server or Job Server) to communicate using the HTTPS protocol. The user can selectively choose which RM Windows service should communicate using the HTTPS protocol. The HTTPS port 443 is typically open on the computer firewall and allows for easier configuring of an RM system. In the event that port 443 is unavailable on the Windows firewall, the user must manually configure the port.

Note:

- For customers that do not want to transmit data over the HTTPS protocol, the HTTPS (Port 443) field must be disabled by the user. Once disabled, the RM system uses only the TCP protocol. See HTTPS Protocol Support for the feature description.

HTTPS Protocol Support

In addition to the TCP protocol, Radio Management supports the HTTPS protocol to allow RM clients (RM Client, RM Device Programmer and RM Job Processor) to communicate with the RM Windows services (RM Server and Job Server).

IMPORTANT:

The HTTPS protocol is only supported when the Windows services of the RM Server and the RM clients are running on computers using Windows 8 and above or Window Server 2012 and above.

When the HTTPS protocol is enabled (default setting), the Windows service listens for requests on the HTTPS and TCP channels. When the HTTPS protocol is disabled, the Windows service listens for requests only on the TCP channel. The HTTPS protocol is set in the **Network Setting** window of the RM Server Utility. See Configuring the HTTPS Protocol.

The RM client request is transparently routed to the appropriate channel based on the capabilities of the Windows service and the operating system running on the RM client computer. If the Windows service is listening on the HTTPS and TCP channels and the RM client is running on Windows 8 and

above or Window Server 2012 and above, the RM client request is routed to the HTTPS channel. Otherwise, the RM client request is routed to the TCP channel.

Note:

- RM clients are now required to connect to the RM Server on port 443 instead of port 8675. See Connection Settings.
- The following troubleshooting topics are related to the HTTPS protocol feature:
  - Port Conflict by Multiple Applications
  - Unable to Validate Server SSL Certificate

Options

Description

The **Options** selection is used to configure language and auto-add options.

Language Options

The **Language Options** section is used to set the display language for the RM Server utility.

Columns and Buttons	Description
Language	Allows you to select the desired language from the drop down list.
Apply button	Sets the language defined in the language fields and restart the RM Server utility when checked.

Auto Add and Configure Devices in RM

The **Auto Add and Configure Devices in RM** section allows the system to automatically add radios to the RM Server when detected (USB connection or WiFi) by the RM Device Programmer but are not in the RM database. When a radio is auto added or read into the RM System, the radio is displayed in Radio View. The user can track the job in Job View as job type, Auto Add/Read Job.

Note:
Radios with a read password cannot use the Auto Add feature. If a radio is disconnected from the RM Device Programmer or the radio is out of range for WiFi connections, the radio is added to the RM Server and cannot be auto read again. The radio must be removed from the RM Server and reconnected. The supported device types are as follows:
• Android
• APX
• MOTOTRBO

Columns and Buttons	Description
Allow Auto Add Radios	When checked, the radio is automatically added to the RM Server database for the selected device type when detected by the RM Device Programmer. **Note**: • A read job for the radio must be manually created using the RM Client. To have the read job automatically created for the radio, select the **Auto Read Radios** option.
Template Mode	This radio button selection allows the radio to be added to the RM Server as a Template. **Note**: • The Template is automatically generated and applied to the radio when

	the **Auto Read Radios** option is selected.
Auto Read Radios	When checked, the detected radio is read and processed by the RM Job Processor. The Job Status column in Radio View displays the process.

RM Server Common Tasks

This topic covers the following common tasks for RM Server Utility:

To launch the RM Server Utility, click Start ➔ Motorola ➔ RM Server ➔ RM Server Utility.

Server Database
- Backing Up the Server Database
- Restoring the Server Database

User Authorization
- Enabling User Authorization Feature
- Adding Users to the RM System
- Deleting Users from the RM System
- Updating Authorized Users and Assigning Roles
- Adding Roles in User Authorization
- Default RM Administrator Role Members

Machine Authorization
- Enabling Machine Authorization Feature
- Adding Computers to the RM System
- Deleting Computers from the RM System
- Updating Authorized Users and Assigning Roles
- Registering a Non-Domain Computer using a One-Time Password
- Default RM Administrator Role Members

Network Settings
- Configuring the HTTPS Protocol

Backing Up the Server Database

The RM Server database should be backed up when new radios and data is added to the RM system. This operation ensures that the RM system can be restored to its operation state in the event of a database error or when the RM system is updated to a newer version

Step	Action
1	From the **RM Server Utility**, select **Database Settings**.
2	From the **Database Backup** section, click **Browse**. The **Browse For Folder** window opens and allows the user to select an existing folder location or create a new folder to store the backup.
3	Optional: Select the **Enable Password** check box and enter a Password to password protect the backup folder. Selecting the eye icon to the right of the **Password** field allows the user to view the password.
4	Click **Backup** to initiate the backup operation. A confirmation Warning message appears and warns against performing any operations using the RMC Client while the backup operation is in progress.
5	Click **Yes** to confirm the backup operation. A folder is created and named with the current date and time in the Destination folder.

Restoring the Server Database

Restoring the RM Server database allows an administrator to populate the database with a good known backup.

Step	Action
1	From the **RM Server Utility**, select **Database Settings**.
2	From the **Database Restore** section, click **Browse**. The **Browse For Folder** window opens.
3	Locate the **Source** folder that contains the RM Server database backup folder.
4	Click **Restore** to initiate the restore operation. A confirmation Warning message appears.
5	Click **Yes** to confirm the restore operation. If a password was assigned to the backup folder, a **Restore** password window opens.
6	Optional: If the backup folder was password protection, enter the Password and click **OK**. Note: • In the event of an error during the Restore operation, a valid backup must be restored to populate the database with usable data. The backup of the RM Server database is restored and the RM Server Utility restarts.

Enabling User Authorization Feature

This feature is enabled when the user running the RM Server Utility has an **RM Administrator** role.

The following conditions must be met in order to use the RM Server Utility for user authorization:
• The RM Server Utility application must run on the RM Server machine.
• The user must be a local Administrator on the RM Server machine.

Use this procedure to verify that the user is a local Administrator.

Step	Action
1	Open a **cmd prompt** window on the RM Server machine.
2	Enter lusrmgr.msc The **Local Users and Groups (Local)** management console opens.
3	Select the **Groups** folder from the left pane
4	From the right pane, right-click **Administrators** and select **Properties**.
5	Verify that the user account is listed in the Members section. **Note:** • The user account must be listed as an individual member of this group. If the current user is not a member of the Administrators group, either add the user to the group or log in to the server machine using an account that is a member of the group.

Adding Users to the RM System

Access to the RM Server requires users to be added to the RM system under the User Authorization section of the RM Server Utility.

Note:

- Users of the local RM Server computer and domain users must be added when the **Allow all Windows Authenticated users** is unchecked. All non-domain users must be added regardless of the **Allow all Windows Authenticated users** check box setting.

The RM Server Utility is collocated with the RM Server and is launched from the Windows start icon by selecting **All Programs** → **Motorola** → **RM Server** → **RM Server Utility**.

Step	Action
1	From the **RM Server Utility**, select **User Authorization.**
2	Ensure that **View by** is set to **Users** .

3	Click the **Add** icon and perform one of the following actions: **Note**: • The selections available from the **Add** icon depend on whether the RM system is connected to a domain or a local network.

If...	Then...
adding a domain user	perform the following actions: a. Select **Add Users from Domain**. b. From the **Select Users** window, click **Advanced**. c. From the **Common Queries** section, enter the name of a user as identified in the domain. d. Click **Find Now**. e. From the **Search results** section, select one or more users from the list. f. Press **OK**. The computer now appears in the list in the **User Authorization** window.
adding a non-domain user	perform the following actions: a. Select **Add Non Domain User**. b. From the **New User** window, enter the users credentials as they appear in the window. The following fields are required: • **User Name** • **Password** (7 characters minimum) • **Confirm New Password** **Note**: • The **Show Password** check box can be used to view the password text for verification purposes. • All other fields are optional. c. Press **OK**. The user now appears in the list of users in the **User Authorization** window.
adding a local computer	perform the following actions: Use this procedure to add specific users from the local computer a. Select **Add Users from Local Computer**. b. From the **Select Users** window, click **Advanced**. c. From the **Common Queries** section, click **Find Now**. d. From the **Search results** section, select one or more users from the list. e. Press **OK**. f. From the **Select Users** window, click **OK**. The user now appears in the list of users in the **User Authorization** window.

Once a new user is added to the RM system, assign a role to the user to provide the required permissions. See Updating Authorized Users and Assigning Roles.

Deleting Users to the RM System

Users that are no longer required to access the RM Server can be deleted from the RM system using the RM Server Utility.

Note:

- RM Server Utility is collocated with the RM Server and is launched from the Windows start icon by selecting All Programs → Motorola → RM Server → RM Server Utility.

Step	Action
1	From the **RM Server Utility**, select **User Authorization.**
2	Ensure that **View by** is set to **Users**.
3	Select one or more users from the list.
4	Click the **Delete** icon. A **Member Deletion Warning** confirmation window opens.
5	Click **Yes** to confirm and deleted the selected user.

Updating Authorized Users and Assigning Roles

Once users are added to User Authorization, the administrator can update and configure additional details for each user.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>From the User Authorization window, set View by to Users and select a user from the list.</td></tr>
<tr><td>2</td><td>Click the Edit icon.</td></tr>
<tr><td>3</td><td>From the General section, update or configure the following fields:
<table>
<tr><td>User Name</td><td>This field is read-only for domain users.
For non-domain users, this field defines the name used by the user when logging in to the RM system.</td></tr>
<tr><td>Description</td><td>Valid only for non-domain users. Enter a description that defines the user.</td></tr>
<tr><td>Email</td><td>Valid only for non-domain users.
Enter a valid email for the user.</td></tr>
<tr><td>Disabled</td><td>Allows the administrator to disable an authorized user.</td></tr>
<tr><td>Locked Out</td><td>Valid only for non-domain users. When enabled (checked), the user has exceeded the maximum number of incorrect password entries. Only an administrator can unlock the account.
Note:
The maximum number of invalid password entries is a Windows feature and is set in the Local Security Policy by the system administrator. The default setting is 0 (Disabled) up to a maximum of 999 before a lockout occurs.</td></tr>
<tr><td>User must change password on next login</td><td>Valid only for non-domain users.
When checked, the user must change the assigned password when logging on to the RM Server the first time.</td></tr>
<tr><td>Password (Reset Password)</td><td>Valid only for non-domain users.
The Reset Password button allows the administrator to create a new password for the user.</td></tr>
</table></td></tr>
<tr><td>4</td><td>From the Roles section, check one or more roles for the selected user.
Note:
• The RM Administrator role can only be assigned to local administrators. See</td></tr>
</table>

	Assigning Local Administrators to the RM Administrator Role. Domain users must be added individually to the local Administrator group of the machine in order to be assigned as an RM Administrator. • The **RM Client User** role is assigned to all authorized users by default.
5	Click **Save** and then **Close**. The selected users now show the roles assigned to them under the Roles column of the **User Authorization** window.

Adding Roles in User Authorization

The creation of roles in an RM system allows an administrator to group users and configure permissions for accessing authorization screens in the RM Server Utility and perform certain functions in an RM system.

Note:

By default, the RM Server Utility provides RM Client User and RM Administrator roles. In a MOTOTRBO PCR RM system, the RM Client role is reserved for future use. The RM Administrator role allows a user access to the User Authorization and Machine Authorization screens.

Step	Action
1	From the **RM Server Utility**, select **User Authorization**.
2	From **View** by, select the **Roles radio** button.
3	Click the **Add** icon.
4	In the **Add Role** window, enter a name for the role and a **description**.
5	Click **OK**.

Default RM Administrator Role Members

By default, all local Windows administrators on the server machine are automatically assigned the RM Administrator role when the RM Server Utility is launched for the first time.
However, new local Windows administrators added to the machine after the initial launch of the RM Server Utility are not automatically assigned the RM Administrator role.

RM Administrator Role Assignment for New Local Administrators

In order to assign additional local Windows administrators the RM Administrator role, the current user of the RM Server Utility must have RM Administrator role privileges. With the User Authorization feature enabled, assign new local administrators the RM Administrator role. See Assigning Local Administrators to the RM Administrator Role.

Reinitialization of RM Administrator Role

If necessary, the RM Administrator role can be repopulated by automatically assigning all local Windows administrators on the server machine to the RM Administrator role. See Reinitializing the RM Administrator Role.

Enabling Machine Authorization Feature

This feature is enabled when the user running the RM Server Utility has an RM Administrator role. The following conditions must be met in order to use the RM Server Utility for user authorization:

• The RM Server Utility application must run on the RM Server machine.
• The user must be a local Administrator on the RM Server machine.

Use this procedure to verify that the user is a local Administrator.

Step	Action
1	Open a **cmd prompt** window on the RM Server machine.
2	Enter lusrmgr.msc The **Local Users and Groups (Local)** management console opens.
3	Select the **Groups** folder from the left pane.
4	From the right pane, right-click **Administrators** and select **Properties**.
5	Verify that the user account is listed in the Members section. **Note:** • The user account must be listed as an individual member of this group. If the current user is not a member of the Administrators group, either add the user to the group or log in to the server machine using an account that is a member of the group.

Adding Computers to the RM System

The RM administrator can authorize domain and non-domain computers to run the RM Device Programmer and/or RM Job Processor Windows services within an RM system.

Step	Action
1	From the **RM Server Utility**, select **Machine Authorization.**
2	Check **Enable computer authorization.**
3	Select the **Groups** folder from the left pane.
4	From the right pane, right-click **Administrators** and select **Properties**.
5	Click the **Add** icon and perform one of the following actions: **Note**: • The selections available from the Add icon depend on whether the RM system is connected to a domain or a local network. If... / Then... adding a domain computer / perform the following actions: a. Select **Add Users from Domain**. b. From the **Select Computer** window, click **Advanced**.

	c. From the **Common Queries** section, enter the name of a user as identified in the domain. d. Click **Find Now**. e. From the **Search results** section, select one or more users from the list. f. Press **OK**. g. From the **Select Computer** window, click **OK**. The computer now appears in the list in the **User Authorization** window. h. Select one or both of the RM system Windows services (**Device Programmer**, **Job Processor**).
adding a non-domain computer	perform the following actions: a. Select **Add Non Domain User**. b. From the **New User** window, enter the users credentials as they appear in the window. The following fields are required: • Host Name • Password (7 characters minimum) • Confirm New Password **IMPORTANT**: This password must then be entered into the One-Time Password field of the RM Component (Job Processor or Device Programmer) template in order to register the computer running the component. **Note**: • The **Show Password** check box can be used to view the password text for verification purposes. • All other fields are optional. c. Press **OK**. d. Select one or both of the RM system Windows services (Device Programmer, Job Processor).

Deleting Computers from the RM System

Computers that are no longer required to access RM components (Device Programmer and Job Processor) can be deleted from the RM system.

Step	Action
1	From the **RM Server Utility**, select **Machine Authorization.**
2	Select one or more computers from the list.
3	Click the **Delete** icon. A **Member Deletion Warning** confirmation window opens.
4	Click **Yes** to confirm and deleted the selected computer.

Updating Authorized Computers and Assigning Roles

Once computers are added to User Computers, the administrator can update and configure additional details for each computer.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>From the User Computers window, select a computer from the list.</td></tr>
<tr><td>2</td><td>Click the Edit icon.</td></tr>
<tr><td>3</td><td>From the General section, update or configure the following fields:
<table>
<tr><td>Name</td><td>This read-only field is the host name of the computer.</td></tr>
<tr><td>Disabled</td><td>Valid only for non-domain computers. Allows the administrator to disable an authorized computer.</td></tr>
<tr><td>Locked Out</td><td>Valid only for non-domain computers. When enabled (checked), the computer has exceeded the maximum number of incorrect password entries. Only an administrator can unlock the account.
<u>Note:</u>
The maximum number of invalid password entries is a Windows feature and is set in the Local Security Policy by the system administrator. The default setting is 0 (Disabled) up to a maximum of 999 before a lockout occurs.</td></tr>
<tr><td>Registered</td><td>Valid only for non-domain computers.
When enabled (checked), the machine has been registered with the RM system using the One- Time Password. See Registering a Non-Domain Computer using a One-Time Password.</td></tr>
<tr><td>Reset Password</td><td>Valid only for non-domain users.
The Reset Password button allows the administrator to create a new password for the computer.</td></tr>
</table></td></tr>
<tr><td>4</td><td>From the Roles section, check one or more roles (Device Programmer, Job Processor) for the selected computer.</td></tr>
<tr><td>5</td><td>Click Save and then Close.
The selected computer now show the roles assigned to them under the Roles column of the Machine Authorization window.</td></tr>
</table>

Registering a Non-Domain Computer using a One-Time Password

The registration of a non-domain computer is required in order for the computer to access the Device Programmer and/or Job Processor.

After a non-domain computer (running Device Programmer or Job Processor) is added to the list of authorized computers, the non-domain computer must be registered with the RM Server using the password created in the Adding Computers to the RM System procedure. This is a one-time operation that must be performed after the following:

- A new non-domain computer has added to the list of authorized computer.
- Password Reset of an existing computer.

Step	Action
1	For Device Programmer, preform the following actions: a. Select **Start** → **All Programs** → **Motorola** → **RM Device Programmer** → **RM Device Monitor**. b. Click **Settings**.
2	For Job Processor, select **Start** → **All Programs** → **Motorola** → **RM Job Processor** → **RM Job Processor Config**.
3	Enter the **Address** and **Port** of the **RM server**.
4	In the **Authentication Method** field, select **One-Time Password.**
5	Enter the password used when the computer was added to the list of Authorized Computers.
6	Click **Test Connection**. A pop-up window opens displaying **Connection was successful**.
7	Click **OK**. The RM component service restarts.

Configuring the HTTPS Protocol

The HTTPS protocol for RM Windows services (RM Server and Job Server) can be enabled or disabled for individual services using the RM Server Utility application deployed with the RM Server. This procedure configures the HTTPS Protocol to allow RM clients to communicate with the RM Server over the Internet. See HTTPS Protocol Support.

Step	Action
1	Launch the RM Server Utility by selecting the Windows icon and searching for **RM Server Utility**.
2	Select **Network Settings** from the left column.
3	From the RM Server and/or Job Server sections, **check** or **uncheck** the **HTTPS (Port 443)** check box to enable or disable the HTTPS protocol.
4	Click **Apply**. A warning message appears stating that changes will not take effect until the service is restarted.
5	Press **OK**.
6	Restart the RM services. Perform the following actions: a Select **Status** from the left column. b From the Server Status section, click **Stop All**. c Once the **Service Status** reads *Stopped*, click **Start All**.

See Also

- RM Server
- RM Server Utility

Device Programmer/Device Monitor

Device Programmer

This topic covers the following areas:

- Device Programmer Overview
- Device Programmer Components

Device Programmer Overview

The Device Programmer is the service that performs the read, write, and switchover jobs that are scheduled in the Schedule Job window. It performs jobs when a radio becomes present because the user plugs in a radio into a USB port or when the radio is present on the Radio Network. If multiple radios are present, then the Device Programmer performs jobs one at a time (see Using Device Monitor to Configure Multiple Device Programmers). Because the Device Programmer is a Windows service, it will continually perform jobs even when the computer is unattended and the user is not logged on.

Notes:

- Many Device Programmers are able to be installed within a single Radio Management (one Server) template, and are able to be run on multiple remotely-located computers / devices.
- The Device Programmer facilitates the processing of scheduled "Read" and "Write" jobs even when the computer is unattended or the user is not logged on.
- The Device Monitor's user-interface does not need to be running in order for scheduled jobs to be performed by the Device Programmer.
- When a Radio's status is "No Manage Radio" within the Device Monitor window, this indicates that the Device Programmer has detected the presence of this radio, however the radio is not part of the current Radio Management's fleet. If appropriate, the radio can be added to the Server database using one of the Radio Management Add Radios feature.

Device Programmer must be configured to process either wired or OTA jobs. During Job creation, the user will specify if the job is wired or OTA (See Schedule Job Window section). Wired jobs can only be performed by Wired Device Programmers and OTA jobs can only be performed by OTA Device Programmers.

The user is required to set the correct Communication Method that will be used to program, and set the server that the Device Programmer is connected to. For more information, refer to Device Programmer Common Tasks.

Device Programmer Components

The following table lists the fields in Device Programmer.

<table>
<tr><th>Included Fields and Buttons</th><th>Description</th></tr>
<tr><td colspan="2">RM Server</td></tr>
<tr><td>Address</td><td>Defines the IP (Internet Protocol) Address part of the Address-Port combination that is used by the Device Programmer to communicate with the RM Server database. This address can be specified by either the IP (Internet Protocol) Address or the DNS (Domain Name System) host name. If the RM Server is deployed on the same computer as the RM Device Programmer, enter localhost</td></tr>
<tr><td>Port</td><td>Defines the Port part of the IP (Internet Protocol) Address-Port combination that is used by the RMC to communicate with the RM Server's database. The default Port value of 443 is used for most deployments.
<u>Note</u>:
Previous releases of Radio Management used port 8675. Port 8675 is no longer supported as the default port for establishing a connection to the RM Server.</td></tr>
<tr><td>Authentication Method</td><td>Selects the cryptography (Authentication) method that the RM Server can accept from the current Device Programmer. In this case, the authentication method used is the same key for both encryption and decryption. The supported authentication methods are Certificate, Windows Credentials, or One-Time Password.
<u>Note</u>:
One-Time Password authentication method is used for registering nondomain computer running the RM Device Programmer to communicate with the RM Server. See Registering a Non-Domain Computer using a One-Time Password.</td></tr>
<tr><td colspan="2">Device Communication Method</td></tr>
<tr><td>Communication Method</td><td>Selects the Communication type of job that the current Device Programmer can accept from the RM Server. The selections are as follows:<table>
<tr><td>USB</td><td>Configures the communication method for a wired USB connection between the RM Device Programmer and the radio or MUC (Multi-Unit Charger).</td></tr>
<tr><td>Wireless (LAN)</td><td>Configures the communication method for a wireless (Wi-Fi) computer network (secured access point) connection between the RM Device Programmer and radios. The higher bandwidth of a Wi-Fi connection allows for nearly simultaneous programming.</td></tr>
<tr><td>Over The Air</td><td>Configures the communication method for the LMR radio data channel to establish a connection between the RM Device Programmer and radios. OTAP communication occurs one radio at a time per RM Device Programmer. When selected, the PN Server section appears.
<u>IMPORTANT</u>:
Only one RM Device Programmer can be configured for Over the Air (OTAP) per RM system. OTAP is not possible if there are any downloaded and pending Offline Jobs.</td></tr>
</table></td></tr>
</table>

Radio Groups	
Assigned Radio Groups	Selects an RM Client defined Group, or the "All" Group, for the current Device Programmer. Selecting a specific Group creates a filter that allows jobs only for the selected Group. The "All" Group eliminates any Group filtering. See Radio Groups.
Job Settings	
Auto Process Jobs (USB and Wireless (LAN))	When enabled (default), the RM Device Programmer processes all scheduled jobs without user interaction. When disabled, the user must manually start each job on a per radio basis using the Device Monitor. Each job is processed by selecting the **Execute Job** button.
Job Pacing	Defines a time delay between multiple jobs from 0-10 minutes. **Note**: • Job Pacing is supported for USB, Wireless (LAN), and Over The Air.
Language Settings	
Select Language	Specifies the language used by the Device Monitor. Selection of languages includes English, French, Spanish, Portuguese, Hebrew, Russian, Chinese (Traditional), and Arab.  WARNING • When a new language selection is made, the user must restart the Device Monitor in order for the change to take effect. • The input language depends on the keyboard selection made in your computer's operating system, and not this language selection; however, numbers entered into a Device Monitor text field are always shown in the form 0–9, regardless of the language selection, including "Arabic".
PN Server (for Over The Air Jobs) **T**his section allows the user to configure the Presence Notifier IP address and UDP port when programming radios Over The Air (OTAP).	
Use PN Server checkbox	This checkbox should only be selected if the RM Device Programmer is used for Over The Air programming of radios.
PN Server	Enter the IP address of the active Trunking controller (default 172.21.0.1).
Port	Enter a UDP port number of 50015
Offline Mode	
Work Offline	Offline mode allows the user to select programming jobs from the RM Server to be downloaded to the Device Programmer (DP). Once downloaded, the computer containing the DP may be disconnected and "offline" when the programming of these jobs occurs; this is also known as local programming. The user can also use the offline programming with a DP that is permanently disconnected from the RM Server.

See Also

- Device Monitor/Device Programmer Common Tasks
- Device Monitor
- Download and Manage Offline Jobs

Device Monitor

This topic covers the following areas:

- Device Monitor Overview
- Device Monitor Components

To launch the RM Device Monitor, click Start ➔ Motorola ➔ RM Device Programmer ➔ RM Device Monitor.

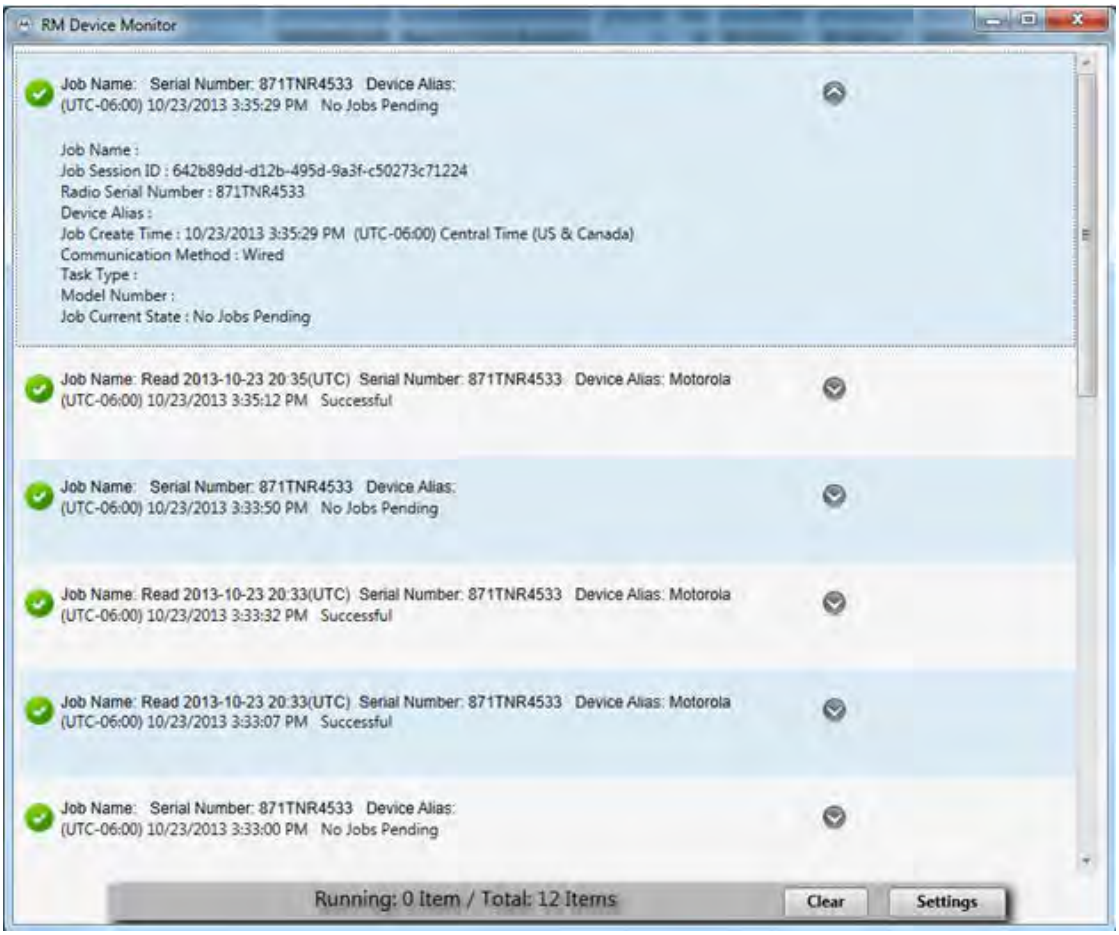
Device Monitor Overview

The Device Monitor provides the user-interface to configure the Device Programmer and to view its current operations. Monitoring includes constantly listening for the presence of radios, and qualifying any detected radios as being a part of the same Radio Management system's radio fleet. Executing programming jobs includes matching detected Radio Management fleet radios with applicable and current Radio Management's Scheduled Jobs.

Notes:

- The Device Monitor's user-interface does not need to be running in order for scheduled jobs to be performed by the Device Programmer.
- When a Radio's status is "No Manage Radio" within the Device Monitor window, this indicates that the Device Programmer has detected the presence of this radio, however the radio is not part of the current Radio Management's fleet. If appropriate, the radio can be added to the Server database using one of the Radio Management Add Radios feature.

The diagram below shows the RM Device Monitor window.



Device Monitor Window

The user is required to set the correct Communication Method that will be used to program, and set the server that the Device Programmer is connected to. For more information, refer to Device Programmer Common Tasks.

Device Monitor Components

The following table lists the fields in Device Monitor.

Included Features	Description
Execute Job button 	The **Execute Job** button appears when the **Auto Process (only for USB+Wireless)** option under Settings is disabled. It indicates that the user must manually executed a scheduled job.
Job Details button 	The **Job Details** button is used to show and hide detailed information related to the process performed by the RM Device Programmer.
Clear button	Clicking this button allows the user to delete all of the status information from the Device Monitor window.

Settings button	The Settings button opens the Settings window for configuring the RM Device Programmer. It allows the user to view or modify the RM Device Programmer to RM Server data communications, the RM Device Programmer to radio communications, as well as the Device Monitor language preference settings.Refer to Device Programmer.

See Also

- Device Monitor Common Tasks
- Device Programmer

Device Monitor / Device Programmer Common Tasks

This topic covers the following common tasks for the Device Monitor/Device Programmer:

- Configuring Device Programmer
- Multiple Device Programmers
- Viewing Current Device Programmer Service Operation
- Verifying Device Programming with RM Server on Feature Upgrade Jobs

To launch the RM Device Monitor, click Start ➔ Motorola ➔ RM Device Programmer ➔ RM Device Monitor.

Configuring Device Programmer

The RM Device Programmer is configured from the RM Device Monitor. Note that the connection method used for a scheduled job in Scheduler must match the connection method configured for the RM Device Programmer.

Step	Action
1	From Windows, select **Start** → **All Programs** → **Motorola** → **RM Device Programmer** → **RM Device Monitor**.
2	From the **RM Device Monitor** window, select **Settings**
3	From the RM Server section, ensure that the following fields are correct: a. In the **Address** field, enter the IP address or hostname (computer name) for the **RM Server.** **Note:** • If the RM Server is installed on the same computer as the RM Device Programmer, enter localhost as the **Address**. b. Ensure that the **Port** setting is set to the default value of **443**. c. Select the **Authentication Method** used by the RM Server and current RM Device Programmer. See Authentication Methods in RM Device Programmer Components. d. If required, enter a password in the **One-Time Password** field. **Note**: • The **One-Time Password** field is only accessible when the Authentication Method is set to **One-Time Password**. e. Click **Test Connection** to ensure that the RM Server settings are correct.

4	From the Device **Communication Method** section, select the **Communication Method** for the current RM Device Programmer. **Note**: • The connection method configured for a Scheduled Job in the RM Client must match the connection method configured for the RM Device Programmer. • For USB + Wireless (LAN) Scheduled Jobs, the RM Device Programmer must be configured for either USB and/or Wireless (LAN).
5	From the Radio Group section, select the Assigned Radio Group for programming jobs. **Note**: • The radio selected for a scheduled job must be assigned to the radio group selected in the **Assigned Radio Group** field. Otherwise, the Job Status column in the RM Client reads, **Running.WaitingForDP** and the Device Monitor reads, **No Jobs Pending**. Select **All** to ensure that all radios are accessible regardless of their assigned radio group. See Radio Groups.
6	From the **Job Settings** section, ensure the **Auto Process Jobs (only for USB+Wireless)** is checked. Remove the check to manually execute a scheduled job.
7	Optional: In the **Job Pacing** field, add a time delay (0-10 minutes) between multiple jobs.
8	For **Over The Air communication** method, in the **PN Server** section, configure the following fields: • **Use PN Server** • **PN Server** • **Port** **Note**: • See the PN Server section in RM Device Programmer Components for descriptions.
9	From the Language Settings section, select the language used by the RM Device Monitor. See the Language Settings selection in RM Device Programmer Components for supported languages.
10	Click **OK**.

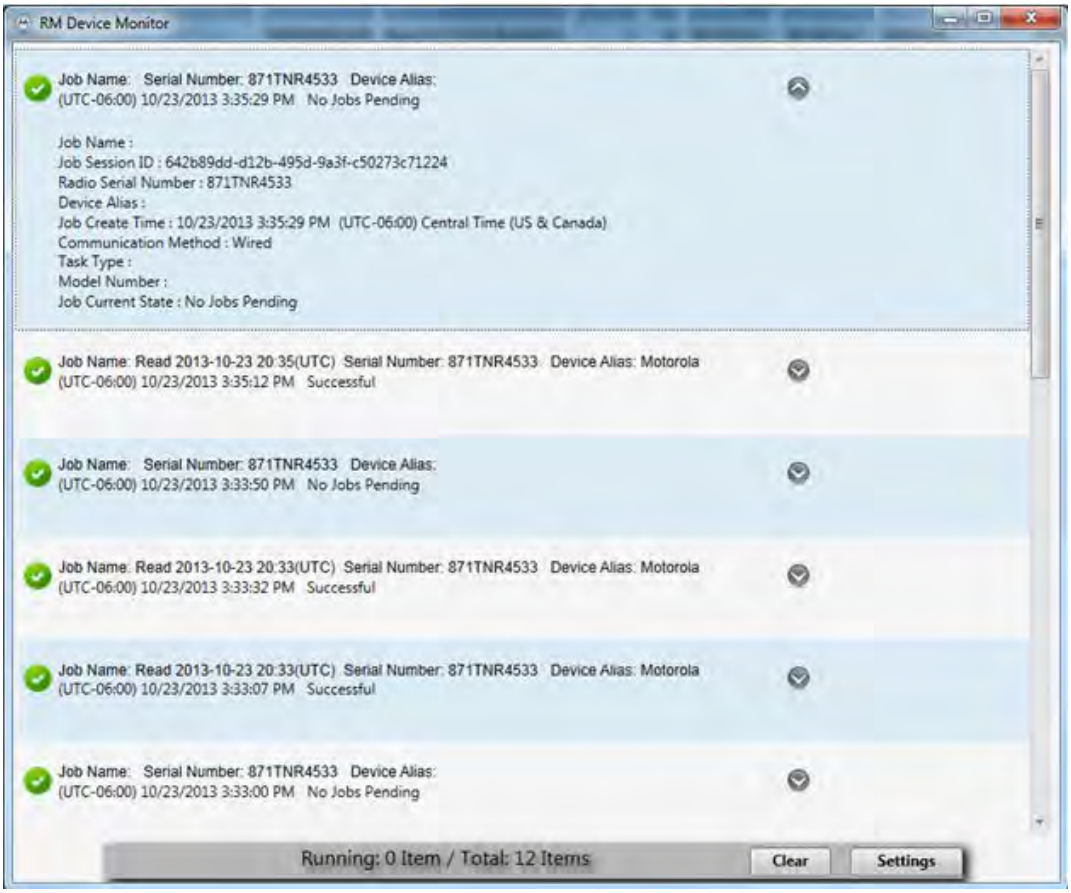
Multiple Device Programmers

The user can setup multiple Device Programmers in a single Radio Management system by installing the Device Programmer on additional computers and configuring them to use a single RM Server. This allows customers to configure additional programming stations on multiple, remotely located computers.

It is recommended that only one Device Programmer have the IP Programming connection method enabled per repeater system. If it is desired to use multiple IP Programming enabled Device Programmers on the same repeater system then each Device Programmer should be assigned a unique group of repeaters to perform IP Programming jobs.

Viewing Current Device Programmer Service Operation

You can view the current operations performed by the Device Programmer through the Device Monitor's main window.



View the current operations performed by the Device Programmer through the RM Device Monitor.

The Device Programmer only communicates with one radio at a time. The top line in the Device Monitor Window shows the current or last job that the Device Programmer attempted. This line shows general information about the job including: Job Name, Radio Serial Number, Radio Alias, date and time the job was attempted, and a general status of the attempt that was made. By clicking the down arrow icon  on the line, the user can view additional information about the job.

While the Device Monitor program is running, it keeps a list of jobs that were attempted by the Device Programmer on the main screen. The user can clear this list by pressing the **Clear** button. This does not affect the job status viewed in the Job View or Radio View of the client. When the Device Monitor program is not running, the Device Programmer is still processing jobs and the status of these jobs are updated on the RM server.

Note:

- The status of the attempt shown in the Device Monitor is not the final status of the job. It is only the status of this one attempt to perform the job by this Device Programmer. Final Job Status is shown in the Radio View or Job view of the client.

Verifying Device Programming with RM Server on Feature Upgrade Jobs

Device programming is an activity that occurs between the RM Server and the Device Programmer.

When a write job where the CFS Indicator is set, then the Device Programmer checks with the RM Server to verify that the new features that are about to be added to the radio are in accordance with the authorized features in the RM Server.

Before the user verify with RM Server on feature upgrade jobs, the user must ensure that the device have a write job scheduled where the CFS Indicator bit is enabled, and that the job must be active in the Device Programmer. The user must also ensure that the Device Programmer is not configured for OTAP programming.

Notes:

- Updating features or firmware in radios is not supported in any Device Programmer in offline mode or OTAP mode.
- If the RM server is on a separate machine from any Radio Management component (Device Programmer, Radio Management client), ensure that the Coordinated Universal Time (UTC) on the computers is synchronized to within 5 minutes.

See Also

- Device Programmer
- Device Monitor

Job Processor

Job Processor Settings

This topic covers the following areas:

- Job Processor Settings Overview
- Job Processor Settings Window Components

Job Processor Settings Overview

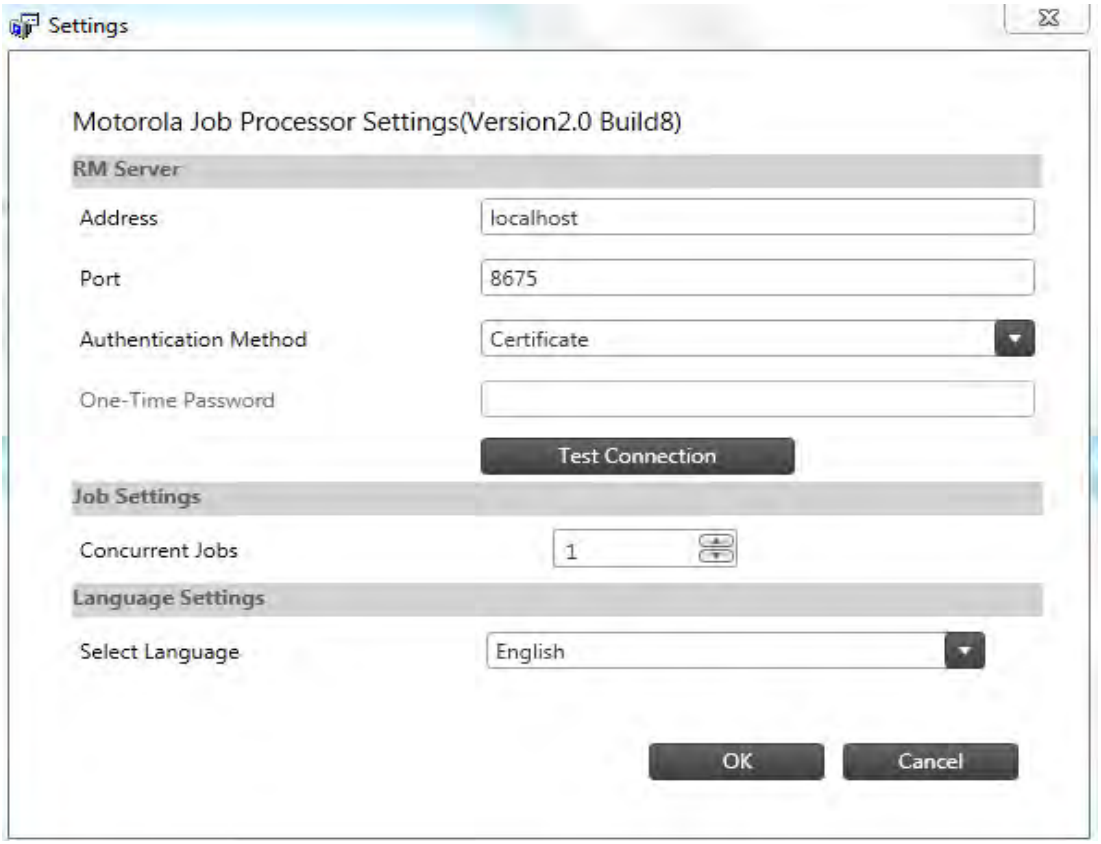
The Job Processor is a Windows service that validates the data maintained in the RM Server. The main function of this component are as follows:

- To validate all codeplug / template data as it is being created and organized in the Radio Management Client,
- To validate all job-codeplug and job-template data being retrieved-from the RM Server, or being sent-to the RM Server.
- To verify all job "Write" codeplug information and data as it is being sent from the RM Server to the Device Programmer, and then to a radio. And the Job Processor verifies all job “Read" codeplug information and data as it is being retrieved from a radio, through the Device Programmer, and then sent back to the RM Server.

Notes:

- Because validation of radio codeplug / template data can be very CPU intensive, it can be beneficial to isolate the CPS / Radio Management Client, the Device Programmer, and this Job Processor on separate CPU devices.
- Many Job Processors may exist on several different computers / devices, all of which are connected to the same RM Server.

The diagrams below show the Job Processor Settings window. Whenever the Job Processor Settings is launched, it automatically attempts to connect to the RM Server's database using the configured "RM Server" and "Port" settings.



Job Processor Settings Window Components

The following table lists the components in the Job Processor Settings Window Components.

Included Fields and Buttons	Description
RM Server	
Address	Allows the user to view or modify the IP (Internet Protocol) Address part of the Address-Port combination that is used by the Device Programmer to communicate with the RM Server's database. This address can be specified by either the IP (Internet Protocol) Address or the DNS (Domain Name System) host name.
Port	Allows the user to view or modify the Port part of the IP (Internet Protocol) Address-Port combination that is used by the Device Programmer to communicate with the RM Server's database. By default the RM Server and Device Programmer use port number 443 and in standard template should not be changed.
Authentication Method	Selects the cryptography (Authentication) method that the RM Server can accept from the current Device Programmer. In this case, the authentication

	method used is the same key for both encryption and decryption. The selection is X.509 Certificate.
One-Time Password	Allows the user to add a password that is valid for only one login session.
Test Connection button	Clicking this button attempts to connect the Job Processor to the RM Server's database based-on the Server Name / IP Address and Port information defined in this Job Processor Settings window. Anytime the Job Processor is launched, bsed on these settings, the Job Processor always attempts to connect to the RM Server's database.
Job Settings	
Concurrent Jobs	Selects the number of Job Processors that are configured to connect to the same RM Server concurrently.
Language Settings	
Select Language	Select the language that appears in the Job Processor Settings window. Selection of languages includes English, French, Spanish, Portuguese, Hebrew, Russian, Chinese (Traditional), and Arab  WARNING • When a new language selection is made, the user must restart the Job Processor in order for the change to take effect. • The input language depends on the keyboard selection made in your computer's operating system, and not this language selection; however, numbers entered into a Job Processor text field are always shown in the form 0–9, regardless of the language selection, including "Arabic".
OK button	Clicking this button saves your settings and attempts to connect the Job Processor to the RM Server's database, basedon the Server Name / IP Address and Port information defined in this window.
Cancel button	Clicking this button allows the user to immediately close the Job Processor Settings Window without further actions. Any unsaved changes are not saved.

See Also

- Configuring Job Processor to Server

Configuring the RM Job Processor

The RM Job Processor Settings window allows the user to view or modify the RM Job Processor to RM Server data communications, as well as the RM Job Processor language preference settings. Whenever the RM Job Processor service is launched, it automatically attempts to connect to the RM Server's database using the configured RM Server and port settings.

Step	Action
1	From Windows, select **Start** → **All Programs** → **Motorola** → **RM Job Processor** → **RM Job Processor Config**
2	From the RM Server section, ensure that the following fields are correct: a. In the **Address** field, enter the IP address or hostname (computer name) for the RM Server. **Note**: • If the RM Server is installed on the same computer as the RM Job Processor, enter **localhost** as the **Address**. b. Ensure that the **Port** setting is set to the default value of **443**. c. Select the **Authentication Method** used by the RM Server and current RM Device Programmer. • **Certificate** (default) • **Windows Credentials** • **One-Time Password** d. If required, enter a password in the **One-Time Password** field. **Note**: • The One-Time Password field is only accessible when the **Authentication Method** is set to **One-Time Password**. e. Click **Test Connection** to ensure that the RM Server settings are correct.
3	From the Job Settings section, select the number of RM Job Processors that are configured for the same RM Server. **Note**: • Up to 4 RM Job Processors can be configured to connect to the same RM Server. Load balancing is enabled when multiple RM Job Processors, each installed on a separate computer, are configured in the RM system.
4	From the **Language Settings** section, select the language used by the RM Job Processor. The supported languages are **English, German, Spanish (Latin), Spanish (Spain)French (France), Italian (Italy), Polish (Poland) Portuguese (Brazil), Russian (Russia), Chinese (Simplified)**. Note: • When a new language is selected, the Device Monitor must be restarted before the new language takes effect. The input language depends on the keyboard selection made in the operating system of the computer, and not this language selection; however, numbers entered into a Device Monitor text field are always shown in the form 0-9, regardless of the language selection.
5	Click **OK**.

AutoUpdate Enable for Radio Management 2

AutoUpdate Enable for Radio Management 2

The **AutoUpdate Enable** feature in Radio Management (RM) ensures that all RM components connected to the RM Server are running compatible software versions. The **AutoUpdate Enable** feature is selected during the installation of the Radio Management suite.

Important: In order for RM components to communicate with the RM Server, the RM components must be running a software version that is compatible with the RM Server.

The following RM components support the AutoUpdate Enable feature:

- Radio Management Client
- RM Device Programmer
- RM Job Processor

The **AutoUpdate Enable** feature compares the software version installed on the RM component to the software version installed on the RM Server, when the RM component connects to the RM Server. If an incompatible software version is detected, the latest version is downloaded from the RM Server to the RM component. The RM component receives the updated version and initiates the installation.

AutoUpdate Preconditions

The AutoUpdate process is performed when the following conditions are met:

- The RM Server and RM Components are from the same RM system release (that is, RM 2.1) and were installed with the AutoUpdate Enable option selected.
- The software version of the RM Server is greater than the software version on the client.

The following links provide additional information on the **AutoUpdate Enable** feature:

- AutoUpdate Process Initialization
    - Radio Management Client with AutoUpdate
    - RM Device Programmer with AutoUpdate
    - RM Job Processor with AutoUpdate
- Disable the AutoUpdate Feature in Radio Management 2

AutoUpdate Process Initialization

AutoUpdate Process Initialization

The **AutoUpdate** feature is initiated differently for the Radio Management Client (RMC) than it is for the RM Device Programmer and the RM Job Processor. The RM components are initialized as follows:

- Radio Management Client with AutoUpdate
- RM Device Programmer with AutoUpdate
- RM Job Processor with AutoUpdate

Radio Management Client with AutoUpdate

The **AutoUpdate** feature requires user interaction in the RMC client. When the RMC client attempts to connect to the RM Server with an incompatible version, and the preconditions are met, the user is notified and presented with the option to update.

If the user acknowledges the update, a file is downloaded from the RM Server to the client and installed. The RMC client application shuts down and a progress bar displays the installation progress.

Once the RMC client is updated to the current version, the user must re-launch the RMC client to connect to the RM Server.

RM Device Programmer with AutoUpdate

The AutoUpdate process automatically starts when the RM Device Programmer attempts to connect to the RM Server with an incompatible version. The RM Device Programmer downloads the update file from the RM Server and runs the file. The installation runs in the background with no user interaction or notification.

The user can use the RM Device Monitor to check the version compatibility for the RM Device Programmer. See Checking Version Compatibility for the RM Device Programmer.

Checking Version Compatibility for the RM Device Programmer

When and where to use: Use this procedure to determine if the current software version on the RM Device Programmer is compatible with the RM Server.

Step	Action
1	Perform a search in Windows for **Device Monitor**.
2	Right-click on **RM Device Monitor** and select **Run as administrator**.
3	From the RM Device Monitor, click **Settings**.
4	Ensure that all RM Server settings are correct.
5	Click **Test Connection**. The **Test Connection Result** dialog box opens indicating if the connection was successful.

RM Job Processor with AutoUpdate

The AutoUpdate process automatically starts when the RM Job Processor attempts to connect to the RM Server with an incompatible version. The RM Job Processor downloads the update file from the RM Server and runs the file. The installation runs in the background with no user interaction or notification.

The user can use the RM Job Processor Config to check the version compatibility for the RM Job Processor. See Checking Version Compatibility for the RM Job Processor.

Checking Version Compatibility for the RM Job Processor

When and where to use: Use this procedure to determine if the current software version on the RM Job Processor is compatible with the RM Server.

Procedure:

Step	Action
1	Perform a search in Windows for **Device Monitor**.
2	Right-click on **RM Job Processor Config** and select **Run as administrator**.
3	Ensure that all RM Server settings are correct.
4	Click **Test Connection**. The Test Connection Result dialog box opens indicating if the connection was successful.

Disable the AutoUpdate Feature in Radio Management 2

To disable the **AutoUpdate** feature in the RM system, all the RM components must be uninstalled and reinstalled without selecting the **AutoUpdate Enable** option.

Common Tasks

Adding Radios

This topic covers the common tasks for :

- How to Add Radios to Radio Management

The Actions Menu's "New Radio" selection allows you to add new radios to the RM Server's database. Once the Serial Number field is entered, all non-template radio-specific values may be read from the radio. Also see Importing Radios.

These selections are only available when accessed from the Radio Management Client's - Radio View.

How to Add Radios in Radio Management

To add radios in Radio Management, follow these steps:

Step	Action
1	From the **Radio View**  , click the **Actions**  button and select **New Radio...**. The new radio window appears.
2	In the New Radio window, enter values for the mandatory field (Serial Number) and optional fields (Radio ID, CAI, Radio Alias, and Radio IP). **Note:** With only Serial Number entered, you may Schedule a Job to read the radio's codeplug to retrieve all template and non-template data into the Radio Management database.  Once entered the Serial Number cannot be changed, although you can "Delete" the record and start again.
3	Click the **OK** button. A new radio record / row is added to the Radio View, which is stored within the RM Server's database, as well as is included as part of the currently-selected

	group (refer to Grouping Radios) within the RM Server. **Note:** The default template name for the radio's codeplug is base-on the radio's Serial Number, which can be appropriately renamed (see Manage Templates) A template may also be selected (see Select Templates).

A job may now be scheduled to read the radio's codeplug data into the RM Server.

Note:

- The “Maximum # of Radios Supported” shows is the maximum number of radios that can be entered into the database. Ten radios are supported by default. Additional capacity may be purchased through the Motorola MOL WEB site.

Importing Radios and CSV Files

This topic covers the common tasks for :

- How to Import Radios to Radio Management
- How to Import CSV files to Radio Management

The Actions Menu's "Import" selection allows the user to add new radios to the RM Server's database. Also see Adding Radios.

These selections are only available when accessed from the Radio Management Client's - Radio View.

How to Import Radios to Radio Management

To import radios in Radio Management, follow these steps:

Step	Action
1	From the **Radio View**  , click the **Actions**  button, and then select **Import ➔ Radios**.
2	From the Import Radio window, browse to the storage device / folder, where the codeplug archive (**.ctb**) file(s) are located.
3	Select the desired archive file(s). Use the <*CTRL*> <*Mouse click*> combination to tag multiple files.
4	Click the **Open** button. The Import Radios dialog box appears.
5	To override the existing radio, click **Always override**. Otherwise, select **Never override**.
6	Click the **Import** button. The radio is added to the currently selected group (see Grouping Radios) within the RM Server.

Note:

- When a codeplug file that is imported has a Serial Number that already exists in the RM Server's database, the radio's previous Templates association for that radio is overwritten (refer to Select Templates).
- A radio's archive-history based-on Radio Management Read / Write events (refer to Schedule a Job) is always maintained in the database, unless a radio is deleted from the RM Server's database (refer to Deleting Radios).
- The codeplug's filename becomes the suggested Template name, which can be appropriately renamed (see Manage Templates).

How to Import Files to Radio Management

The **Import > File to Grid** window allows the user to import radio codeplug data from a comma-separated values (***.csv**) format. Codeplug data that is exported from Radio Management (refer to Exporting Data) can be modified in Microsoft's Excel program and saved as a **.csv** file (using Excel's **Save As** command).

To import **.csv** files in Radio Management, follow these steps:

Step	Action
1	From the **Radio View**  , click the **Actions**  button, and then select **Import ➔ File to Grid**. Alternatively, click **Ctrl+H**. The **Import File to Grid** window is launched.
2	From the **Import File to Grid** window, you can browse to the storage device / folder, where the **.csv** file(s) are located.
3	Select the desired **.csv** file(s). Use the *<CTRL> <Mouse click>* combination to tag multiple files.
4	Click the **Open** button. The Import Radios dialog box appears.
5	To override the existing radio, click **Always override**. Otherwise, select **Never override**.
6	Click the **Import** button. The radio is added to the currently selected group (see Grouping Radios) within the RM Server.

Notes:

- The template/format of the CSV file is located at the default path where the CPS is installed under Samples folder named as **Default.csv**.
- When an imported **.csv** file has a Serial Number that already exists in the RM Server, the values in the .CSV file will replace the values in RM.

Grouping Radios

This topic describes how the user can:

- Creating a New Group
- Selecting a Group
- Adding a New Group
- Associating Radios with a Group
- Renaming a Group
- Deleting a Group

Grouping radios / codeplugs within the Radio Management Client allows the user to organize similar radio types towards the goal of a more-efficient programming strategy. Filtering radios by Group is then possible. The "All" radios group removes all group filters for view / modify purposes.

Creating a Group

To create a group, follow these steps:

Step	Action
1	In the **Radio View**  , right-click within the **Group** list and select **Add Group** from the popup menu. **Note:** Groups cannot contain sub-groups.

Selecting a Group

To select a group, follow these steps:

Step	Action
1	In the top-left corner of the Radio Management Client window, selecting the desired Group is always available from the **Radio View**  .
2	To view only the radios assigned within a certain group, click on the desired Group. **Note:** Selecting **All** allows you to see every radio within the RM Server's database.

Adding A New Group

To add a group, follow these steps:

Step	Action
1	In the **Radio View**  , click the **Actions**  button and select **Add Group**. Alternatively, in the top-left corner of the Radio Management Client window, from the **Radio View**  and **Job View**  , the user can right-click within the **Group List** and select Add Group from the popup menu. **Note:** Groups cannot contain sub-groups.

Associating Radios with a Group

Radios are associated with a group by setting the radio's group attributes in the Radio View. To associate radios with a group, follow these steps:

Step	Action
1	In the top-left corner of the Radio Management Client window, only from the **Radio View**  : Click in the **Group** column of the desired radio record / row, then from the drop-down menu select the appropriate Group. **Notes:** • A radio **cannot** be in more than one Group. • The selected radio is added to the Group. • A newly-added radio is added to the currently-selected group (refer to Adding Radios). • There is **no limit** on the number radios that are possible within a group.

Renaming a Group

To rename a group, follow these steps:

Step	Action
1	In the top-left corner of the Radio Management Client window, from the **Radio View**  and **Job View**  : Right-click on the desired Group name within the **Group** list, then from the popup menu select **Rename**, and then type in the desired new name. **Notes:** • The **All** radios group supplied by Radio Management cannot be renamed. • The new Group name is applied to all radios currently associated with the Group.

Deleting a Group

To delete a group, follow these steps:

Step	Action
1	In the top left corner of the Radio Management Client window, from the **Radio View**  and **Job View**  : Right-click on the desired Group, then from the popup menu select **Delete Group**. **Notes:** • A Group **must be empty** (contain no radios) **before** it can be deleted. • The selected Group is removed from the **Group** list.

Creating and Managing Radios

Grouping radios within the Radio Management Client allows the user to organize and manage similar radio types.

Prerequisites: Radios must first be imported or read into the RM Server before they can be added to radio groups.

To add radios in Radio Management, follow these steps:

Step	Action
1	Click the **Radios** icon to switch to **Radio View.**
2	In the navigation pane, perform one of the following actions: **If...** / **Then...** creating a radio group, → perform the following actions: a Right-click in the navigation pane and select **New Group**. b Enter a name for the new group. deleting a radio group, → perform the following actions: a Select the relevant group. b Right-click and select **Delete**. renaming a radio group, → perform the following actions: a Select the relevant group. b Right-click and select **Rename**.
3	Assign radios to a group. Perform the following actions: a. From the navigation pane, select **All** to display all radios in the RM system. b From the list of radios, select the **Group** drop-down list and select the relevant group. **NOTE**: If **None** is the only value in the **Group** drop-down list, then no groups exist in the navigation pane. c Repeat step 3 b until all radios for this group are selected.
4	From the navigation pane, select the **radio group** that contain all the newly added radios. All radios displayed belong only to the selected radio group and under **All**.

Deleting Radios

Description

The Actions Menu's **Delete Radio** selection allows the user to remove radios from the RM Server. This selection is **only** available in the Radio View.

To delete radios, follow these steps:

Step	Action
1	In the **Radio View**  , select the radios to delete. To select multiple radios, hold down the **CTRL** key and click the desired rows.
2	Right click and select **Delete**.

Deleting Radios with Pending Licenses

Description

This selection is **only** available in the Radio View.

The RMC provides a function for deleting one or more radio(s) from the RM Sever Database. When a radio is deleted from the RM Server while there are pending licensing changes that have yet to be programmed to the radio, RMC alerts the user that they will lose the pending licenses, if they continue with deleting the radio from RM. User must call Motorola to replace the lost license.

Before the user can delete a radio with pending licenses, ensure that:
1. Open the Radio View in RMC.
2. There must be at least one radio in the RM with pending licenses changes waiting to be programmed to the radio.

To delete a radio with pending licenses, follow these steps:

Step	Action
1	Select the radio with pending license changes and select **Discard**. ***Results:*** RMC presents a message to the user informing them that they will permanently lose the pending licenses.
2	Click **OK.** ***Results:*** RMC removes the radio from RM and deletes any records in the Device Capability table associated with the radio.

Exporting Radios and CSV Files

The user can export data from the RM Server to a spreadsheet, or saved on a per-radio basis to your system's local hard drive as a codeplug archive.

This topic describes the following tasks:
• Exporting a Radio—Export a radio from the Server to an Archive File that can be read by CPS.
• Exporting Grid to CSV File—Export data from the RM server to a spreadsheet.

These selections are **only** available when accessed from the Radio Management Client's - Radio View.

Exporting a Radio

To export a radio from the Server to an Archive File that can be read by CPS, follow these steps:

Step	Action
1	From the **Radio View**  , select the radios to be exported.
2	Click the **Actions**  button and select **Export ➔ Radio...**. **Notes:** • To select multiple radio records, use the *<CTRL> <Mouse click>* combination and click the desired records.
3	From the **Save As** window, browse to the desired storage device/folder where the radio codeplug file is to be archived. **Notes:** • All Template and Non-Template codeplug data is exported. • The radio's current Template is suggested as the filename (with a **.ctb** file extension).
4	Enter the desired filename, then click the **Save** button. Result: Only selected data that is viewable within the Radio View is exported. The user can now customize the data that is exported to the file by showing or hiding columns in the Radio View grid.

Exporting Grid to CSV File

To export grid to file, follow these steps:

Step	Action
1	From the **Radio View**  , select the radios to be exported.
2	Click the **Actions**  button and select **Export ➔ Grid to File...**. **Note:** To select multiple radio records, hold down the CTRL key and click the desired records.
3	Browse to the desired storage device / folder from the **Save As** window.
4	Enter the desired filename, then click the **Save** button. **Result:** Only selected data that is viewable within the Radio View is exported. The file may now be opened in Microsoft Excel. The user can now customize the data that is exported to the file by showing or hiding columns in the Radio View grid.

***.CSV** is a standard "comma-separated values" format that can be opened in a spreadsheet program such as Microsoft Excel.

Managing Templates

This topic covers the following areas:

- Selecting Template(s)
- Editing Template(s)
- Deleting Template(s)
- Importing Template(s)
- Selecting Language Packs
- Upgrading Firmware

For each of the following procedures, the user must access the Manage Templates feature. To launch the Template window, refer to Manage Template.

Selecting Template(s)

To select a Template or Templates, follow these steps:

Step	Action
1	From the Radio View  , select the radios to be assigned to a template.
2	Right-click directly on the highlighted radios and choose **Select Template** from the popup menu. Alternatively, click **CTRL+M**.
3	In the resulting Select Template window, select the desired template and click the **OK** button. The chosen template is then applied to the selected radio(s). The template referenced in the Template Name column will change for each selected radio. **Notes:** • Only templates with compatible model numbers and codeplug versions are available. For example, if the user has selected a portable radio, the window will not show mobile templates. • The same restrictions for cloning apply to template selection so if the user cannot clone a radio from a template, it will not be shown in the window.

Editing Template(s)

The majority of a radio's codeplug feature-values are contained within a Radio Management template; templates can be applicable to multiple radios, which is why template-based programming is very efficient. The more generic codeplug feature-values (less radio-specific) are contained within Radio Management templates. Template codeplug values are modified from the main CPS user-interface. Template codeplug values have a view-only status in the RMC many views. Non-template radio-specific codeplug values such as Radio IDs and IP Addresses are maintained on a per codeplug basis in the RMC's three edit-capable views.

A template may be edited by selecting a single row in the table and choosing **Edit Template…** from the **Actions** button, which will bring up a traditional CPS view of the archive. It is important to note that any identity settings will be disabled when editing a RM template. Once modification of the template is done, clicking the **Save** button will prompt the user to store the modified version of the template as a new, uniquely named template. Since templates may be shared by many radios, it is important to give the modified version of the template a new, unique name as other radios may still need to reference the older version of the template. Once a new template name is provided, RM will detect if any other radios were using the old version of the template and prompt the user if the user wants to move the templates to the newer version. This is a very powerful feature that allows potentially thousands of radios to share

the same template and when the user needs to add a channel or change a button setting, the user only needs to edit a single template. Templates may only be shared across radios that have the same model number (similar to how Clone operations are restricted to the same model radios).

Once a Template has been edited (or any of the identity information has been changed), the Modified column for that radio will indicate which templates have changed and a job needs to be scheduled to write the changes to the physical radio.

To edit a Template or Templates, follow these steps:

Step	Action
1	From the Radio View  , select the desired radio.
2	Right-click directly on the desired template, then choose Edit Template or press **Ctrl + T**. This opens the selected template for editing of these more generic radio codeplug values in the main CPS user-interface. • Non-template (more radio-specific) fields are not able to be modified in the CPS when in this Edit Template mode.Non-Template feature values may be edited in the three edit-capable views of the Radio Management Client. • Radio record / rows currently scheduled for a job, may not have their template modified.
3	After the user completed the Edit session in the main CPS user-interface, click the CPS **Save** button. The Save Template As window appears.
4	Save the modified template with a new, unique name (other radios may still need to reference to the older version of the template). select the radio(s) to apply the changes from the new template. Use the Search tool if necessary.
5	Click **OK**. • All data edits are validated by the Job Processor when the template is Saved. • All versions of the template are maintained in the RM Server database, and therefore may be restored if need be (see the Radio Details window's Restore feature).
6	Close CPS to return to the RMC.

Deleting Template(s)

To delete a Template or Templates, follow these steps:

Step	Action
1	From Manage Templates window, right-click directly on the desired template, then click on **Delete**. Only templates not being used by any managed radios can be deleted.

Importing Template(s)

To import a Template or Templates, follow these steps:

Step	Action
1	Click the **Actions**  Button and choose **Import Templates...**. The **Import Template** window opens. **Note:** • Only **.ctb** files can be imported.
2	Select the desired file(s). These codeplug/template files allow are imported in to the current RM Server in a template only format.

Selecting Language Packs

To select language packs, follow these steps:

Step	Action
1	From Manage Templates window, right-click directly on the desired template and choose **Select Language Packs** or press **CTRL+S**. A **Choose Language** dialog box appears.
2	Select the desired language.

To learn how to import language packs, refer to Import Language Packs.

Upgrading Firmware

To upgrade firmware, follow these steps:

Step	Action
1	From Manage Templates window, right-click directly on the desired template and choose **Upgrade Firmware**. A **Upgrade Firmware** dialog box appears.
2	Select the desired firmware for upgrade.

To learn how to import firmware, refer to **Import Firmware.**

Managing Radio Licenses

This topic covers the following areas for the Radio Licenses window:

- Restoring Registered Licenses to Radio
- Recovering Radio Licences
- Sorting the Grid in the Radio Licenses View
- Filtering Available Radios by Groups

Restoring Registered Licenses to Radio

This section covers the ability to find licenses in the Device Capability table which are associated with a given radio, but are not shown in the Radio Licenses view. Licenses can end up in this state when changes to the device are dismissed with licenses in the registered state (prior to being activated in the device via a write operation). Another way is to delete the radio from and then add the radio into the RM Server database again between the registration and activation steps.

To restore registered licenses to radio, follow these steps:

Step	Action
1	Open the Radio Licenses View.
2	Load one (or more) radio device into the RM server database.
3	Select one or more rows in the Radio Licenses view.
4	Right click and select **Restore Licenses**. Alternatively, the user can click **Ctrl+O**. The RMC communicates with the RM server to determine if there are any licenses associated with the device by registered ID and updates the display in the Radio Licenses view to show licenses in this state, showing the Restored licenses as in the Ready for Activation state.

Recovering Radio Licenses

The user can use this feature when the user has lost your licensing information due to reimaging of the RM server machine. If the machine hardware is changed, then the user may have to contact the customer support. The user need to be able to call back to the Licensing Server in order to recover licenses (in the form of Capability Responses) for all radios in RM.

To recover radio licenses, follow these steps:

Step	Action
1	Click  , and then click **Settings**. The Settings window is displayed.
2	In the Settings window, select the **Licenses** tab. The Recover Licenses screen appears.
3	In the Recover Licenses screen, click the Radio Licenses - **Recover** button.
4	Click **OK**. The existing Licenses from the Motorola Licensing server is restored.

Sorting the Grid in the Radio Licenses View

By default, the data in the table is sorted in ascending according to Radio Serial Number.

However, the user can sort the data in the Radio Licenses view in ascending or descending order based on the selected column. To perform this action, click on of the column headers in the grid.

Filtering Available Radios by Groups

The user can filter Available Radios by Group (refer to Grouping Radios). The user can sort radio data by any column by clicking on the column header (refer to Sorting, Hiding, and Unhiding Radio Management Column Data).

Registering Radio Licensing

This topic covers the common tasks for Radio Licensing window that includes:
Text Field:

- How to Query EID
- Selecting Multiple Line Items in the EID Table
- Check All/Clear All Line Items in EID Table

Radio Licensing Summary:

- Clear All Radio Licensing

Available and Selected Radios Tables:

- Moving Highlighted Radios from Available Radios Table to Selected Radios Table
- Moving Highlighted Radios from Selected Radios Table to Available Radios Table
- Moving All Radios from Available Radios Table to Selected Radios Table
- Moving All Radios from Selected Radios Table to Available Radios Table
- Submitting Software License Assignment

The user must login to RM to view this feature. To login to RM, refer to Login to Radio Management. If the user is logon to RM, click the **Actions**  button and select **Manage Licenses** from the submenu. Alternatively, if the **Register Radio Licenses** button is already visible in the lower left-hand side of the window, click on that button.

Query EID Table Common Tasks

This section describes the common task for text field column of the Register Radio Licenses window.

How to Query EID

To query for an EID, follow these steps:

Step	Action
1	Type in the "Entitlement ID" into the Entitlement ID text box.
2	Click the **Query** button. To cancel, click **Clear All** button.

Note: If RMC prompts an error message detailing failure to retrieve the EID, ensure that the internet connection is valid or the user has entered a correct EID or the EID information appears in the Register Radio Licenses window.

Selecting Multiple Line Items in the EID Table

Follow these steps to select multiple line items in the EID table:

Step	Action
1	Click on the check box in the first column of the desired row. To check all or clear all, click on the checkbox in the column header of the EID table. RMC updates the EID table and applies filtering of the **Available Radios** and **Selected Radios** tables.
2	Click **OK** to remove any radios from the **Selected Radios** table and manually add the radios from the **Available Radios** table. User may skip this step if there are no radios to be removed.
3	Click **OK**. The radios are filtered out from the **Selected Radios** table.

Check All/Clear All Line Items in EID Table

Follow these steps to check or clear all line items in the EID table:

Step	Action
1	Click on the checkbox in the column header of the EID table.
2	Click **OK**. The radios are filtered out from the **Selected Radios** table.

Radio Licensing Table

This section describes the common task for Radio Licensing Summary table of the Register Radio Licenses window.

Clear All Radio Licensing

To clear all the EID table and subsequently, the Available Radios and Selected Radios lists, click the **Clear All** button.

Available Radios and Selected Radios Tables

This section describes the common task for the Available Radios and Selected Radios tables of the Register Radio Licenses window..

Moving Highlighted Radios from Available Radios Table to Selected Radio Table

To move highlighted radios from the Available Radios table to the Selected Radios table, follow these steps:

Step	Action
1	Highlights one or more rows in the **Available Radios** table.
2	Click **Add** button.

Alternatively, highlight and drag the ones to move from one list to the other.

Moving Highlighted Radios from Selected Radios Table to Available Radios Table

To move highlighted radios from the Available Radios table to the Selected Radios table, follow these steps:

Step	Action
1	Highlights one or more rows in the **Selected Radios** table.
2	Click **Remove** button.

Alternatively, highlight and drag the ones to move from one list to the other.

Moving All Radios from Available Radios Table to Selected Radios Table

To move all radios from the Available Radios table to the Selected Radios table, follow these steps:

Step	Action
1	Click **Add All** button. ***Result:*** RMC updates the table indicating the amount of radios are listed in the "Available Radios" list and the "Selected Radios" list.

Note: Each radio is added to the "Selected Radios" list once. There must never be multiple rows in the "Selected Radios" list that represent the same radio (by device serial number).

Moving All Radios from Selected Radios Table to Available Radios Table

To move all radios from the Available Radios table to the Selected Radios table, follow these steps:

Step	Action
1	Click **Remove All** button. ***Result:*** RMC removes all the radios shown in the "Selected Radios" table and adds each of the removed rows to the "Available Radios" table. RMC then updates the table indicating the amount of radios are listed in the "Available Radios" and the "Selected Radios" list.

Submitting Software License Assignment

After selecting the radios to assign the licenses, click the **Register** button in order to commit these associations.

Before submitting any software license assignment, ensure that:

- Radio Licensing window is open.
- The EID table contains at least one fully populated row, and at least one row in the EID table is checked.
- The Selected Radios table is populated with at least one fully populated row.
- The number or radios in the Selected Radios table must not exceed the number of licenses available in any of the checked rows in the EID table.
- RMC have valid internet connection.

To submit software license assignment, follow these steps:

Step	Action
1	Click **Register** button after selecting the radios to assign licenses to. ***Results:*** RMC displays a Progress Dialog indicating the register action is in progress and may take some time depending on the number of radios being processed.
2	Click **OK**. ***Results:*** RMC returns to the Radio Licensing screen.

Managing Application Licenses

This topic covers the common tasks for Application License window that includes:

- Online: Adding Licenses to the Current RM Server
- Offline: Adding Licenses to the current RM Server and "Get Host ID"
- Recovering Application License

For each of the following procedures, the user must access the Manage Application License feature. To launch the Manage Application License window, refer to Manage Application License Window.

Description

The Register Application Licenses feature allows the user to add additional Managed Radios to the Radio Management database. Once purchased, licenses can be added into this feature by one of two methods: Online "From EID" or Offline "From File". Each license added allows for an additional radio to be managed. License information is stored in the RM Server. Each RM Server comes with 100 free radio licenses. The Online "From EID" (Entitlement ID) method allows full access to new licenses through an Internet connection. The Offline "From File" method is available when having system isolation from an Internet connection is preferred.

Online: Adding Licenses to the current RM Server

To add licenses to the current RM server using the online method, follow these steps:

Step	Action
1	Select your License retrieval method to be **From EID**.
2	Verify that the user has an Internet connection.
3	Enter your Entitlement ID in the entry field. Whenever additional Licenses are ordered, Motorola Solutions sends the user an "Entitlement ID", which is the user's record for being entitled to the radio licenses that the user has purchased, and provides online access to the Licensing Server.
4	Click the **Query** button, then verify in the **Purchased** field that the proper amount of licenses have been retrieved from Motorola Solutions.
5	In the **Enter Quantity** field, enter the desired number of Licenses to be transferred to the current RM Server. Any portion of the **Available** licenses may be transferred.
6	Click the **Submit** button, then verify in the **Capacity** field that the radio licenses have been properly transferred

Offline: Adding Licenses to the current RM Server and "Get Host ID"

To add licenses to the current RM server using the offline method, follow these steps:

Step	Action
1	Select your license retrieval method to be **From File**. Offline does not require an Internet connection.
2	Select the **Get Host ID** button to create the Host ID for the current RM Server. The **HostID.txt** file is created containing the Host ID.
3	Save the **HostID.txt** file, being sure to take note of the folder where this file is being saved. The default folder is "ProgramData\Motorola\MOTOTRBOCPS".
4	Open the HostID.txt file with a word processer or text editor program. With the RM Server's Host ID number you may order your licenses from Motorola Solutions.
5	When the user has received your radio licenses from Motorola Solutions, the user may copy the License File (***.bin**) to a preferred location in the user's system. The Manage License **Browse** feature's default folder is "ProgramData\Motorola\MOTOTRBOCPS".
6	Click the **Submit** button to transfer all licenses, and verify in the **Capacity** field that the radio licenses have been properly transferred. With the **Offline** License method, all licenses are always transferred

Recovering Application Licenses

Clicking this button restores the existing Licenses from the Motorola Licensing server. This could be used when the user has lost its licensing information due to reimaging of the RM server machine. If the machine hardware is changed then the user may have to call the customer support. The user needs to be able to call back to the Licensing Server in order to recover licenses (in the form of Capability Responses) for all radios in RM.

To recover application licenses, follow these steps:

Step	Action
1	Click  and then click **Settings**. In the Settings window, click the **Licenses** button. **Settings window is displayed.**
2	Click **Recover** button under the Recover Application Licenses field. RMC presents a popup message, warning the user this could take a long time if depending on the number of radios and the connection quality of the network.
3	Click **OK**. RMC presents a Progress Dialog indicating the Recover Application Licenses action is in progress.
4	Click **OK**. RMC dismisses the Progress Dialog and returns focus to the Settings dialog.

Managing Firmware

This topic covers the common tasks for Manage Firmware window that includes:

- Importing Firmware
- Upgrading Firmware

Importing Firmware

To import firmware, click the Add  button in the Manage Firmware window. Alternatively, follow these steps:

Step	Action
1	Click the Actions  Button and choose **Import Firmwares**. The Import Firmware window appears.
2	Select the desired firmware.
3	Click **Import** to import the firmware to the RM Server.

Upgrading Firmware

To upgrade firmware, follow these steps:

Step	Action
1	From Manage Templates window, right-click directly on the desired template and choose **Upgrade Firmware**. An Upgrade Firmware dialog box appears.
2	Select the desired firmware for upgrade.

Importing Language Pack Files Manually

For each of the following procedures, the user must access the Manage Language Packs feature. To launch the Manage Language Packs Window, refer to Manage Language Packs Window.

To import Language Packs Files manually, follow these steps:

Step	Action
1	Click the Actions  Button and choose **Import Language Packs**. The Import Language Packs window appears.
2	Enable the checkboxes of your desired language(s).
3	Click **Import** to import the Language Packs.

Importing Text To Speech Pack Files Manually

For each of the following procedures, the user must access the Manage Text To Speech Packs feature. To launch the Manage Text To Speech Packs Window, refer to Manage Text To Speech Packs.

To import Text To Speech Packs Files manually, follow these steps:

Step	Action
1	Click the Actions  Button and choose **Import Language Packs**. The Import Text To Speech Language Pack Files window appears.
2	Enable the checkboxes of your desired language(s).
3	Click **Import** to import the Text To Speech Packs.

Importing Voice Announcement Files Manually

For each of the following procedures, the user must access the Manage Voice Announcement feature. To launch the Manage Voice Announcement window, refer to Manage Voice Announcement Window.

To import Voice Announcement Files manually, follow these steps:

Step	Action
1	From the Actions menu, select **Manage Voice Announcements** to open the **Resource View Voice Announcement** window.
2	Click the **Add** button.
3	From the **Import Voice Announcements** window, select the relevant **.mva** file. Note: The **.mva** file length must not exceed 20 seconds.
4	Click **Open**. Results: The voice announcement file is imported to the RM server.

Adding, Editing, and Deleting OTAP Keys

This topic covers the following areas:

- Adding OTAP Key(s)
- Editing OTAP Key(s)
- Deleting OTAP Key(s)

For each of the following procedures, the user must access the Manage OTAP Keys feature. To launch the OTAP Keys window, refer to Manage OTAP Keys.

Adding OTAP Key(s)

To add an OTAP Key or OTAP Keys, follow these steps:

Step	Action
1	From Manage OTAP Keys window, click the Add button  . **Add OTAP Key** dialog box appears.
2	Type in your desired values in the text field to set your new OTAP parameters.
3	Click **OK**.

Editing OTAP Key(s)

The user can only edit Key ID and Key Value when these parameters are not being used by any managed radios or templates. Key Alias is always editable. In-Use (Radios/Templates) is not editable.

To edit an OTAP Key or OTAP Keys, follow these steps:

Step	Action
1	From Manage OTAP Keys window, double-click directly on the desired cell.
2	Type in your desired values in the text field to set your new OTAP parameters.
3	Click on the view area to set your new value.

Deleting OTAP Key(s)

The user can only edit Key ID and Key Value when these parameters are not being used by any managed radios or templates. Key Alias is always editable. In-Use (Radios/Templates) is not editable.

To delete an OTAP Key or OTAP Keys, follow these steps:

Step	Action
1	From Manage OTAP Keys window, right-click directly on the desired row.
2	Select **Delete**.

Adding, Editing, and Deleting Privacy Keys

This topic covers the following areas:

- Adding Privacy Key(s)
- Editing Privacy Key(s)
- Deleting Privacy Key(s)

For each of the following procedures, the user must access the Manage Privacy Keys feature. To launch the Privacy Keys window, refer to Manage Privacy Keys.

Adding Privacy Key(s)

To add a Privacy Key or Privacy Keys, follow these steps:

Step	Action
1	From Manage Privacy Keys window, click the Add button  . **Add Privacy Key** dialog box appears.
2	Type in your desired values in the text field to set your new Privacy parameters.
3	Click **OK**.

Editing Privacy Key(s)

The user can only edit Key ID and Key Value when these parameters are not being used by any managed radios or templates. Key Alias is always editable. In-Use (Radios/Templates) is not editable.

To edit a Privacy Key or Privacy Keys, follow these steps:

Step	Action
1	From Manage Privacy Keys window, double-click directly on the desired cell. **Results:** Add Privacy Keys dialog box appears.
2	Type in your desired values in the text field to set your new privacy key parameters.
3	Click on the view area to set your new value.

Deleting Privacy Key(s)

The user can only rows that are not being used by any managed radios/templates. To delete an Privacy Key(s), follow these steps:

To delete a Privacy Key or Privacy Keys, follow these steps:

Step	Action
1	From Manage Privacy Keys window, right-click directly on the desired row.
2	Click **Delete**.

Adding, Editing, and Deleting RAS Keys

This topic covers the following areas:

- Adding RAS Key(s)
- Editing RAS Key(s)
- Deleting RAS Key(s)

For each of the following procedures, the user must access the Manage RAS Keys feature. To launch the RAS Keys window, refer to Manage RAS Keys.

Adding RAS Key(s)

To add a RAS Key or RAS Keys, follow these steps:

Step	Action
1	From Manage RAS Keys window, click the Add button  . **Add Privacy Key** dialog box appears.
2	Type in your desired values in the text field to set your new RAS parameters.
3	Click **OK**.

Editing RAS Key(s)

The user can only edit Key ID and Key Value when these parameters are not being used by any managed radios or templates. Key Alias is always editable. In-Use (Templates) is not editable.

To edit a RAS Key or RAS Keys, follow these steps:

Step	Action
1	From Manage RAS Keys window, double-click directly on the desired cell.
2	Type in your desired values in the text field to set your new RAS key parameters.
3	Click on the view area to set your new value.

Deleting RAS Key(s)

The user can only rows that are not being used by any managed radios/templates. To delete a RAS Key(s), follow these steps:

To delete a RAS Key or RAS Keys, follow these steps:

Step	Action
1	From Manage RAS Keys window, right-click directly on the desired row.
2	Click **Delete**.

Adding, Editing, and Deleting Symmetric Keys

This topic covers the following areas:

- Adding Symmetric Key
- Editing Symmetric Key
- Deleting Symmetric Key

For each of the following procedures, the user must access the Manage Symmetric Keys feature. To launch the Symmetric Keys window, refer to Manage Symmetric Keys.

Adding Symmetric Key

To add a Symmetric Key, follow these steps:

Step	Action
1	From Manage Symmetric Keys window, click the Add button  . **Add Symmetric Key** dialog box appears.
2	Type in your desired values in the text field to set your new Symmetric parameters.
3	Click **OK**.

Editing Symmetric Key

The user can only edit Key ID and Key Value when these parameters are not being used by any managed radios or templates. Key Alias is always editable. In-Use (Templates) is not editable.

To edit a Symmetric Key, follow these steps:

Step	Action
1	From Manage Symmetric Keys window, double-click directly on the desired cell. The **Add Symmetric Keys** dialog box appears.
2	Type in your desired values in the text field to set your new Symmetric key parameters.
3	Click on the view area to set your new value.

Deleting Symmetric Key

The user can only rows that are not being used by any managed radios/templates. To delete an Symmetric Key, follow these steps:

To delete a Symmetric Key, follow these steps:

Step	Action
1	From Manage Symmetric Keys window, right-click directly on the desired row.
2	Click **Delete**.

Cancelling Jobs

This topic covers the following areas:

- Cancel Job

For each of the following procedures, the user must access the Schedule Job window. To launch the Schedule Job window, refer to the table below.

The RMC's **Cancel Job** selection allows the user to remove a Scheduled Job from the RM Server's database. This feature can be used when a radio's Status is "Scheduled" or "Scheduled, Processing Job" (see the Radio View's - Status field).

This selection is only available when accessed from the Radio Management Client's - Radio View.

Once a scheduled Job has been sent from the RM Server to the Device Programmer, the Job can no longer be cancelled.

Cancel Job

To cancel a scheduled Job, follow these steps:

Step	Action
1	From the **Radio View**  , select the desired radios.
2	Right-click and select **Cancel Job**.

See Also

- Scheduled Job Common Tasks

Download and Manage Offline Jobs

This topic covers the following areas:

- Description
- Offline Job Process
- Prerequisites to Managing Offline Jobs
- Offline Jobs Tasks

For each of the following procedures, the user must access the RM Device Monitor. To launch the RM Device Monitor, click Start ➔ Motorola ➔ RM Device Programmer ➔ RM Device Monitor.

Description

The user can schedule and download offline jobs as well as cancel downloaded jobs. Offline jobs only support read and write jobs.

The Advanced button is located next to the Test Connection button at in the Manage Offline Job View. The warning text is in the Manage Offline Job View. The Advanced button is only visible when the Device Programmer's Radio Connection Method is "wired". Otherwise, this button is hidden. In the Manage Offline Job View, the user can view two types of jobs: ”Ready-to-be Downloaded” jobs on the RM server and “Completed Downloads” in the Device Programmer. However, only wired jobs in "Waiting for DP" or "Scheduled" status are shown. Offline or Online status is presented on the title of the window.

Offline Job Process

The Offline Job process is as follows:

Stage	Description
1	Job Processors write jobs.
2	Job is downloaded to Device Programmer. **Note:** If the user is downloading a future job (the start time is in the future), the status can change to an immediate job.
3	Device Programmer updates the Job Status to “Running”.
4	Device Programmer submits completed or cancelled jobs automatically when it is online.

Notes:

- This function does not support auto refresh.
- If there are any pending offline jobs, the user cannot configure Device Programmer as OTAP.

Prerequisite to Managing Offline Jobs

If the user is managing offline jobs, the user must adhere to the following parameters:

- The user can only manage offline read and write jobs. Write jobs are processed by Job Processor (JP) before it is downloaded to Device Programmer (DP).
- Only DP is available for offline programming.
- Radio Connection Method of DP is configured as "Wired". For more information, refer to Scheduling a Write Job.
- Radio licenses changed jobs is not allowed for offline programming.
- RM Server and DP are distributed on different PCs (marked as PC_Svr [installed RM Server, RMC, Command line CPS and JP] and PC_DP[installed DP only]

Offline Job Tasks

The user can perform the following tasks in this view:

- Download an Offline Job
- Cancel a Downloaded Job
- Perform an Offline Job

Download an Offline Job

Before performing this action, remember to follow the parameters outlined in the Prerequisite to Managing Offline Jobs.

To download an offline job, follow these steps:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>In RMC on PC_Svr, create a new device.
<table>
<tr><th>If...</th><th>Then...</th></tr>
<tr><td>scheduled a write job</td><td>wait for JP processed the job.</td></tr>
<tr><td>scheduled a future Job</td><td>Step 2 onwards will be the same.</td></tr>
<tr><td>scheduled a wireless job</td><td>the job will not be displayed at Step 3.</td></tr>
</table></td></tr>
<tr><td>2</td><td>Schedule a wired read job.
Results: Job status in RMC changes to "Waiting for DP" or "Scheduled".</td></tr>
<tr><td>3</td><td>Navigates to "Manage Offline Job View".
Results: Job is displayed in the view. The job's download status is "Available"</td></tr>
<tr><td>4</td><td>Select the job, then press Download.
Results: In RMC on PC_Svr, the download status changed to "Running". In DP on PC_DP, the download status changed to "Downloaded".
<table>
<tr><th>If...</th><th>Then...</th></tr>
<tr><td>the job failed to download</td><td>the download status will change to "Download Failed".</td></tr>
<tr><td>the user selected a job with a download</td><td>the download button will not be</td></tr>
</table></td></tr>
</table>

	status is "Not Available for Download" (for example, "is downloaded", "Canceled", and "Ready to Upload") | available.
5	Click  , and then **Refresh.** ***Results:*** The "Download Failed" status will change to "Available for Download".

Cancel a Downloaded Job

To cancel a downloaded job, follow these steps:

Step	Action
1	Disconnect the PC_DP with PC_Svr.
2	Navigate to "Manage Offline Job View".
3	Select a "Downloaded" job. Press the "Cancel Offline Job" button. ***Results:*** Job's download status will change to "Canceled".
4	Connect the PC_DP with PC_Svr. ***Results:*** In RMC, the job status will change to "Waiting on DP".

Notes:

- DP executes a local job when the device is connected, regardless of the job status on server.
- User can only cancel a local job is via DP (offline jobs management tab). If user attempts to cancel a downloaded job in RMC, a warning that there could be an inconsistency between radio and RM Server appears.
- When DP disconnected with Server, if another user cancels a downloaded job on server and scheduled a new job for the device, then after re-connected the DP with server.
    - The downloaded job is abandoned
    - If the downloaded job is executing, the job will be abandoned after execution completed.

Perform an Offline Job

To cancel a downloaded job, follow these steps:

Step	Action	
1	Disconnect the PC_DP with PC_Svr.	
	If...	**Then...**
	the user selected a job and pressed the Cancel button on the "Manage Offline Job View"	a. the download status is "cancelled" and the job will not be executed at step 2.
		b. After re-connected to RM server, the job status in RMC is changed to "Waiting on DP", and the job item is removed from "Manage Offline Job View".

<table>
<tr><td>2</td><td>Attached the corresponding device to the PC_DP.
Result: The job is executed and the job's download status is "Pending to Upload".<table><tr><th>If...</th><th>Then...</th></tr><tr><td>the job failed</td><td>the job's download status si "Waiting Upload" and the job status in step 3 is "Failed" instead of "Completed".</td></tr></table></td></tr>
<tr><td>3</td><td>Connect the PC_DP with PC_Svr.
Result: Job is uploaded to the RM server. If the job is a read job, JP continues to process the job. The job status in RMC is changed to "Completed" and the job item is removed from "Manage Offline Job View".</td></tr>
</table>

Using the Right Click Menu Feature

This topic covers the common tasks for:

- Overview
- Menu Selections and Keyboard Shortcuts

Overview

The Radio Management Client's Right-Click menu provides contextually sensitive tools for adding, editing, deleting, organizing, upgrading, and general maintenance of codeplug / template records and values, that are stored within the RM Server database.
Note: Highlight the desired RMC's record/row and then right-click for the menu. This menu is only available from Radio View.

Menu Selections and Keyboard Shortcuts

The table below lists the menu selections and keyboard shortcuts for the right click menu options.

Menu Selections	Keyboard Shortcut	Definition
Show Details		Launches the Radio Details Window for the currently-highlighted radio.
Delete	Del	Deletes the currently highlighted radio(s) from the Server database (refer to Deleting Radios).
Select Group...		Allows the user to Move a radio to a new Group (refer to Radio Groups in Radio Management).
Edit Template...	Ctrl+T	Launches the main CPS interface, where Template codeplug values can be viewed and edited (refer to Manage Templates).
Select Template...	Ctrl+M	Launches the Select Template window where the user may select a new Template to be applied to the currently-highlighted radio(s).
Discard Changes		Discards any recent changes made to the currently- highlighted radio. This is true for all Template-related changes and non-template-related data. However a Group change is not restored (refer to Radio Groups in Radio Management).
Schedule Job...		Launches the Schedule Job window in order to create a new read or write programming job for the currently highlighted radio(s).
Cancel Job		Allows the user to Cancel a Job for the currently highlighted radio (refer to Cancelling Jobs in Radio View).

Upgrade Language Pack		Compares the language pack versions currently read from the radio to those stored on the RM Server. If a newer language pack version is detected, the language pack is updated and the **Language Packs Modified** flag is set. A wired or wireless Write job must be scheduled to update the language packs on the radio and clear the Language Packs Modified flag. Note: • The Language Packs Modified flag is only set when a newer language pack version is detected on the RM server. In addition, write jobs for codeplug modifications can be scheduled Over the Air even if the Language Packs Modified flag is set. Language packs can only be written to the radio over a wired or wireless connection.
Export➔ Radio	Ctrl+ Shift+R	Allows the user to export the currently highlighted radio(s) to a codeplug file (**.mc**) format. Refer to Exporting Codeplug Data from Radio View.
Export➔ To CSV	Ctrl+ Shift+S	Exports all of the data shown in the Radio View to an Excel spreadsheet (.xlsx) format file. Refer to Exporting Codeplug Data from Radio View.
Modify Radio Password		Launches the Modify Radio Password widow that allows the user to override the current codeplug password for the configuration for the radio.

RM Troubleshooting

Troubleshooting in Radio Management

This section covers various troubleshooting related topics in Radio Management that are intended to provide information and resolution.

WARNING	Only a user with a good understanding of the system should perform these troubleshooting activities.

The following sections contains helpful troubleshooting information:

- Radio Management Connection Problems
    - RM Client Component and RM Server Computers in Different Domains
        - Obtaining the IP Address and Hostname for the RM Server
        - Resolving DNS Names for RM Server
    - Network Connectivity Problem
    - Windows Firewall and RM TCP Ports
    - Coordinated Time Zone for Radio Management
    - Radio Management Windows Services
    - Certificates and License Server
- Delete Button is Grayed Out
- Radio Resets Twice after a Write Job

- Preventing USB LAN as the Default LAN for USB Connection

Radio Management Connection Problems

The Radio Management Client and the RM Device Programmer may experience issues connecting to the RM Server in a distributed environment. These issues may be caused by a number of factors and the error messages that are displayed do not always provide the necessary information to resolve the issue.

The following sections provide the user with helpful information to resolve common problems.

RM Client Component and RM Server Computers in Different Domains

Problem:

The RM client component (RMC, RM Device Programmer, or RM Job Processor) cannot connect to the RM Server. This can occur even if the RM client component is using the correct RM Server hostname or IP address within its connection settings.

When properly configured, the DNS on the network generally handles hostname resolution without any issue. However, there are cases (especially in non-domain deployment scenarios), where the RM Server hostname is not resolved by the computer running the RM client component.

Solutions:

Perform the following procedures to connect the RM client component to the RM Server:

1. Obtain and record the IPv4 Address and hostname of the computer running the RM Server. See Obtaining the IP Address and Hostname for the RM Server.
2. Modify the Windows hosts file C:\Windows\System32\drivers\etc\hosts on the RM client to resolve the DNS name of the computer running the RM server. See Resolving DNS Names for RM Server.

Obtaining the IP Address and Hostname for the RM Server

Procedure:

Step	Action
1	From the RM Server computer, run Command Prompt as an administrator
2	Enter the command, ipconfig
3	Record the IPv4 Address for the RM Server computer
4	At the command prompt, enter the command, hostname
5	Record the hostname for the RM Server computer

Resolving DNS Names for RM Server

An RM client computer residing in a different domain then the RM Server requires that the DNS name for the server be resolved on the client computer

Procedure:

Step	Action
1	From the client computer running the RM client component, navigate to C:\Windows\System32\drivers\etc\.
2	Open the **hosts** file, as an administrator, using a text editor (Notepad).
3	Add an entry to the end of the file using the following syntax: <IPAddress> <hostname> where, <IPAddress> is the RM Server IPv4 Address and <hostname> is the hostname of the RM Server record in Obtaining the IP Address and Hostname for the RM Server. Step example: **111.222.333.444 MyRMServerName**
4	Save the **host** file.
5	Start the RM client component (RMC, Device Programmer, or Job Processor) and verify the connection to the RM Server. **Note**: • If the server is on a different domain than the client, a non-domain user account must be set up in the RM Server Utility for each user running the RM Client. See Adding Users to the RM System.

Network Connectivity Problem

Intranet or Internet

An internal company intranet connection to the RM Server is required. The RM Client requires an internet connection for the licensing feature.

Windows Firewall and RM Ports

Problem:

The Radio Management Client cannot communicate with the RM Server due to a Windows firewall error.

Resolution:

The following HTTPS and TCP ports must be open in the Windows Firewall on both the client and server computers:

- HTTPS Protocol:
  - 443
- TCP Protocol:
  - 3415
  - 49202
  - 49205-49210
  - 50003

- 51020-51030
- 65534

Port Conflict by Multiple Applications

Port conflicts can occur when the RM Server is deployed on a computer running other services concurrently.

Problem:

The RM Windows services do not start. An error is logged in the service log file indicating that the service port is in use by another application.

Resolution:

Review the service log, identify the application using the port and stop the application. Launch the RM Server Utility and **Start All** the services from the Status.

Unable to Validate Server SSL Certificate

The RM Client (RM Client, RM Device Programmer and RM Job Processor) must establish a trust relationship for the SSL Certificate used by the RM Windows services.

Note:

- This error can occur when using the HTTPS Protocol Support feature that uses port 443 to connect to the RM Server.

Problem:

The RM client is unable to start and an error is reported in the client log file. The error indicating that a trust relationship could not be established for the SSL/TLS secure channel. This error can occur when the default port 443 has been registered with another application on the client machine.

Resolution:

Install the Trusted Root Certification Authority of the SSL certificate on the client machine. Contact Motorola Solutions Service Center for assistance.

Coordinated Time for Distributed Radio Management Deployment

Any computer running Radio Management components (RM Client, RM Device Programmer, or RM Job Processor) must have its time set to within five minutes of the time on the computer running the RM Server.

- This synchronization of time ensures that the Radio Management components connect to the RM Server.
- Computers may exist in different time zones; however, their time must be set to within 5 minutes of the RM Server's time, accounting for the difference in time zones. For example, an RM Server in Chicago is set to 1:15 p.m. (CST). Ensure that the computers running the DP and JP in California are set to 11:15 a.m. (PST).

Radio Management Windows Services

Problem:

Communication with any of the RM components has failed. One or more of the Motorola RM services may have stopped running.

Resolution:

Verify that the following Motorola RM Windows services are running on the server.

- Motorola RM Discovery Service
- Motorola RM Server
- Motorola RM Job Server
- Motorola RM Job Processor
- Motorola RM Device Programmer

If any of the above mention services is not running, open Windows services on the server, stop all the Motorola RM services, and restart them in the order listed above.

Note:

If the Motorola RM services do not start, there is a problem with the installation and no further action can be performed. Contact Motorola Solutions Service Center for assistance.

Certificates and License Server

Digital Certificates

Radio Management uses digital certificates to authenticate the RM Device Programmer. Occasionally, the certificates can become corrupted, or they can expire. Contact customer support to have the digital certificates manually reinstalled.

Connection Problems with the License Server

If the server is in a separate network than the client, it may be necessary to create a route to the server in the client's Windows Route Table. Refer to Windows documentation to perform this task. The URL to the license server is https://licensing.motorolasolutions.com

Delete Button is Grayed Out

There are many reasons why a delete button is grayed out. The following sections describe some of the more common reasons.

Views Displaying Grayed Out Delete Button

In Radio View, the delete button can be grayed out when the selected radio has a scheduled job that is waiting to be completed.

Note:

- **Radio View** is displayed when the **Radio View** icon is selected.

Radio Resets Twice after a Write Job

Problem

After performing a firmware and configuration write job using the **USB+Wireless(LAN)** connection method, the radio is resetting twice.

Resolution

When upgrading the radio firmware and modifying the configuration, it is highly recommended to perform two separate write jobs. First, upgrade the radio firmware and schedule a write job. When the firmware upgrade write job is complete, register the new feature, configure the radio settings for the new feature, and then schedule a second write job.

Preventing USB LAN as the Default LAN for USB Connection

If the user selects direct cable (USB) instead of wireless (Wi-Fi) connection as the interface between the RM tool and the device, the device will work as a modem (USB tethering).

Problem

USB tethering prevents the PC from connecting to the internet because Windows uses the USB LAN as a default LAN. When there are no valid internet connection, it may cause errors during license registration or license recovery.

Resolution

Motorola Solutions proposes the following solutions:

- Register or recover license(s) firstly without USB connection between PC and device, or
- Disconnect USB connection and use Wi-Fi as the RM tool-device interface medium..

Purchasing Radio Features

Purchasing Radio Features

Radio features can be purchased through the Motorola Online (MOL) website. Once the radio features are purchased,an EID (Entitlement ID) will be provided from Motorola. Keep the EID in a safe place because it will be used to identify the purchased features and is necessary for enabling those features in the device.

A two-step process must be followed to enable a feature. The first step in this process is called Registration. During Registration, the user will associate the feature purchased with the Serial Numbers of all the devices on which they want to enable the feature. Please note that during Registration, an Internet connection is required. After Registration is complete, the radio features are ready to be transferred to the selected devices.

The second step of this process is called Activation. During Activation, a device must be connected to the same PC on which the device was registered. This is important to note that if the device Serial Numbers are registered within an office, but the actual devices are in the field, it is necessary to use a computer which can be brought out to the devices in the field, such as a laptop. After Activation is complete, the feature is enabled in the device and ready to be configured via CPS.

The features available for purchase are listed below. Depending on the model, radios may come with some of the features enabled by default. In order to determine which features are available for purchase, please read the device and go to the Device Information - Device Features.

Features Available:

- Digital
- Capacity Plus - Single Site
- IP Site Connect
- Enhanced Privacy
- Transmit (TX) Interrupt
- Dynamic Mixed Mode
- Connect Plus
- Enhanced GNSS
- Convert to 3600 Trunking
- 5 Tone
- Digital Phone Patch
- Connect Plus Mandown
- Radio Mandown
- Restricted Access to System
- Capacity Plus - Multi Site
- Data Services Via Bluetooth
- Digital Emergency
- Remote Monitor
- Radio Inhibit
- PDT Option Board
- Network Application Interface Data
- Network Application Interface Voice
- Digital Voting
- Bluetooth Permanent Discoverable
- Radio Keep Alive

- Multi-Button PTT
- End of Train
- CB Frequency
- Satellite Receiver
- Response Inhibit

Please click here for a list of **Frequently Asked Questions**.

Overview of the CFS:

- Registration
- Activation
- View

Registering a Device

Description

Allows the user to associate a feature with a device Serial Number. The user will be guided through the Registration process with a series of dialogs. No devices need to be connected to the PC during Registration. However, an Internet connection is required.

To register a device:

1. Select **Menu->Features->Register Device** to open the Register Wizard dialog. The dialog displays the instructions on the Registration process to the user.
2. Click **Next** to navigate to the **Enter EID** page.
3. Enter the EID (Entitlement ID) given by MOL and click **Next** to navigate to the **Select Feature** page.
4. Select a feature from the list. The Quantity Available and Quantity Ordered columns indicate the remaining available licenses that have not been registered for the feature and the number of licenses that were originally purchased.
5. Click **Next**, if there are available licenses, to navigate to the **Add Serial Numbers** page.
6. Enter the Serial Number of the device on which a feature is to be activated and click **Add**. For MTR3000 base radio/repeater, the MTR3000 Controller Board Serial Number page shows the location of the correct serial number to enter. Alternatively, enter Serial Numbers in the following ways:
    a. Click **Import...** to import the Serial Numbers from a text (.txt) file. The file should have one Serial Number per line. The Serial Numbers targeted for Registration will be displayed.
    b. Click **Read Device** to read the Serial Number directly from a device, or multiple devices. Select the device(s) and click **Add**.
7. Click **Register** to navigate to the **Registering Devices** page. The server is contacted to verify the EID and downloads the feature to the machine after verification. Then, Registration is complete.

Notes:

- Contact the Network Administration if the PC is unable to communicate with the license server.
- Only Serial Numbers which have yet to be registered to the selected EID and feature can be registered. A Serial Number that is already registered will not be added to the target Registration list.

Activating a Device

Description

Allows the user to transfer the feature or features to the device. The user will be guided through the process by a series of dialogs. The feature is enabled in the device and ready to be configured via CPS when Activation is complete.

To activate a device if the application is only connected to the device(s) physically (**Note**: An Internet connection is not required):

1. Connect a radio with a Serial Number which is already registered to this PC.
2. Select **Menu->Features->Activate Device** to open the Activation Wizard dialog. The dialog displays the Activation information to the user.
3. Click **Next** to navigate to the **Connected Devices** page. The page displays the device information which are the device IP Address and Serial Number.
4. Click **Next** to select the device and navigate to the **Select Feature** page.
5. Select the registered feature for the selected device and click **Activate**. Then, Activation is complete.

Note:

- Activating MOTOTRBO 2.0 digital feature, can be done via **Menu->Device->Update** or by pressing the **UPDATE** button when the Activation Complete pop-up is seen. To complete the digital feature enablement, radio firmware must be updated.

To activate a device if the application is connected to the device(s) physically and to the intermediary (master) remotely using the IP Repeater Programming feature (**Note**: An Internet connection is required):

1. Connect a radio with a Serial Number which is already registered to this PC.
2. Select **Menu->Features->Activate Device** to open the Activation Wizard dialog. The dialog displays the Activation information to the user.
3. Click **Next** to navigate to the **Select Mode** page. The page displays the available connection mode.
4. Select *Local mode* to navigate to the **Connected Devices** page, or *Remote mode* to navigate to the **Remote Device** page.
5. Enter Password (this page is shown after the **Remote Device** page and if the target device has a codeplug password programmed).
6. Click **Next** to select the device and navigate to the **Select Feature** page.
7. Select the registered feature for the selected device and click **Activate**. Then, Activation is complete.

To activate a device if the application is only connected to the intermediary (master) remotely using the IP Repeater Programming feature (**Note**: An Internet connection is required):

1. Connect a radio with a Serial Number which is already registered to this PC.
2. Select **Menu->Features->Activate Device** to open the Activation Wizard dialog. The dialog displays the Activation information to the user.
3. Click **Next** to navigate to the **Remote Device** page.

4. Enter Password (this page is shown if the target device has a codeplug password programmed).
5. Click **Next** to select the device and navigate to the **Select Feature** page.
6. Select the registered feature for the selected device and click **Activate**. Then, Activation is complete.

Viewing Registered Devices

Description

Allows the user to view the Serial Numbers that have been registered to a feature. No devices need to be connected to the PC during View Registered Devices process. However, an Internet connection is required. The user will be guided through the process by a series of dialogs.

To view registered devices:

1. Select **Menu->Features->View Registered Devices** to open the View Wizard dialog.
2. The user is navigated to the **Enter EID** dialog.
3. Enter the EID (Entitlement ID) given by MOL and click **Next** to navigate to the **Select Feature** page.
4. Select a feature from the list and click **Next** to navigate to the **View Registered Devices** page. The page displays the list of devices registered to this feature.

Frequently Asked Questions

What if the Serial Number for the wrong device was registered?

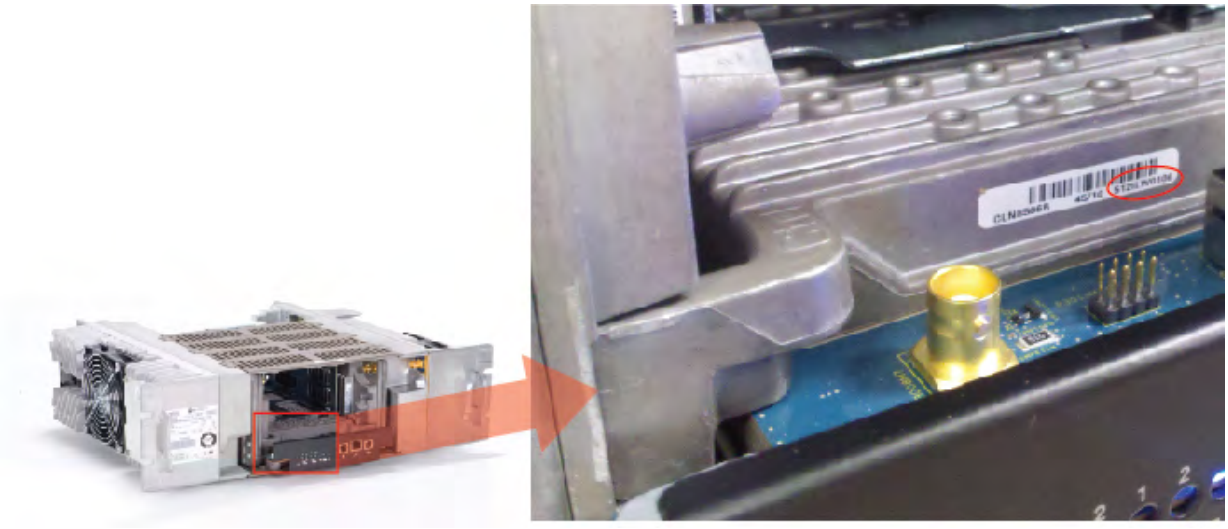
The user will need to contact customer service in order to make the feature available for re-registration with the correct Serial Number.

What if I registered a Serial Number and now, I want to activate a device from a different PC?

The user must activate the feature on same PC that was used to register the feature. With this in mind, the PC of choice should be selected carefully. However, if the user must activate a device from a different PC, they will need to contact customer service.

MTR3000 Controller Board Serial Number

The serial number (shown by the red oval) on the sticker on the controller board is used to register the base radio/repeater to the purchased software features encompassed within the entitlement identification (EID). Additionally, this serial number is used for warranty claims for the MTR2000 Upgrade.



Note

- If the incorrect serial number is registered to the purchased features, then a new EID number needs to be obtained.

Purchasing Application Features

Purchasing Application Features

Application features can be purchased through the Motorola Online (MOL) website. Once the application features are purchased, an EID (Entitlement ID) will be provided from Motorola. Keep the EID in a safe place because it will be used to identify the purchased features and is necessary for enabling those features in the application.

To enable a feature, it must go through a Registration process. During Registration, the user will associate the feature purchased with the application on which they want to enable the feature. Please note that during Registration, an Internet connection is required.

The features available for purchase are listed below. Depending on the application version, the application may come with some of the features enabled by default.

Features Available:

- Canada Full Frequency Range
- IP Repeater Programming
- 25 kHz Channel Bandwidth
- Over-the-Air Programming
- Radio Management (Manage Licenses)

Note:

- Do not have any MOTOTRBO radios connected to the PC while registering features.

Registering an Application Feature

Description

Allows the user to associate a feature with the application. The user will be guided through the Registration process with a series of dialogs. No devices need to be connected to the PC during Registration. However, an Internet connection is required.

To register a device:

1. Select **Menu->Features->Register Application Features** to open the Register Wizard dialog. The dialog displays the instructions on the Registration process to the user.
2. Click **Next** to navigate to the **Enter EID** page.
3. Enter the EID (Entitlement ID) given by MOL. The range is a maximum of 255 characters of 'A – F', '0 – 9' and '-'.
4. click **Next** to navigate to the **Select Feature** page.
5. Select a feature from the list. The Quantity Available and Quantity Ordered columns indicate the remaining available licenses that have not been registered for the feature and the number of licenses that were originally purchased.
6. Click **Next**, if there are available licenses, to proceed with the registration process. The server is contacted to verify the EID and downloads the feature to the PC after verification. Then, Registration is complete.

Note:

- The EID can only be registered on one PC. If the application on the PC is un-installed and reinstalled again, the registered feature(s) will still be available in the application.
- Contact the Network Administration if the PC is unable to communicate with the license server or registration fails.

Viewing Application Features

Description

Allows the user to view all the available application features and their statuses. Select **Menu->Features->View Application Features** to launch the dialog. No devices need to be connected to the PC during the View Application Features process.

IP Site Connect Features

Master

Archive Password 

Description

This feature sets a password to protect the IP Site system archive. The password prompt appears the next time the archive is opened. The user may enter up to 8 characters, consisting of alphanumerics, spaces, and special characters. Trailing spaces are ignored. The password is masked by solid dots.

Note

- There is no known method to retrieve a lost or forgotten password.
- This feature is supported in Digital mode only.

System Settings

Authentication Key (Master) 

Description

This feature allows the user to specify the private key value in a repeater using Link Establishment. All repeaters within the same Link Establishment system must share the same Authentication Key. The user may enter up to a maximum of 40 characters. Valid characters are 0-9 and A-F. Setting this value to blank indicates that the Authentication is disabled. Setting this key value as forty "F", or Ø indicates that the current value on the targeted repeater is to be preserved during write/clone operations.

For security reasons, if the codeplug is read from a radio, its Authentication Key value is shown as Ø.

This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Link Type** is set *Peer* and **Master Archive File** is specified.
- This feature is supported in Digital mode only.

Master IP (Master)

Description

This feature specifies the IP Address of the Master within the Link Establishment system. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Note

- This feature is supported in Digital mode only.

Master UDP Port (Master)

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Master within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is enabled when **Link Type** is set *Peer* and **Master Archive File** is left blank.
- This feature is supported in Digital mode only.

Peer Firewall Open Timer (sec) (Master)

Description

This feature displays and allows the user to select a firewall open message timer for Peer to Peer Protocol (P2P) messages. This timer is used to keep the connection alive between the application and its peer by having a periodic message sent between them at an interval as defined here. This timer is only applicable to Peers. This is a radio-wide feature.

Range	
Maximum	60 sec
Minimum	5 sec
Increment	1 sec

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Master Archive File** is specified.
- This feature is supported in Digital mode only.

Master Settings

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Peer

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number. By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Troubleshooting Section

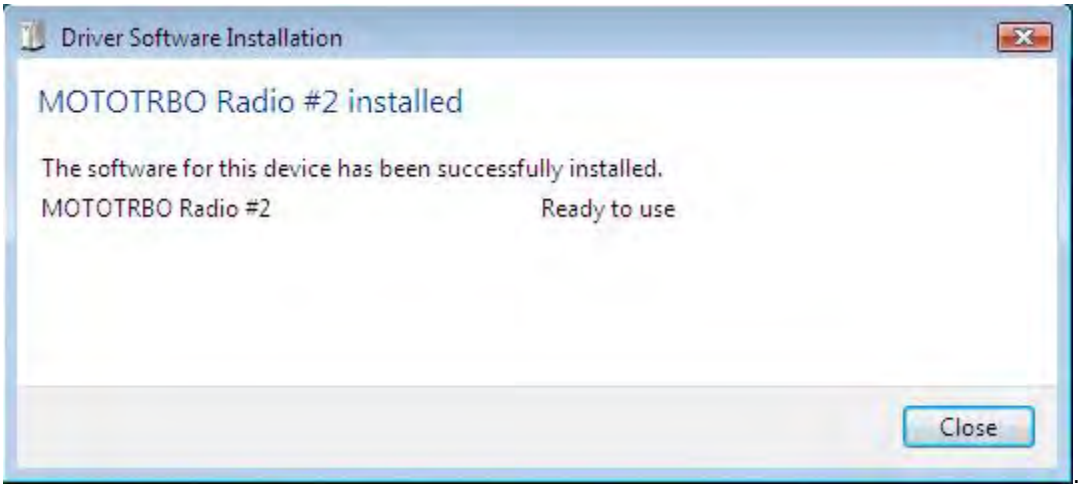
Installing the MOTOTRBO Driver

The user is prompted to install the MOTOTRBO driver when the radio is connected to the PC for the first time. This is needed to establish a connection between the radio and the PC.

On Microsoft® Windows® Vista Business/Home Premium and Microsoft® Windows® 7 Professional/Home Premium Operating System:

To install the MOTOTRBO driver :

1. Exit all the MOTOTRBO programs running on the computer.
2. Connect one end of the programming cable to the radio and the other end to the USB port of the PC. Power up the radio.
3. The **Driver Software Installation** window appears automatically. The installation is complete. Click **Close**.



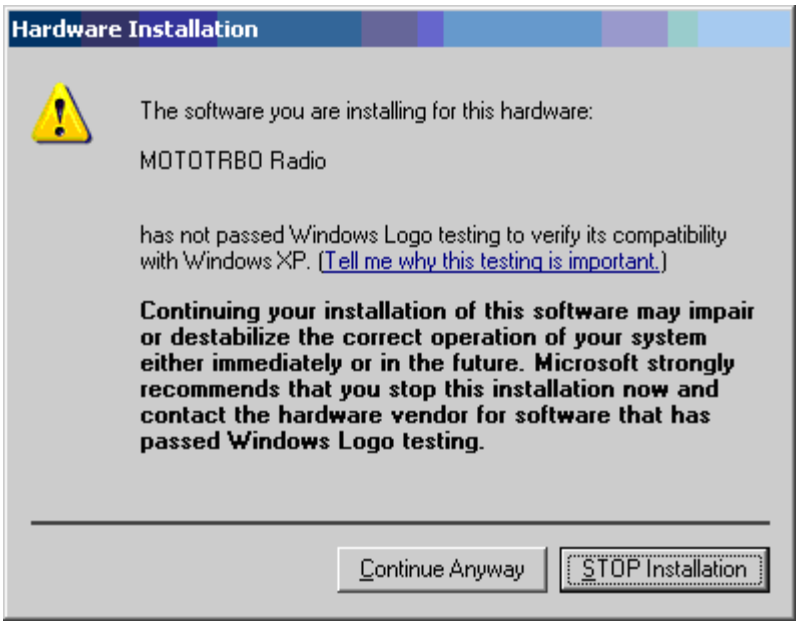
On Microsoft® Windows® XP Home/Professional Operating System:

To install the MOTOTRBO driver :

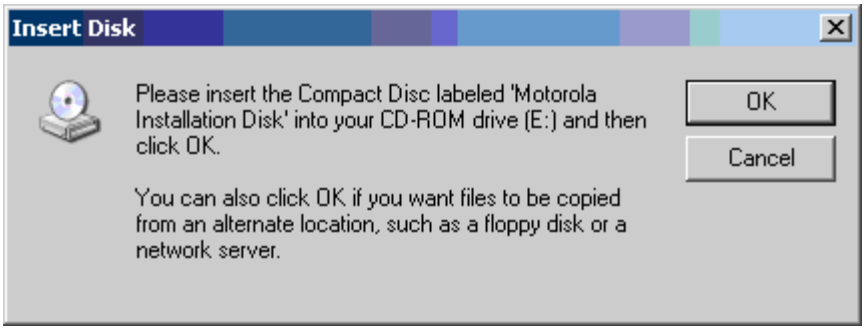
1. Exit all the MOTOTRBO programs running on the computer.
2. Connect one end of the programming cable to the radio and the other end to the USB port of the PC. Power up the radio.
3. The **Found New Hardware Wizard** window may appear automatically. Select *No, not this time*, as shown below. Click **Next**.

4. Select *Install the software automatically (Recommended)*, as shown below. Click **Next**.

5. Please wait while the computer searches and installs the driver. The Hardware Installation screen may appear. Click **Continue Anyway**.



6. The following screen appears if the computer cannot find the driver. Click **OK**.



7. In the following screen, click **Browse...** to manually locate the driver. The default path for the driver is C:\Program Files\Common Files\Motorola\MOTOTRBO Driver. The path may differ if the driver is installed in a different drive. Once the driver is located, click **OK**.

8. Please wait while the computer installs the driver.
9. Once the installation completes, click **Finish** to close the wizard. Proceed to Setting Up the MOTOTRBO LAN properties topic to complete the driver installation.

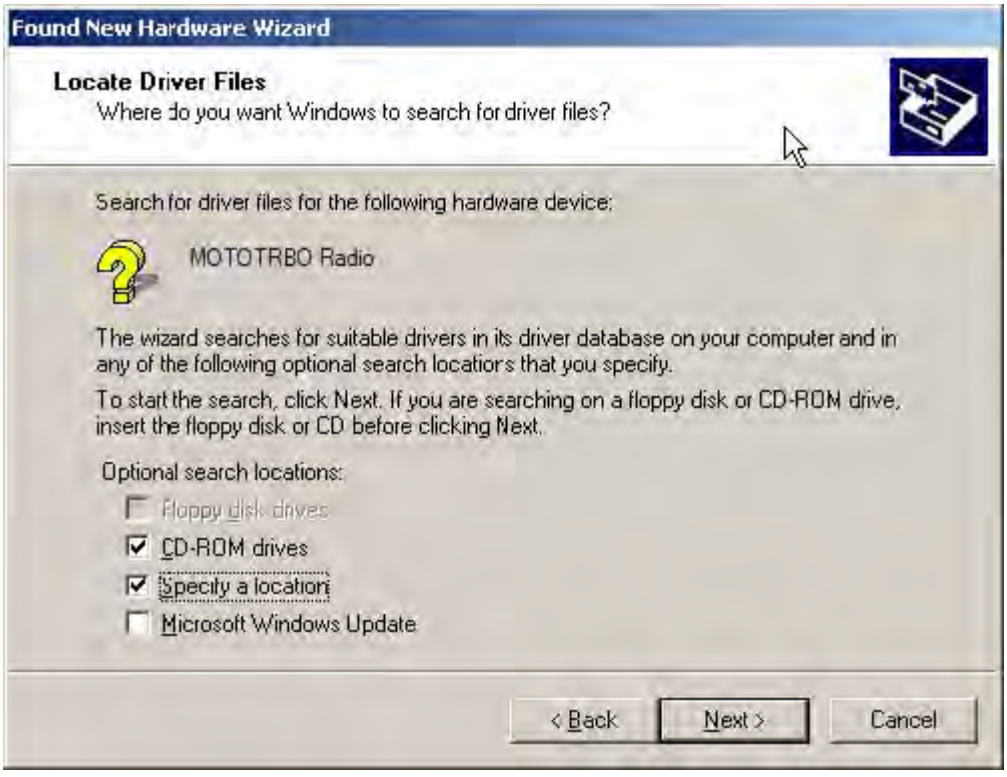
On Microsoft® Windows® 2000 Professional Operating System:

To install the MOTOTRBO driver:

1. Exit all the MOTOTRBO programs running on the computer.
2. Connect one end of the programming cable to the radio and the other end to the USB port of the PC. Power up the radio.
3. The **Found New Hardware Wizard** window below automatically appears. Click **Next** to continue to the next window.

4. Select *Search for a suitable driver for my device (recommended)*, as shown below. Click **Next**.

5. The following window appears. Check the checkbox for *CD-ROM drives* and *Specify a location*. Click **Next**.



6. The window below appears when a driver is found. Click **Next** to install the driver.

7. The following screen appears if the computer cannot find the driver. Click **Browse...** to manually locate the driver. The default path for the driver is C:\Program Files\Common Files\Motorola\MOTOTRBO Driver. The path may differ if the driver is installed in a different drive. Once the driver is located, click **OK**.

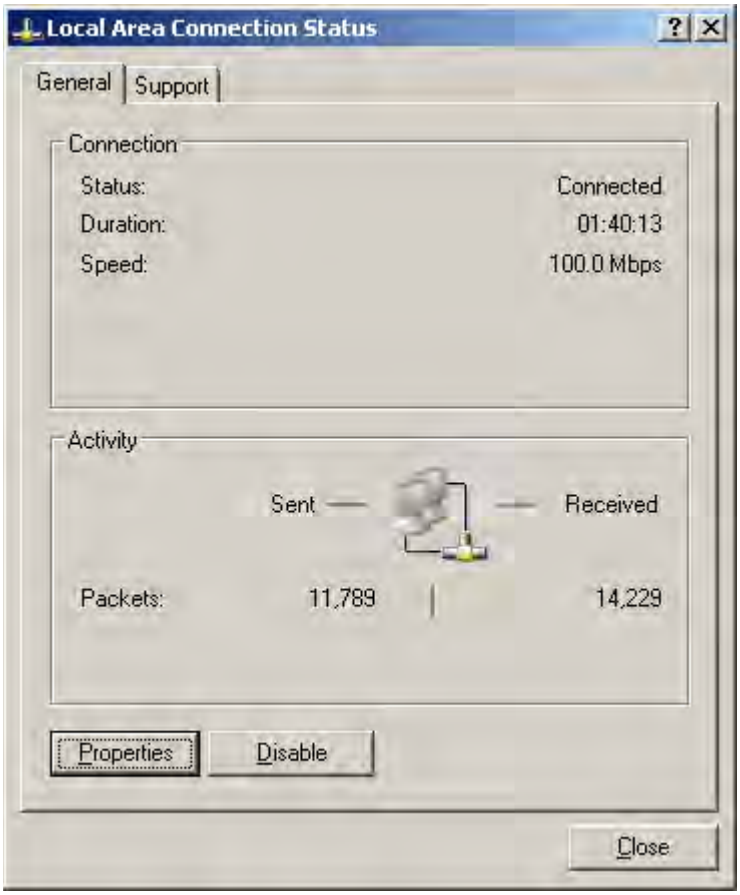
8. Please wait while the computer installs the driver.
9. Once the installation completes, click **Finish** to close the wizard. Proceed to Setting Up the MOTOTRBO LAN properties topic to complete the driver installation.

Setting Up the MOTOTRBO Local Area Network (LAN)

To set up the MOTOTRBO Local Area Connection:

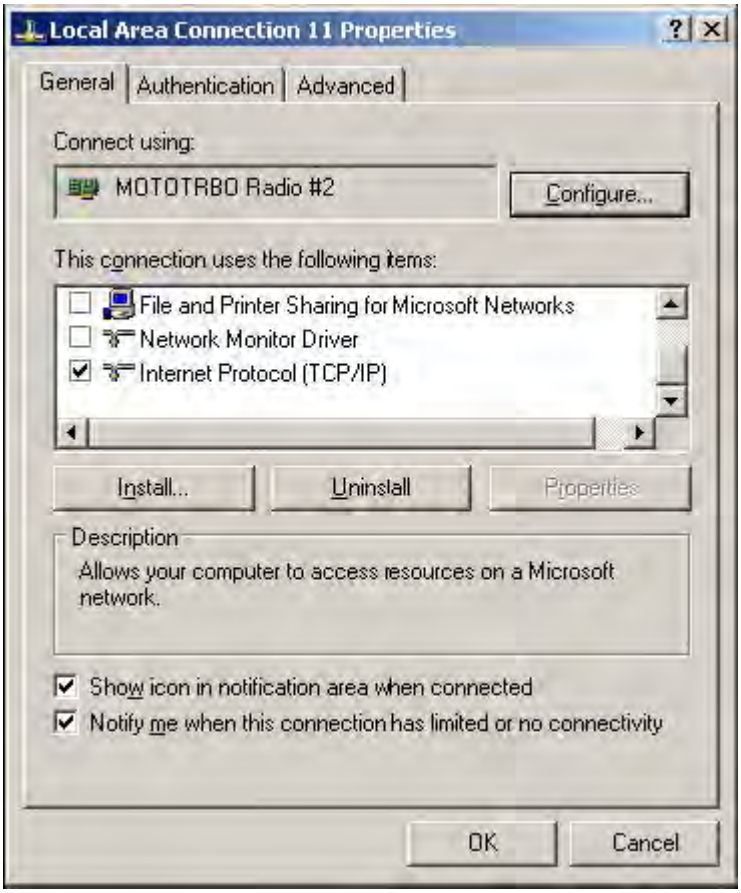
1. Click **Start**->**Settings** ->**Network Connection**, or **Start**->**Settings** ->**Control Panel**->**Network Connection**, and select **Open**.
2. Select **View** -> **Details** at the menu bar.
3. Double-click on the Network Connection named "Local Area Connection" that has the device name "MOTOTRBO Radio". The Local Area Connection box appears.

   Note: The user might have more than one Local Area Connection active on their machine. Please ensure that the right one is selected.



4. Click on **Properties**.
5. Uncheck all the checkboxes EXCEPT for *Internet Protocol (TCP/IP)*. It is recommended that the user checks the checkbox for *Show icon in notification area when connected* and *Notify me when this connection has limited or no connectivity*.

   Note: The *Notify me when this connection has limited or no connectivity* option may not be available on all machines.



6. Click **OK**. The setup for the MOTOTRBO Local Area Connection is complete.

Note

- The MOTOTRBO Local Area Connection needs to be set up again every time the MOTOTRBO driver installation is required.

See Also

- Installing the MOTOTRBO Driver.

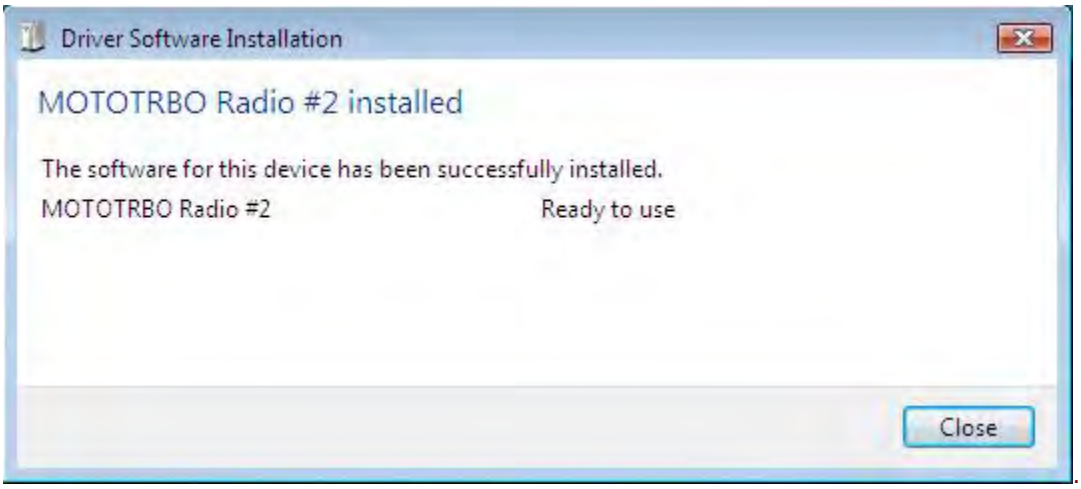
Installing the FlashZap Driver

This driver installation is required for the CPS Device Update and Recover feature to communicate with the radio in FlashZap/Boot Mode. The FlashZap driver installation process is triggered the first time the Device Update or Recover feature is used.

On Microsoft® Windows® Vista Business/Home Premium and Microsoft® Windows® 7 Professional/Home Premium Operating System:

To install the FlashZap driver :

1. Exit all the MOTOTRBO programs running on the computer.
2. Connect one end of the programming cable to the radio and the other end to the USB port of the PC. Power up the radio.
3. The **Driver Software Installation** window appears automatically. The installation is complete. Click **Close**.

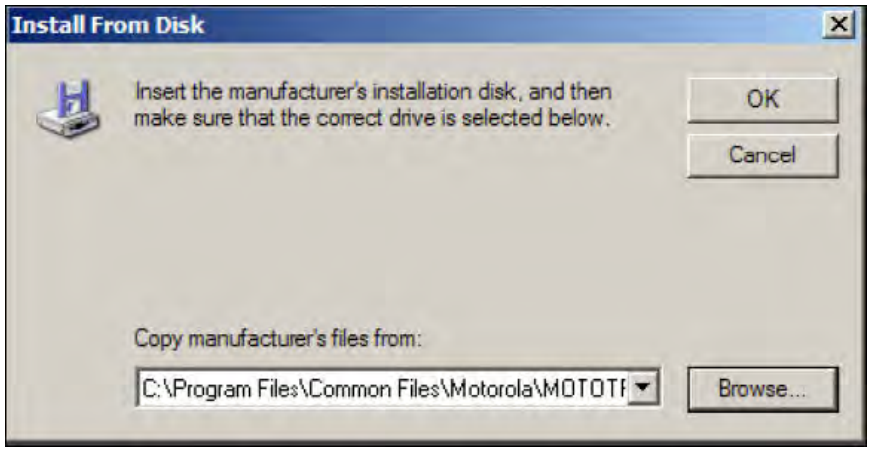


On Microsoft® Windows® XP Home/Professional Operating System:

To install the FlashZap driver:

1. Exit all the MOTOTRBO programs running on the computer.
2. Connect one end of the programming cable to the radio and the other end to the USB port of the PC. Power up the radio.
3. Launch the CPS on the computer.
4. From the CPS menu, select **Device**->**Update** or **Device**->**Recover**.
5. The Device Update or Recover dialog box appears. Select the firmware and codeplug package, and click **OK**.
6. The CPS will display an error if the FlashZap driver was not installed. After the FlashZap driver installation, the user has to restart the Device Update or Recover feature.
7. The **Found New Hardware Wizard** window automatically appears. Select *Install the software automatically (Recommended)*, as shown below. Click **Next**.

8. Please wait while the computer searches and installs the driver.
9. The following screen appears if computer cannot find the driver. Click **Browse...** to manually locate the driver. The default path for the driver is C:\Program Files\Common Files\Motorola\MOTOTRBO Driver. The path may differ if the driver is installed in a different drive. Once the driver is located, click **OK**.



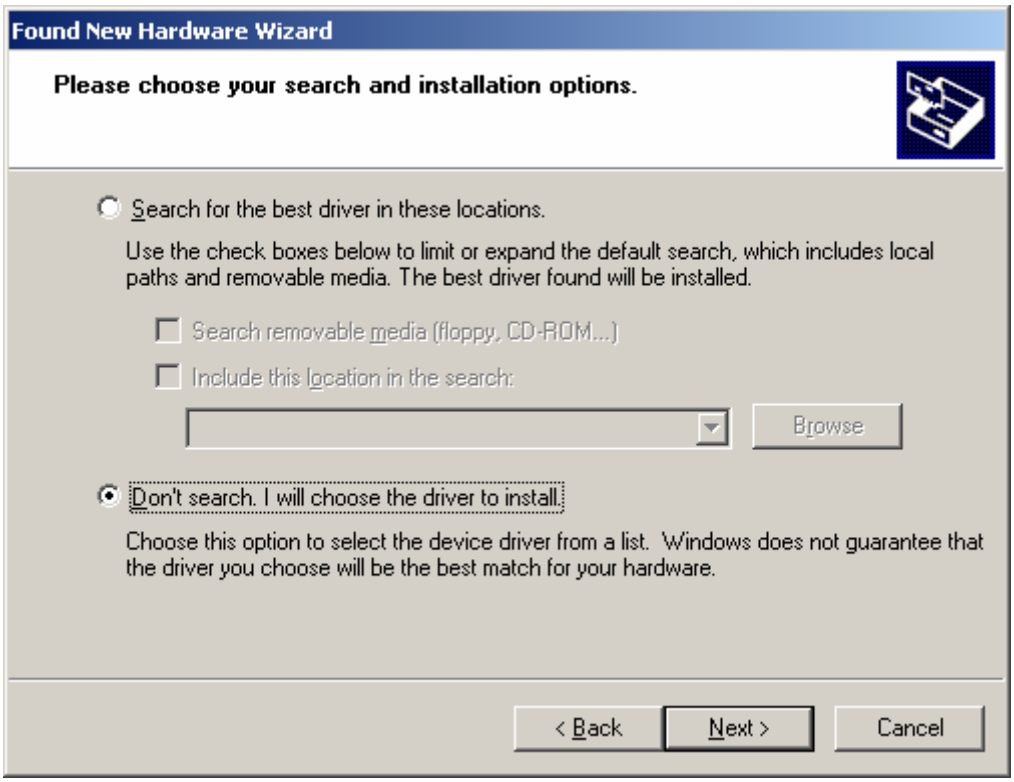
10. Please wait while the computer installs the driver.
11. Once the installation completes, click **Finish** to close the wizard. The driver is successfully installed on Windows XP Home/Professional operating system.

If the above steps do not work, please try to manually install the driver by following the steps below to install the FlashZap driver:

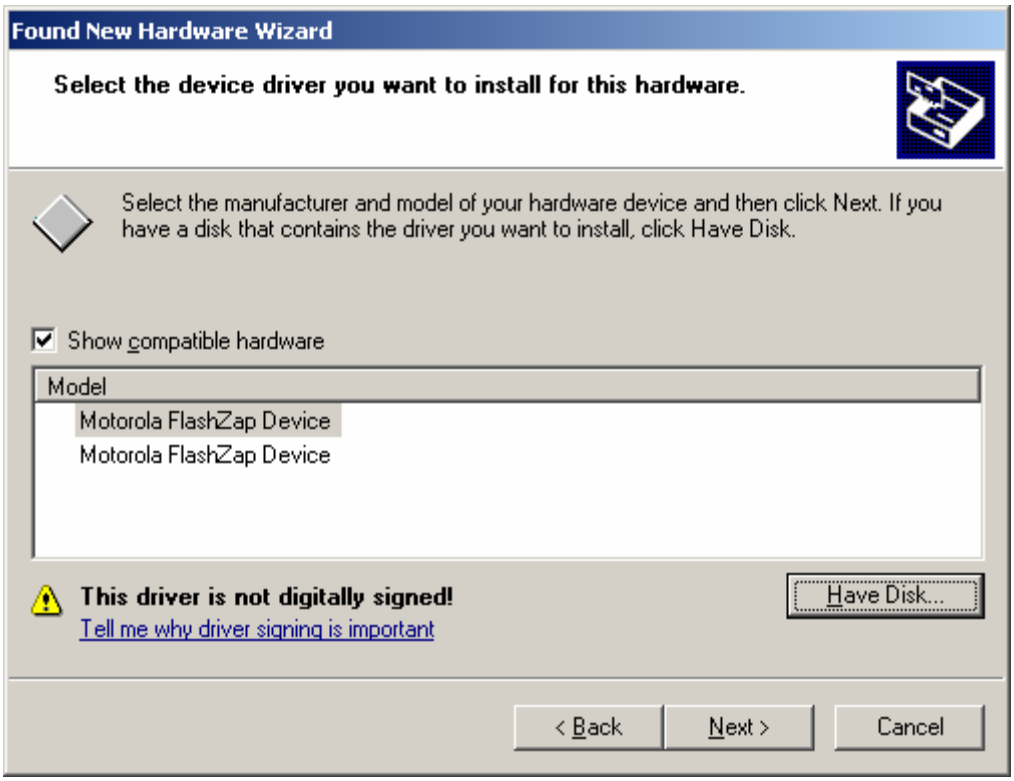
1. Repeat steps 1 to 6.

2. The **Found New Hardware Wizard** window automatically appears. Select *Install from a list or specific location (Advanced)*, as shown below. Click **Next**.

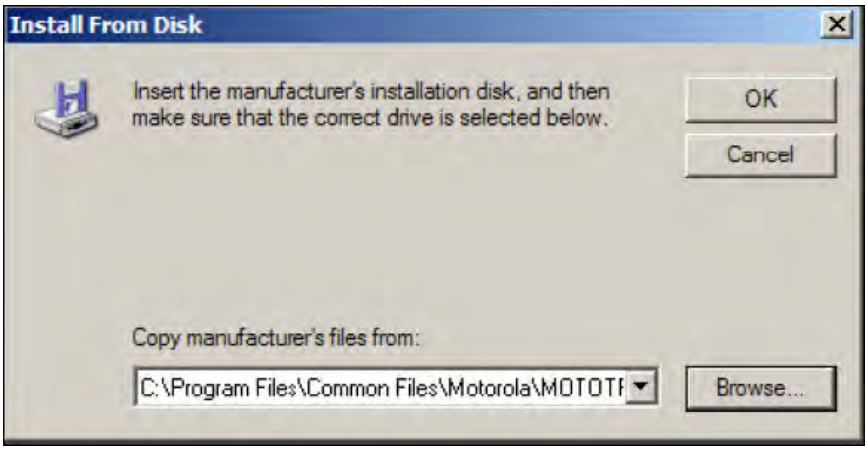
3. Select *Don't search. I will choose the driver to install.*, as shown below. Click **Next**.



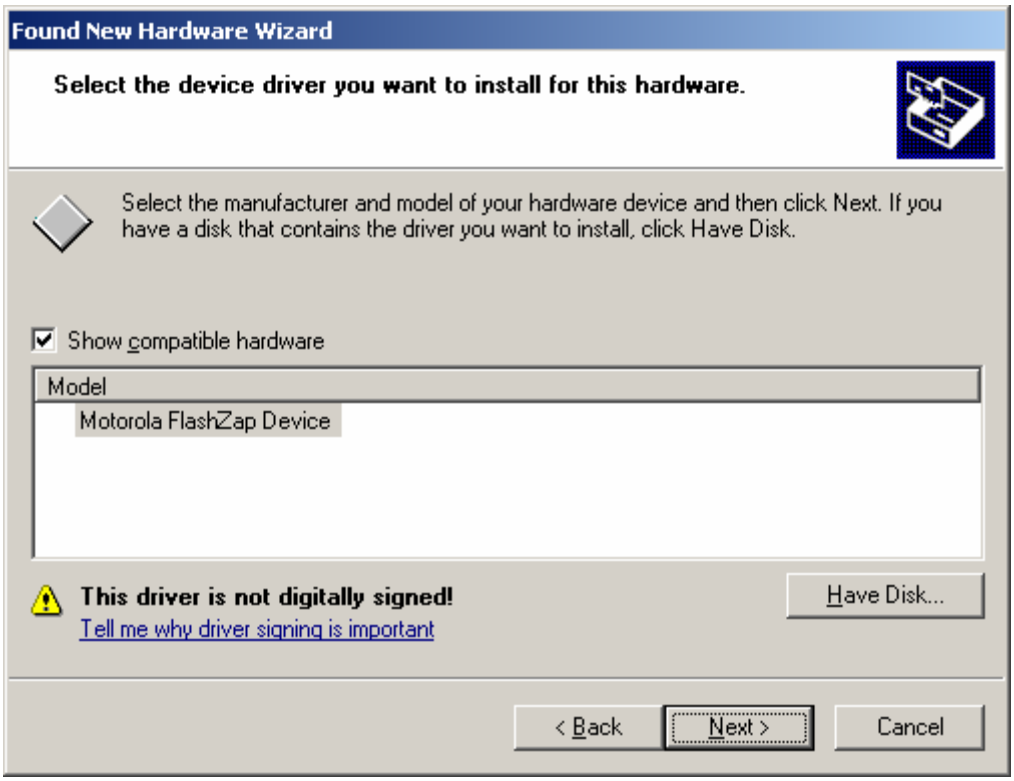
4. Click **Have Disk...**, as shown below.



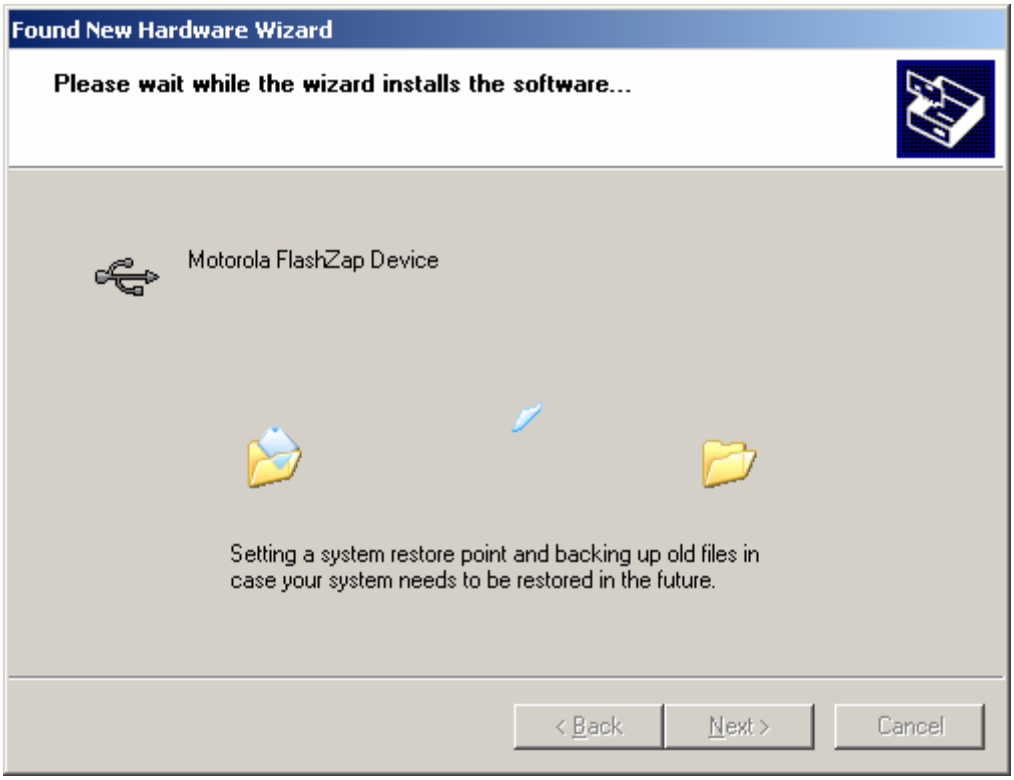
5. Browse to C:\Program Files\Common Files\Motorola\MOTOTRBO Driver and select *fudally.inf* file. Click **OK**.



6. Click **Next**.



7. The following screen appears while the driver is being installed.



8. Once the installation completes, click **Finish** to close the wizard. The driver is successfully installed on Windows XP Home/Professional operating system.

On Microsoft® Windows® 2000 Professional Operating System:

The FlashZap driver automatically installs on the Windows 2000 operating system the first time the Update and Recover feature is used. However, if it fails to install, please refer to the MOTOTRBO driver installation for Windows 2000 Professional operating system for similar instructions on installing the driver manually.

See Also

- Installing the MOTOTRBO Driver.

Unable to Read Codeplug from/Write Codeplug to the Radio

If the user is unable to read the codeplug from the radio or write the codeplug to the radio, check the following:

a. Make sure that the programming cable is connected to the USB port and the radio.

b. Make sure that the radio is powered up.

c. For Portables, make sure that the battery level is not low.

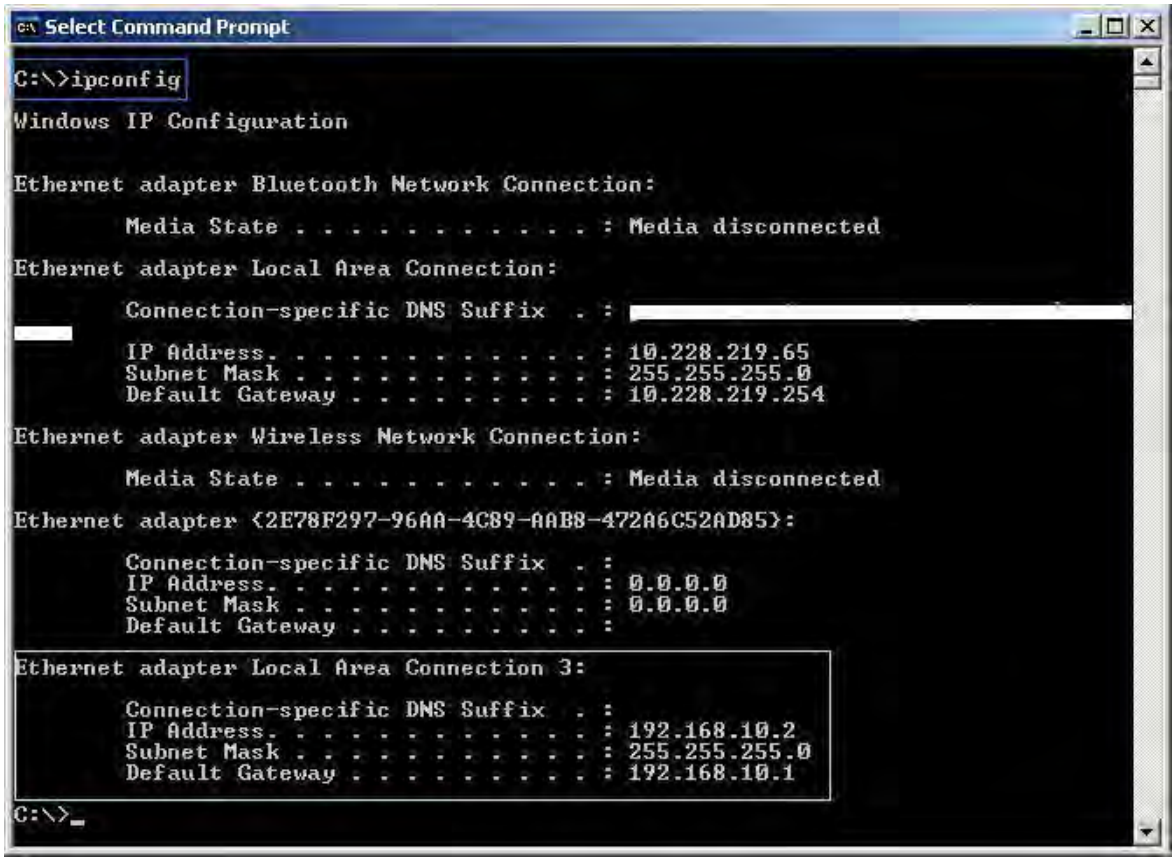
d. Make sure that the MOTOTRBO driver is installed by checking from My Computer\System Properties\Hardware\Device Manager\Network adapters if the driver is listed there as shown in the picture below.

If it is not installed (as shown in picture below), double-click on "Motorola LTD Device" and update the driver from the **Driver** tab. Follow the steps in Installing the MOTOTRBO Driver and Setting Up the MOTOTRBO LAN.

e. Make sure that the network connection is established by checking if the network connection icon for the MOTOTRBO radio (as shown in the picture below) shows up in the Windows taskbar.

Note: This icon displayed is in addition to the user's other Local Area Network (LAN) icons, if there are any.

If no connection is established, check if the radio's IP address is detected by launching a command window (from Windows->Start->Run..., type "cmd" in the Run... dialog box) and typing in "ipconfig" in the command window. See if the radio's IP address appears in the list as shown in the picture below.



If the IP address is not assigned to the radio and the user is using a router or any other IP-based device, please remove the device, reboot the machine and reconnect the radio. Reset the radio and see if the IP address is assigned.

f. If the firewall is enabled, ensure the following ports are open for radio communications:

Feature	Port
Device Programming	8002 (Fixed)
AirTracer	4064 (Fixed)
ARS	4005 (Default Value)
TMS	4007 (Default Value)
Telemetry	4008 (Default Value)

g. If the user receives a serial number invalid message, the user needs to reprogram the serial number using the MOTOTRBO Tuner. The serial number can only be reprogrammed once, therefore the user needs to ensure that the correct serial number is entered. After programming the serial number, reset the radio.

h. If the user receives a codeplug corrupted message, the user should attempt to use the Device Recover feature.

Unable to Write Firmware and Codeplug Package to the Radio via the Device Update or Recover Feature

If the user is unable to write the firmware and codeplug package to the radio, via the Device Update or Recover feature, try the following:

a. Go through the check list in the Unable to Read Codeplug From/Write Codeplug to the Radio.

b. If the user receives a message saying that "No matching packages" exist, that means there is no valid update package for their particular firmware/codeplug version and they need to download it. See topic Retrieving the Firmware and Codeplug Update Package.

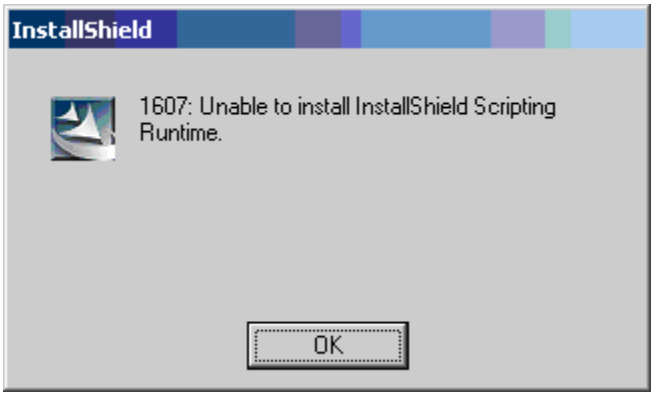
c. Make sure that the MOTOTRBO and FlashZap drivers are installed and working properly.

See Also

- Installing the MOTOTRBO Driver.
- Installing the FlashZap Driver.

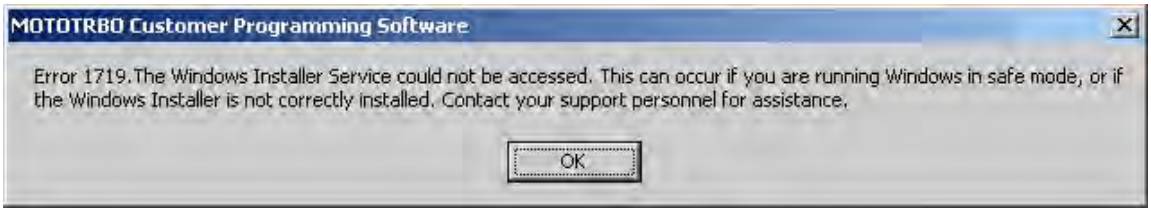
Installation Errors

1. If multiple installations are being launched at the same time, error 1607 as shown in the message box below will be generated.

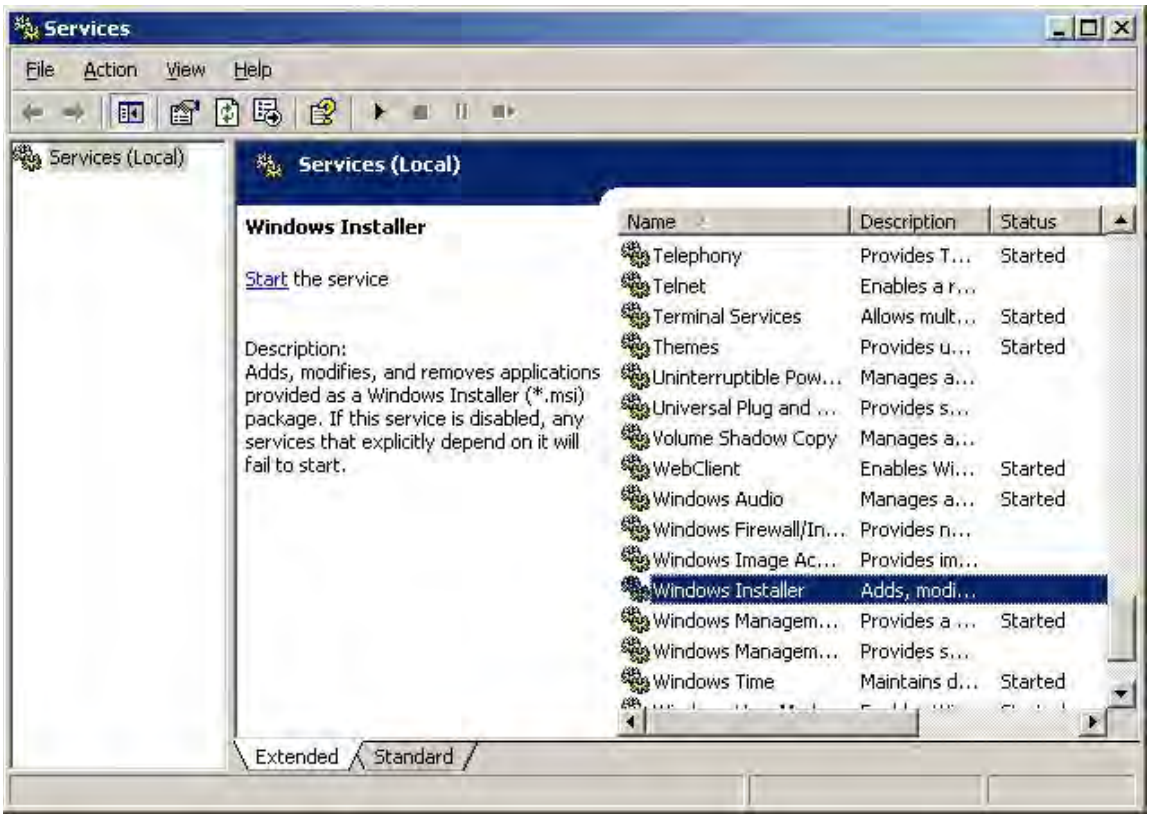


To resolve this problem, all the other installations need to be closed until only one is left opened.

2. If the user encounters error 1719, there are several reasons why this could have happened.



The Windows Installer service might not be working correctly. Check this by launching a command window (from Windows->Start->Run..., type "cmd" in the Run... dialog box) and typing in "services.msc" in the command window. A Services windows explorer appears as shown in picture below. Go down to Windows Installer and double click. Then, click Start. If an error occurs, the message above appears.



To resolve this problem:

1. First try to uninstall any Windows Installer packs that might have been installed by going to Add/Remove programs.
2. Install Windows Installer service application for the current operating system and try to start the Windows Installer service again. The Windows Installer service should start.
3. Once the Windows Installer service is reinstalled, relaunch the CPS installation to install CPS.

Cropped Labels

If the user finds that labels are being cut off, try the following:

a. Go to **Start->Settings->Control Panel->Display->Display Properties->Settings->Advanced->DPI setting:**

b. Ensure that *Normal size (96 DPI)* is selected.

Hot Keys Do Not Appear Properly on the Buttons

If the hot keys do not appear properly on the buttons, check the following:

a. Go to **Start->Settings->Control Panel->Display->Display Properties -> Appearance -> Effects:**

b. Ensure that *Hide underlined letters for keyboard navigation until I press the Alt key* is unchecked.

Unable to Communicate with the Radio

If the user is unable to communicate with the radios (example: error messages 595, 1687, etc.), do the following:

1. Verify that the MOTOTRBO device is powered-up properly. For a repeater, the Power light should be solid green, and either the Digital light or the Analog light should be solid (not blinking). For a portable radio, verify that the battery level is not low (for non-display portable radios, the LED blinks red when you press PTT if the battery is low).
2. Verify that the cable is in working order and that the ADS image is okay. On mobiles and portables, the 1-wire connect tone is heard through the speaker Additionally, display models will also show a momentary message.
3. Launch the CPS and then connect the USB cable to the PC. Verify that the cable is securely connected to both the device and the PC. Ensure that only one MOTOTRBO device is connected to the PC.
4. Verify the MOTOTRBO driver installation.
    i. Exit ALL MOTOTRBO applications.
    ii. Right-click on My Computer and go to Properties. Go to the Hardware tab and click on the Device Manager button.
    iii. Expand the Network Adapters node.
    iv. Right-click on the MOTOTRBO Radio #X node and open up the Properties.
    v. Verify that the Device status says “This device is working properly”. If it does not, then follow these steps:
        a. Uninstall the driver.
        b. Power-down the device.
        c. Disconnect the cable from the PC.
        d. Power-up the device.
        e. Connect the cable to the PC.
        f. Re-install the driver.
5. Verify the Network Connection settings.
    i. Open up the Network Connections from the Control Panel.
    ii. Find the LAN connection associated with the Device Name “MOTOTRBO Radio #X.”
    iii. Right-click on the connection and open up the Properties.
    iv. Select the check box “Show icon in notification area when connected”.
    v. Verify that the box “This connection uses the following items” has everything unchecked except for “Internet Protocol (TCP/IP).”.
    vi. Highlight “Internet Protocol (TCP/IP” and click on the Properties button.
    vii. Click on the *Advanced* button
    viii. Select the DNS tab.
    ix. Make sure that “Register this connection’s address in DNS” is not checked.
    x. Power-down the device.

xi. Disconnect the device.

xii. Power-up the device.

xiii. Reconnect it to the PC and try again.

6. Check if the radio's IP address is detected. Launch a command window by selecting **Windows** -> **Start** -> **Run...** and type "cmd" in the dialog box. Then, type "ipconfg" in the command window.
    i. Verify that the connection for the LAN connection associated with your MOTOTRBO device appears in the list.
    ii. Verify that this connection has valid values for IP Address and Default Gateway. By default this will be 192.168.10.2 and 192.168.10.1.
    iii. In the command prompt, try to ping the device IP Address. For example, type “ping 192.168.10.1”.
    iv. Right-click on the LAN connection notification icon associated with the device and select status.
        a. Verify that the Packets Sent and Received are not zero.
        b. Verify that the connection is Enabled. Press the button to toggle the device from disabled to enabled. (The button next to the Properties button should read “Disable”. If this button says “Enable”, click it.)
7. Ensure there are no conflicts in the route table.
    i. In the command prompt, type “route print”.
    ii. A table with Active Routes: should come up.
    iii. Ensure that there is no conflict in the Network Destination column.
8. Disable any firewalls or anti-virus software installed on your PC, and try again.
9. Try connecting to the device using a different USB port.
    i. If you are going directly through a PC USB port:
        a. Try a different PC USB port.
        b. Try connecting the MOTOTRBO device through a USB hub.
    ii. If you are going through a USB hub, try going directly through a PC port
10. Remove any LAN cables and other USB devices connected to the PC, disconnect the device, reset the device, and try again.
11. Disconnect the cable from both the device and the PC, reconnect using a different programming cable, and try again.
12. Try to reboot the PC and try again.
13. If all of the above fails, try to re-connecting to the device via a different PC.
14. Ensure that the non-signed driver installs is not blocked.

Unable to Connect to the Link Establishment System (Repeaters only)

If the user is unable to connect to the Master radio or Peer radios, check the following System configuration.

Verify Link Establishment Network Connectivity

Check that the IP address is correctly assigned and that the PC can communicate with the Master:

a. Contact your network administrator to ensure network policies allow bi-directional UDP traffic.

b. Contact your network administrator to check for any network policies that would restrict IP addresses or MAC addresses.

c. For the purposes of verifying connectivity, ensure the ping functionality is allowed on your network. (After the system has been verified, ping functionality may be disabled if required by your network policy.)

d. Read the radio in CPS and verify in the **Network** settings if the Master is configured to use a DHCP or Static IP address. If the **DHCP** parameter is un-checked, then this indicates a Static IP address. (To determine if you should use a DHCP or a Static IP configuration, check with your network administrator).

e. Go to the CPS **Device Information** screen and note down the **MAC Address** of the Master.

If the Master is configured to use a Static IP Address

1. Ensure the Master is connected via a CAT5 ethernet cable to the router.
2. Connect to your router with a PC. Through the router interface, find the MAC Address of the Master, check the IP address.
3. Verify the static IP does not conflict with another device on the network.
4. Verify the router has been configured to forward traffic on the IP Site UDP port assigned to the Master.
5. Try to ping the Master IP Address from the PC. If the ping request times out, try resetting the router.

If the Master is configured to use a DHCP IP Address

1. Ensure the Master is connected to your router via a CAT5 ethernet cable and turned on.
2. Connect to your router with a PC. Through the router interface, find the MAC Address of the Master. Verify it has an IP Address assigned, and make a note of it.
3. Verify the router has been configured to forward traffic on the IP Site UDP port assigned to the Master.
4. Try to ping the Master IP Address from the PC. If the ping request times out, try resetting the router.

If you are able to ping the Master IP address but are still unable to connect to the system or peers in the system, continue on. If you are not able to communicate with the Master, please contact your network administrator.

Verify Link Establishment System Configuration

a. Read all of the system radios in CPS and verify that the following features are the same across all peers and match the Master radio where applicable.

   Master IP and **Master UDP Port** – Each peer needs to have the correct **Master IP** (this parameter is distinct from **Radio IP**) and **Master UDP Port** assigned in order to join the system.

   Authentication Key – This feature should match the value in the Master and for each Peer. (e.g. if its turned off in the Master, it should be turned off in all Peers).

   Peer Firewall Open Timer (sec) – This feature is used to ensure the connection between Peers is kept open through a firewall. Depending on your system, this feature value may need to be decreased in order to keep the firewall open for Peers to connect.

b. Check in the CPS application settings that the above features match the common values set for the Peers.

c. Check that each Peer in the system has a *unique* **Radio ID** assigned.

d. Check in the CPS application settings to ensure the **CPS ID** does not conflict with any **Radio ID** values of Peers in the system.

e. If more than one Peer is connected to the same router, and another Peer is outside the router, that router must support hairpinning. Verify with your network administrator that the router in question supports this feature.

f. Ensure any updated system configuration values are written to the radios, and the radios are re-connected to the system. Attempt to re-connect to the system in the CPS application.

g. If you are still unable to connect to the system, have your network administrator contact Motorola Customer Support.

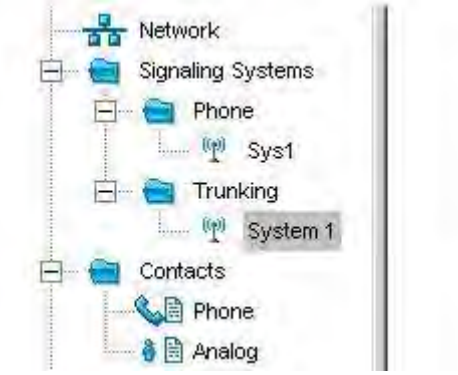
Use Cases

ATG Setup for MOTOTRBO Smartnet Radios

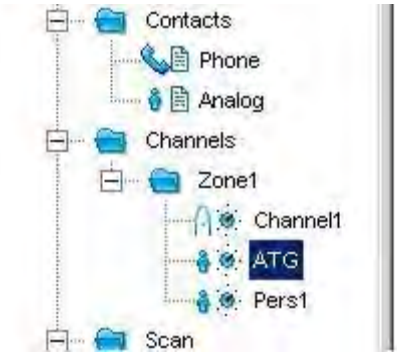
Announcement Talkgroup (ATG) feature allows a radio user to transmit an announcement to several different talkgroups simultaneously. The Announcement Group Call can be set in the central controller to wait while talkgroups finish calls in progress, which allows transmitting radios to hear the announcement. Alternatively, the Announcement Group Call can be set in the central controller to interrupt existing talkgroup communications, not waiting for other transmitting radio users to dekey. Upon dekeying, the interrupted transmitting radio users will join the Announcement Group Call in progress. Announcement Group Call uses message trunking, allowing those receiving the announcement to talkback into the announcement group.

To set up ATG for radios with 3600 baud Smartnet/Privacy Plus Trunking software versions:

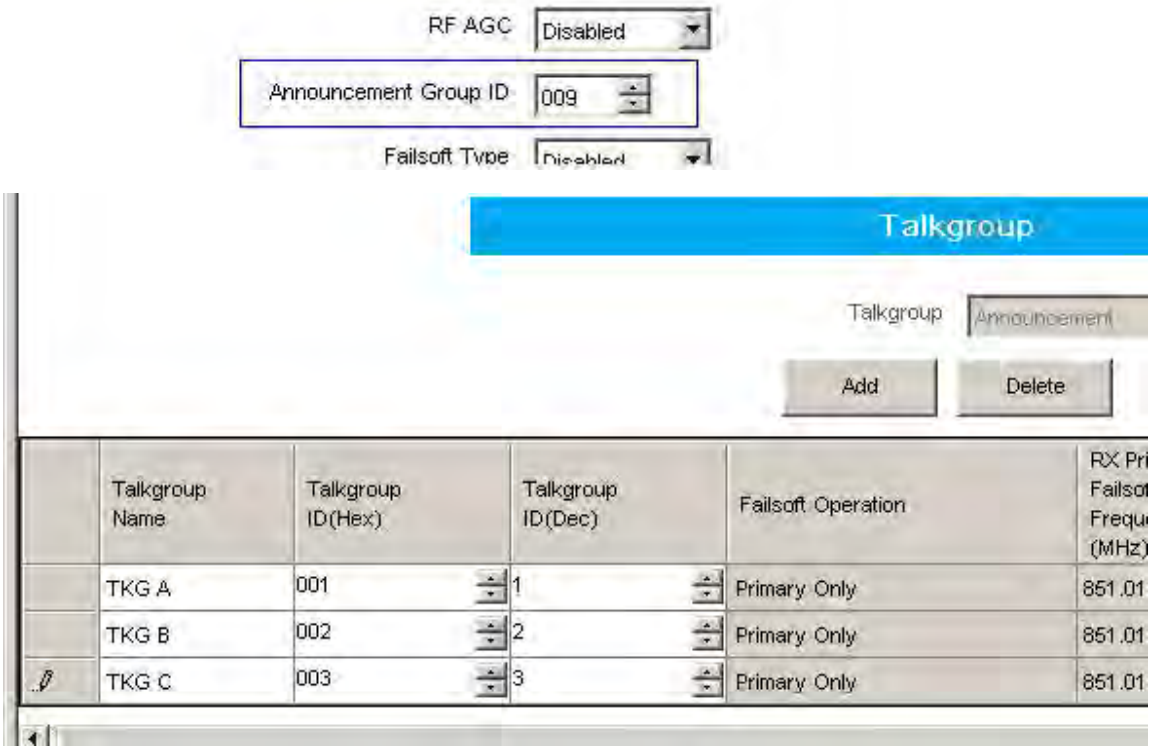
1. Right-click the **Signaling Systems**->**Trunking** folder of the Tree View and select **Add**->**System** to add a trunking system.



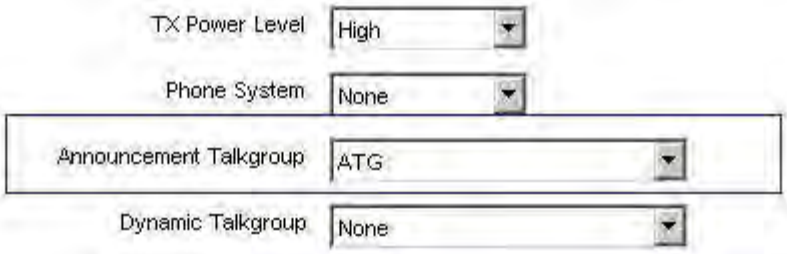
2. Load the corresponding System Key.
3. Right-click the **Channels**->**Zone** folder of the Tree View and select **Add**->**Trunking Personality** to add a trunking personality. This is the trunking personality that will contain the ATG member.



4. Fill out the required information for the ATG personality in the Configuration view: System, Announcement Group ID, and Talkgroup members.

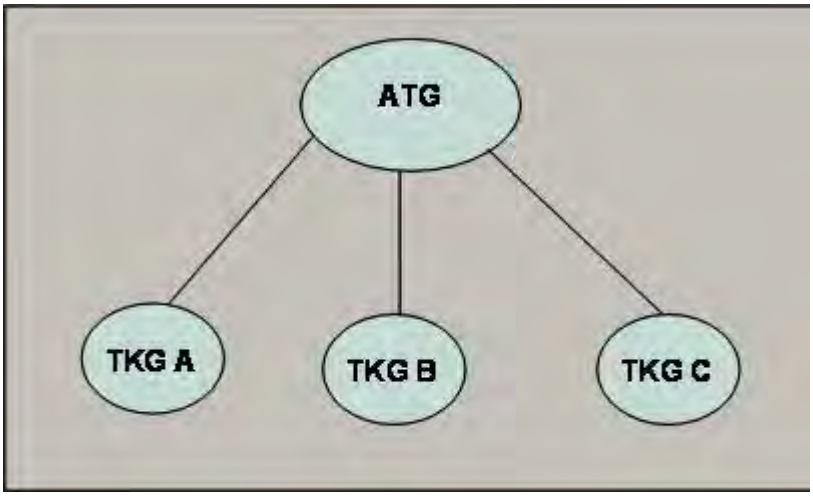


5. Under **Signaling Systems**->**Trunking->System 1,** associate the ATG personality that was just created in the step above to System 1.



Note

- The relation of Announcement Group to its Talkgroup members must also be set up in the system controller database.



- This use case is applicable to 3600 Trunking capable radios in Trunked mode only.

MOTOTRBO CPS Programming Considerations for the Connect Plus Radios

The Connect Plus trunking logic resides in the Connect Plus Option Board, which communicates with main board of the MOTOTRBO radio to facilitate the Connect Plus operation. MOTOTRBO CPS is used to configure the radio main board, while the Option Board is configured with Connect Plus CPS.

Here are the parameters that need to be set accordingly in the MOTOTRBO CPS.

Under General Settings:

1. Radio ID: Enter the subscriber radio ID.
2. GNSS: Enable this for the Connect Plus radio to respond to Location Requests.
3. Private Calls: Enable this if the Connect Plus radio should be able to initiate Private Calls.
4. TX Preamble Duration: Set this to zero if the radio is used for Connect Plus operation only. If the radio contains non-Connect Plus channels that require a TX Preamble, this parameter should be set as short as possible. Otherwise, it may adversely affect the Connect Plus operation.
5. Disable All Tones (under the Alerts subfolder): Uncheck this, unless it is desired to disable all tones radio-wide, including Connect Plus zones and channels.
6. Preamble (under the Battery Saver subfolder): Uncheck this.

Under Network Settings:

1. Radio IP: This is usually left at default setting of 192.168.10.1. Connect Plus will still operate correctly if this value is changed.
2. CAI Network: Leave this at default value of 12.
3. CAI Group Network: Leave this at default value of 225.
4. Maximum TX PDU Size: Set large enough to accommodate the largest text message or LRRP Report transmitted by the radio while operating in a Connect Plus zone. The recommended setting is 500 bytes or larger.

The Network screen has several configurable port settings. As a rule, these settings affect non-Connect Plus zones and channels only, unless the programmer mistakenly selects a port number that is already used by the Connect Plus Option Board. To avoid conflicts with Connect Plus, the programmer must NOT use any of the following ports for these configurable settings: 4061, 4062, 4063, 4004.

Under Channel Settings, for each Connect Plus channel:

1. Data Call Confirmed: Enable this for Connect Plus operation.
2. Admit Criteria: Set this to *Always* for Connect Plus operation. This assures the fastest possible system access times. For Connect Plus, setting the Admit Criteria to *Always* does not mean that the radio will always operate impolitely. Connect Plus will still operate “politely” during Connect Plus calls.
3. In Call Criteria: Set this to *Always* for Connect Plus operation. For Connect Plus, setting the In Call Criteria to *Always* does not mean that the radio will always operate impolitely. Connect Plus will still operate “politely” during Connect Plus calls.
4. Private Call Confirmed: Uncheck this for Connect Plus operation. Connect Plus provides its own confirmation for Private Call.

Each Connect Plus zone must have 16 identically configured channels that are enabled for both **Option Board** and Option Board Trunking. These are the only types of channels allowed in a Connect Plus zone.

Non-Connect Plus channels (e.g. analog conventional, digital conventional, Capacity Plus - Single Site, and talkaround channels) are NOT allowed in any Connect Plus zone.

For the Display Portable and Display Mobile, Connect Plus supports a maximum of 16 Connect Plus zones per radio. Since each Connect Plus zone must be programmed with 16 identical channels, the maximum number of Connect Plus channels per radio for these models is 16 x 16 (for a total of 256 channels). For the Non-Display Portable and Numeric Display Mobile, the radio supports a maximum of two zones per radio. If both of these zones are used for Connect Plus, the maximum number of Connect Plus channels per radio for these models is 2 x 16 (for a total of 32 channels).

Connect Plus zones must be at the top of the Channels list. They cannot be preceded by any non-Connect Plus zones. If there are multiple Connect Plus zones, they must be contiguous – starting with the first zone on the Channels list. For example, if the radio has 5 Connect Plus zones, they must be the first 5 zones in the Channel List. Any non-Connect Plus zone must come after these zones in the list. If the radio already has non-Connect Plus zones prior to adding Connect Plus zones, the non-Connect Plus zones needs to be moved so that they follow the Connect Plus zones. The Channel Pool icon must come after the first Connect Plus zone folder (and prior to any other zone folder). Any other position of the Channel Pool icon is unexpected, and will likely result in undesirable operation.

Note

- Any rearrangement of Zone order in the Channels list (or tree) by using Copy/Cut/Paste is strongly discouraged when Connect Plus zones are being defined in the codeplug. Performing such editing will lead to unexpected behavior for the radio operating in Connect Plus mode.

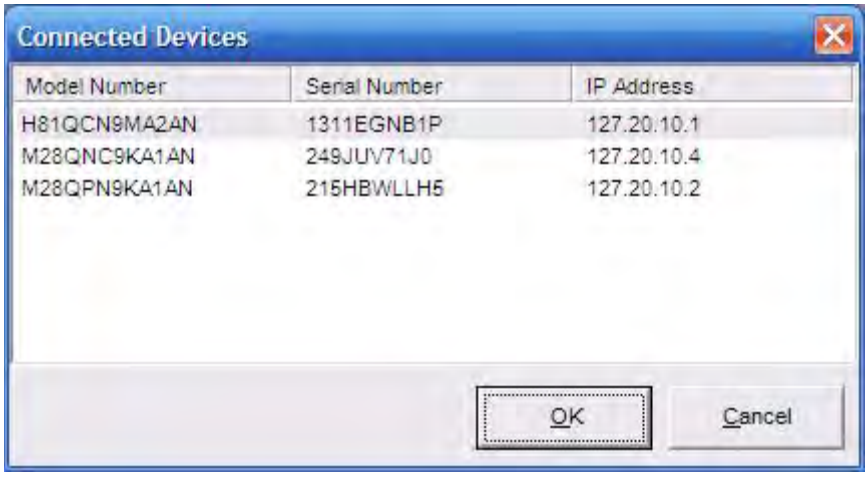
Tip: For a complete discussion on programming the MOTOTRBO CPS codeplug for Connect Plus operation (including step-by-step instructions for making the CPS codeplug conform to the rules stated above), please refer to the MOTOTRBO Connect Plus System Planner.

Manage Voice Announcement

The Voice Announcement (VA) feature allows the user to map Motorola pre-recorded voice file to operation items (e.g. zone, channel, zone list and programmable button), configure the voice announcement parameters, and load the voice file from CPS into the radio. The recorded content is available in multiple languages and played when the user triggers the associated operation item or certain operation occurs such as channel announcement during the radio power up.

Loading VA files into radio(s):

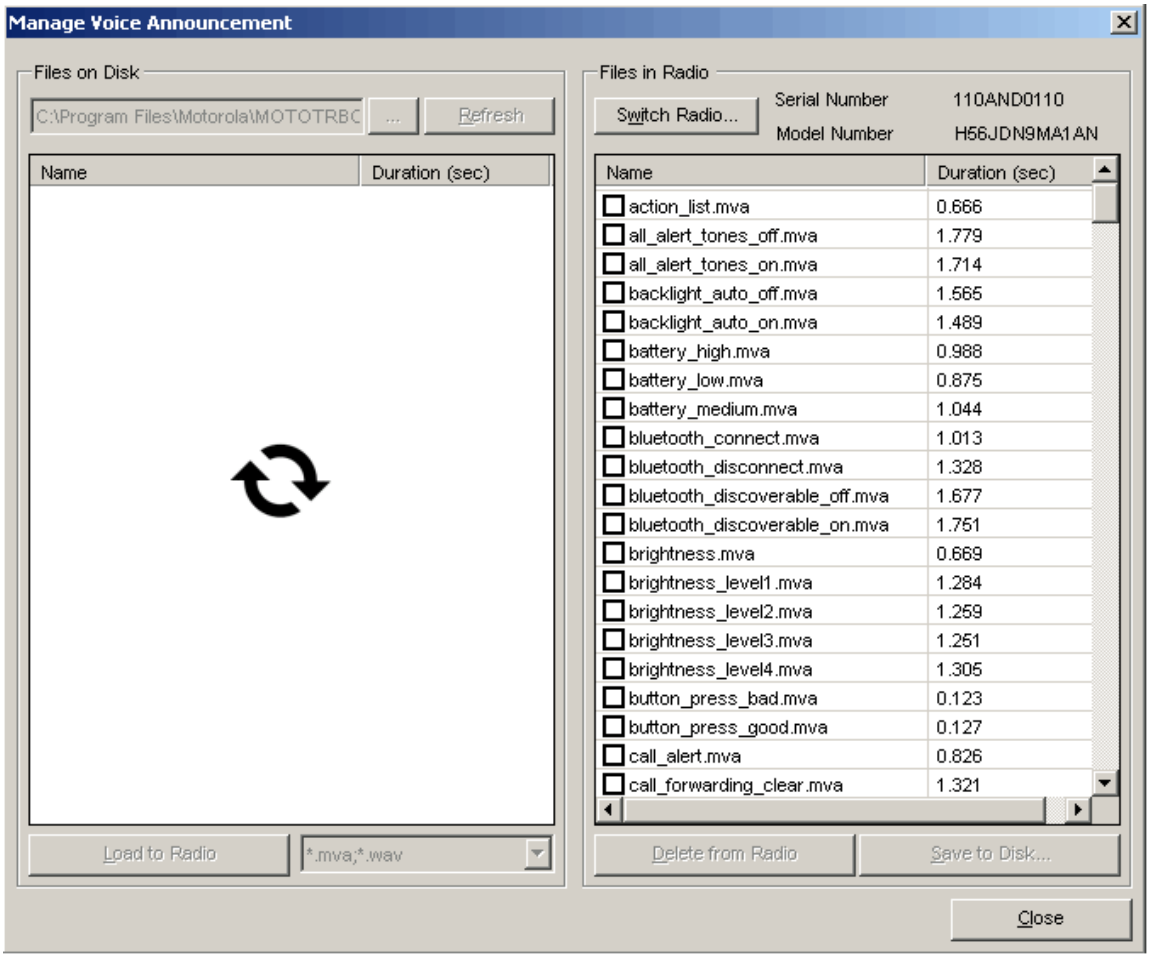
1. Connect the destination radio(s) to the Universal Serial Bus (USB) port of the PC.
2. Select **Device**->**Manage Voice Announcement** at the CPS menu bar.
3. A Connected Devices dialog box appears if there are more than one connected radios detected. Select the radio from the list of connected devices and click the **OK** button.



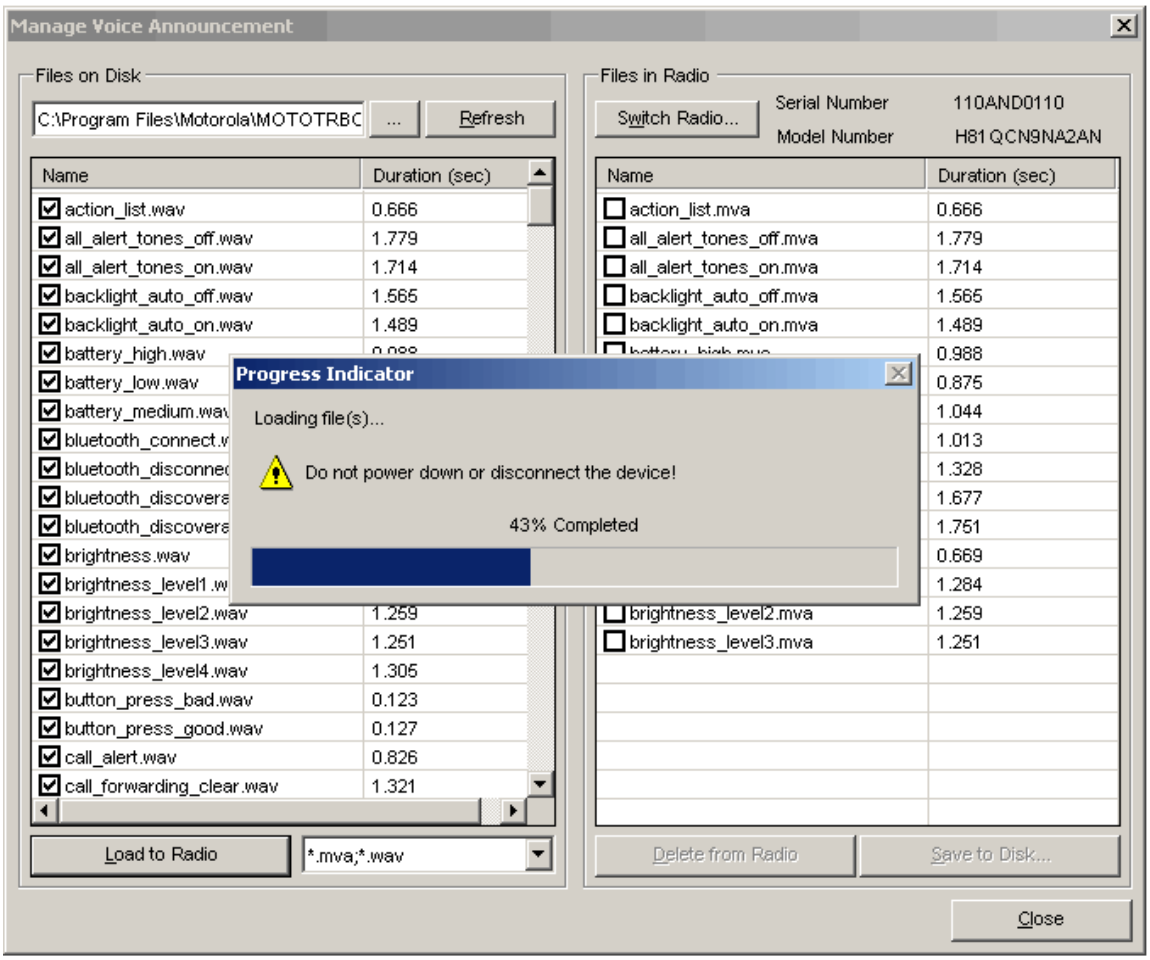
4. A **Manage Voice Announcement** dialog box appears. The VA files in the radio and PC (on disk) are automatically displayed on their respective lists. The user can change the path of the VA files in PC by clicking the **...** browse button, selecting a different path from the Windows' standard browse for folder dialog, and clicking **OK** on the dialog. Click on the **Refresh** button to update the **Files on Disk** list. By default, all the files in the **Files on Disk** list are checked and all the files in the **Files in Radio** list are unchecked.

Note:

- To select all the files listed in the lists, the user can press a combination of **Ctrl+A** and space key or **Ctrl/Shift** and mouse click on any checkbox.



5. The user can click on the VA file filter to display only the selected format on the **Files on Disk** list. Click the **Load to Radio** button to load the VA files into the radio. Only the checked files from the **Files on Disk** list will be loaded into the radio. During the load operation, if there is already a file with the same name, click the **Yes** button to replace the existing file. A progress bar appears as the files are loaded into the radio. Upon a successful load, the progress bar disappears.



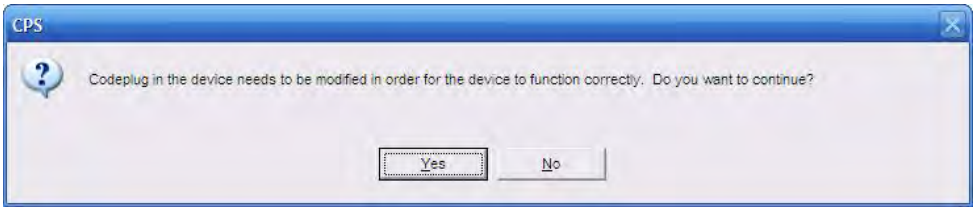
6. To continue with the next radio, click the **Switch Radio...** button in the **Files in Radio** section to select the radio. The Connected Devices dialog box appears again.
7. Repeat step 3 to 6 to load Voice Announcement files into the next radio.

Deleting VA file(s) from radio(s):

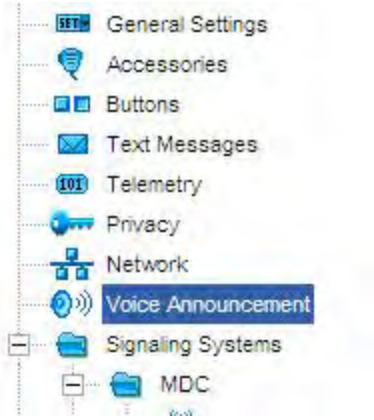
1. Connect the destination radio(s) to the Universal Serial Bus (USB) port of the PC.
2. Select **Device**->**Manage Voice Announcement** at the CPS menu bar.
3. A Connected Devices dialog box appears if there are more than one connected radios detected. Select the radio from the list of connected devices and click the **OK** button.
4. A **Manage Voice Announcement** dialog box appears. In the **Files in Radio** list, select the file(s) from the list.
5. Click the **Delete from Radio** button. A progress bar appears as VA files are deleted from the radio. Upon a successful delete, the progress bar disappears. The list is refreshed.
6. To continue with the next radio, click the **Switch Device** button in the Device Information section to select the radio. The Connected Devices dialog box appears again.
7. Repeat step 3 to 6 to delete Voice Announcement files from the next radio.

Configuring Voice Announcement:

1. Follow step 1-5 in 'Loading VA files into radio(s)' section to load VA files into a radio, if the radio does not have any VA files in it yet.
2. Click **Device**->**Read** at the menu bar to read the radio.
   Note:
   - During a read operation, a feature (under Voice Announcement->File Selection) will be reset to *None* if has been associated with a VA file that does not exist in the radio.
   - During a read operation, if CPS checks that there is no VA file in the radio, it will reset all the VA parameters to *None*. A message will be prompted to ask if the user would like to reset the VA to *None*. Click **Yes** to reset all the parameters to *None*, including the VA in Zone and Channel folders.

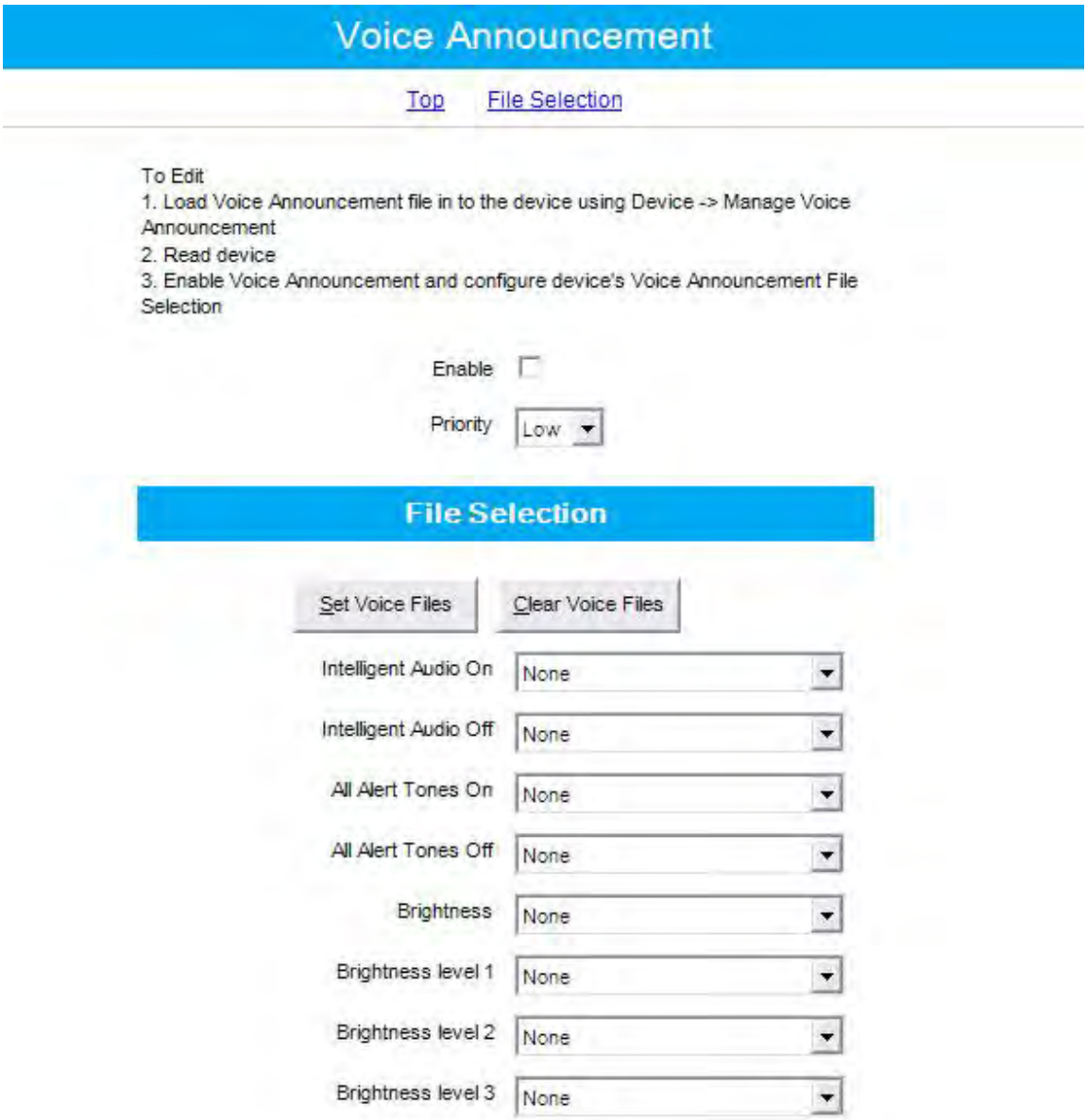


3. In the Tree View, select the VA folder.

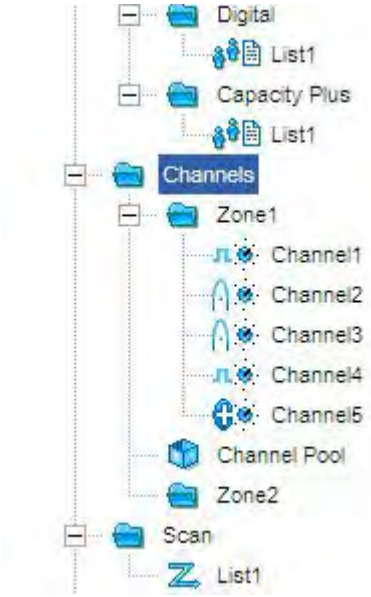


4. In the VA Configuration View, select a VA file for each feature. To automatically configure the VA files, click the **Set Voice Files** button. The default VA files are configured.

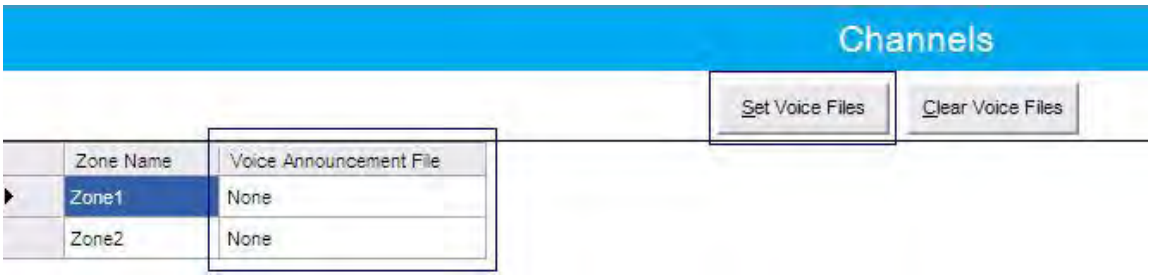
Note: If VA has been manually configured for a feature, **Set Voice Files** will not work on this feature when automatically configured. If the VA filename does not match the feature name, **Set Voice Files** will not be able to find the default VA file. The feature is enabled but set to *None*.



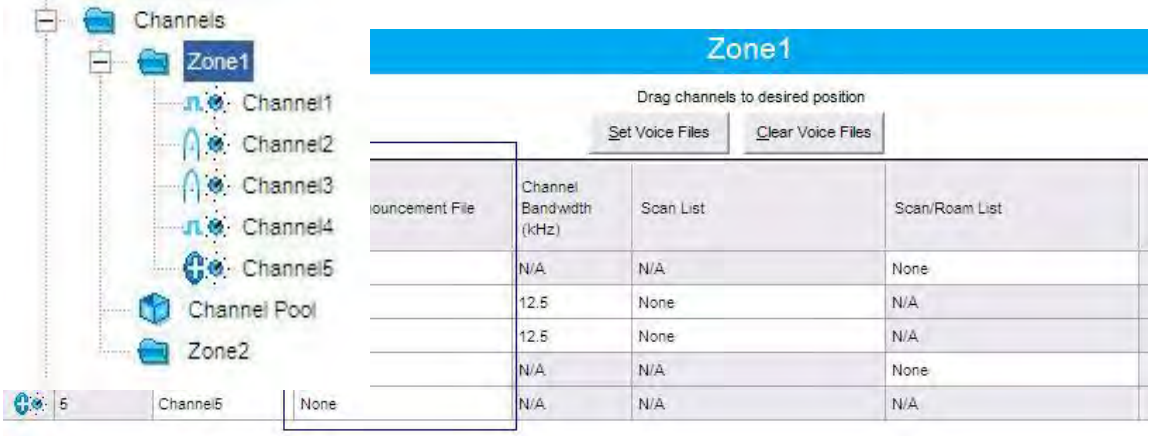
5. In the Tree View, select the Channels folder.



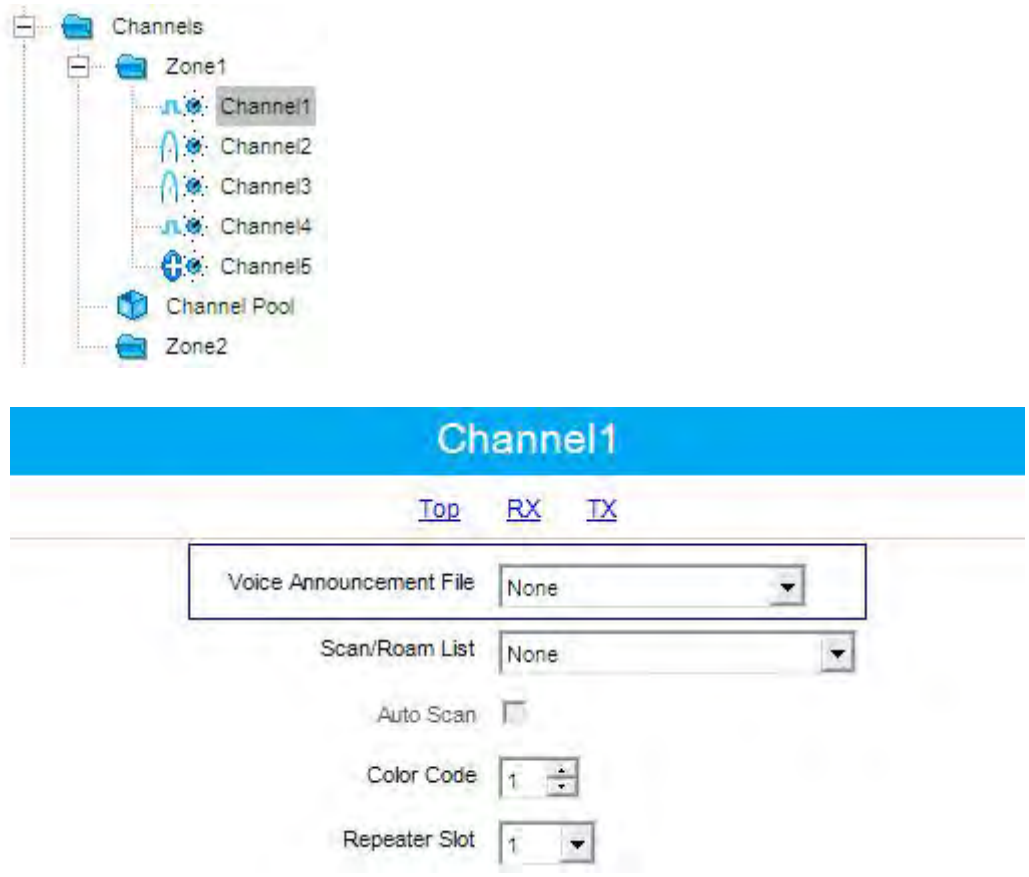
6. In the Channels Configuration View, configure the VA file for each zone, either manually or automatically via the **Set Voice Files** button.



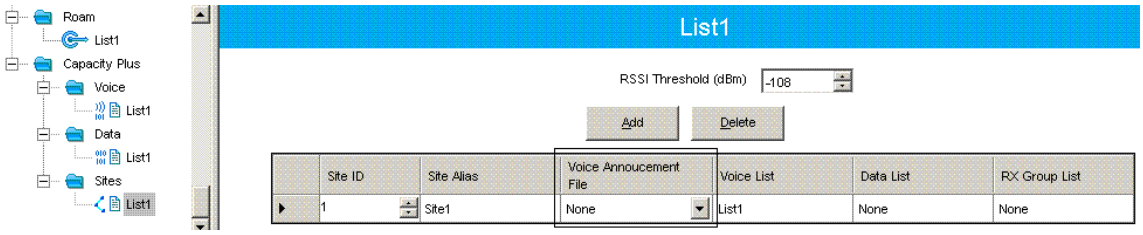
7. Select one zone in data grid, the user can configure the VA file for each channel.



Alternatively, the user can configure this setting in the Configuration View of a channel.



8. In the Tree View, select a Site List. In the Site List Configuration View, the user can configure the VA file for the list.



9. Select **File->Save** at the menu bar to save the entire radio configuration including the VA settings. Archive can be used to clone the VA setting to another radio. Additionally, the user can select **Device->Write** to write this configuration into the radio. The radio can be used as the source radio to clone the VA setting to another radio.

Cloning VA files from one radio to another is a two-step process: 1 – export the VA files from the template radio to a PC; 2 – load those files from the PC into to the target radio(s), as follows:

1. Connect the destination radio(s) to the Universal Serial Bus (USB) port of the PC.
2. Select **Device**->**Manage Voice Announcement** at the CPS menu bar.
3. A Connected Devices dialog box appears if there are more than one connected radios detected. Select the source radio from the list of connected devices and click the **OK** button.
4. A **Manage Voice Announcement** dialog box appears. In the **Files in Radio** section, click the **Save to Disk...** button to select a folder to store the file in the PC. If there is already a file with the same name, click the **Yes** button to replace the existing file. A progress bar appears as VA files are saved into the specified folder. Upon a successful save, the progress bar disappears.
5. In the **Files on Disk** section, click the **...** browse button to select the folder where the VA files reside.
6. Click the **Refresh** button. The files are listed in the **Files on Disk** list.
7. Click the **Load to Radio** button to load the VA files into the radio. If there is already a file with the same name, click the **Yes** button to replace the existing file. A progress bar appears as the files are loaded into the radio. Upon a successful load, the progress bar disappears. The files are listed in the **Files in Radio** section.
8. To continue with the next radio, click the **Switch Device** button in the Device Information section to select the radio. The Connected Devices dialog box appears again.
9. Repeat step 4 to 8 to copy the Voice Announcement files from the source radio into the next radio.

Alternatively, the user can clone the radio(s) from an archive saved with the same VA files as the source radio. To clone from an archive, start from step 5 to 8.

Radio Features

Overview of Radio Features

Overview of MOTOTRBO Conventional Radios Codeplug

Description

After opening a codeplug file, the user can browse the radio features in the Tree View. The features are organized into several folders.

Folder	Description
Device Information	Provides general information about the radio.
General Settings	Contains radio-wide features.
Accessories	Contains features related to the Portable's or Mobile's connector (GPIO pins).
Buttons	Contains features related to the Portable's or Mobile's programmable buttons.
Text Messages	Contains features for the user to enter quick text (predefined) messages.
Telemetry	Contains features for the user to configure auxiliary control.
Menu	Contains features for the user to control the menu settings for Display model Portables or Mobiles.
Network	Contains features for interaction with data applications and configuring the MOTOTRBO radio connection.
Signaling	Contains features for the configuration of the analog MDC system or digital Emergency system. These systems can then be attached to a channel.
Contacts	Contains features for the configuration of calls (Group Call, Private Call, All Call, Dispatch Call or PC Call). These calls can then be attached to a channel.
RX Group Lists	Contains features for the user to create and manage lists of Digital Group Calls.
Channels	Contains features for the configuration of a channel.
Scan	Contains features for the configuration and management of scan lists.
Scrambling	Contains features for the user to configure scrambling control.

Overview of 3600 Trunking Capable Radios Codeplug

Description

After opening a codeplug file, the user can browse the radio features in the Tree View. The features are organized into several folders.

Folder	Description
Device Information	Provides general information about the radio.
General Settings	Contains radio-wide features.
Accessories	Contains features related to the Portable's or Mobile's connector (GPIO pins).
Buttons	Contains features related to the Portable's or Mobile's programmable buttons.
Menu	Contains features for the user to control the menu settings for Display model Portables or Mobiles.
Network	Contains features for interaction with data applications and configuring the MOTOTRBO radio connection.
Systems	Contains features for the configuration of the trunking and phone system. These systems can then be attached to a personality.
Contacts	Contains features for the configuration of Phone and Private Call. These calls can then be attached to a personality.
Channels	Contains features for the configuration of a conventional analog channel or trunking personality.
Scan	Contains features for the configuration and management of scan lists.

Configuring MOTOTRBO Conventional Radio Features

For a quick walkthrough on how to configure the radio to do basic functions, the user may follow the steps below. For a complete training program, the user must attend the system training to learn how to program the radio. System training also covers programming of the radio's advanced features and fleet mapping training for programming a fleet of radios.

Steps to get the radio to do basic functions (based on the radio's default codeplug settings)**:**

1. Hook up the radio to the PC.
2. Upon a successful connection, read the radio.
3. Upon a successful reading, the radio codeplug opens up in a CPS window.
4. Set the radio ID by putting a unique number in **General Settings**->**Radio ID.**
5. The user may want to enter some predefined text messages. Go to **Text Messages** and type in a message. Or the user can add a new message by clicking the **Add** button.

6. The user may want to select an Emergency Signaling system for a particular digital channel to enable the radio to make an emergency call by selecting a system in **Channels**->**Zone #n**->**Channel #n**->**TX**->**Emergency System**. Ensure that the **Alarm Type** in the selected Digital Emergency System is set to a value other than *Disabled.*
7. *T*he user may want to select a scan list for a particular channel to enable scanning on that channel by selecting a scan list in **Channels**->**Zone #n**-> **Channel #n**->**Scan List**.
8. Write to the radio.
9. Disconnect the USB cable.

Making a group call...

- On a Portable, the radio powers up on a channel indicated by the channel knob position. On a Mobile, the radio powers up on the first channel, which by default is a digital channel. Make a group call on that channel by pressing the Push-to-Talk (PTT) button.

Making a private call...

- On a digital channel, make a private call by invoking the Digital contact list containing call IDs and choosing the receiver's radio ID, or manually key in the receiver's radio ID if the number is not found in the list. Press the PTT button.

Sending a predefined/quick text message...

- To send a quick text message, the user must be on a digital channel and using a display model radio.
- Access the radio's text message feature via the menu. Choose QuickText and then the desired text message. The user may choose to edit the text message.
- Next, choose the recipient and initiate the sending of the message.

Making a digital emergency call...

- Make a digital emergency call by pressing the programmable button assigned to *Emergency On*. The call will be made on a digital emergency signaling system.

Starting scan...

- Start scanning via the menu or programmable button assigned to *Scan On/Off.* This feature can be turned off via the same menu choice or programmable button.

Tip: The user can learn the basic and advance features of the CPS and the radio by watching demonstrations in the system training. The training also provides the user with scenarios and hands-on learning experience.

Device Information

Model Number

Description

Displays a string of alphanumeric characters to represent the type of the radio. Examples of model types include MOTOTRBO Non-Display Portable, MOTOTRBO Display Mobile with GNSS, and MOTOTRBO Repeater.

This paragraph is applicable to MOTOTRBO Conventional radios. By default when creating an IP Site Connect system, the Model Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Tanapa Number

Description

Displays a string of alphanumeric characters that is used for factory or distribution center tracking and regional labeling, if exist.

Serial Number

Description

Displays a string of unique alphanumeric characters to identify the radio. Each radio has a unique serial number.

This paragraph is applicable to MOTOTRBO Conventional radios. By default when creating a Link Establishment system, the Serial Number is blank and would always be blank unless it is programmed to be updated to reflect the programmed repeater's model number.

Physical Serial Number

Description

This edit box displays the Physical Serial Number of the radio.

Note

- This feature is non-editable.
- This feature is applicable to MOTOTRBO and MOTOTRBO 2.0 radios only.

Firmware ID

Description

Displays an ID that uniquely identifies the radio firmware. It can be used to differentiate firmware of the same or different products.

Frequency Range (MHz)

Description

Displays the radio's frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Frequency Range (MHz) (3600 Trunking capable radios)

Description

Displays the radio's frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Note

- Two frequency ranges are shown. One for the 800 MHz band and another for the 900 MHz band.
- This feature is applicable to 3600 Trunking capable radio only.

Power Range (W)

Description

Displays the power range of the radio.

12V Power Range (W)

Description

Displays the power range of the radio.

24V Power Range (W)

Description

Displays the power range of the radio.

Power Range (W) (800/900 MHz radios)

Description

Displays the power range of the radio.

Note

- Two power ranges are shown. One for the 800 MHz band and another for the 900 MHz band.
- This feature is applicable to MOTOTRBO Conventional Mobile and Repeater 800/900 MHz and 3600 Trunking capable Mobile only.

Firmware Type

Description

Displays the firmware type programmed in the radio. The available firmware types are Analog and Digital.

- Analog: Analog only firmware
- Digital: Analog and digital firmware

Firmware Version

Description

Displays the firmware version programmed in the radio. Firmware is the software that controls the internal hardware components of the radio.

Codeplug Version

Description

Displays the codeplug version programmed in the radio. Codeplug is the information (data) that supports the firmware and hardware configuration.

Last Programmed Date and Time

Description

Displays the last date and time at which the radio was programmed.

Last Tuned Date and Time

Description

Displays the last date and time at which the radio was tuned.

Note

- This feature is applicable to 3600 Trunking capable radios only.

MAC Address

Description

Displays the repeater's MAC address and the MOTOTRBO SLR series repeater's MAC address. This address serves as a unique device identifier.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Wi-Fi MAC Address

Description

This field displays the Wi-Fi MAC address used for the repeater.

Note

- If a unique WiFi MAC address is not encountered during a Read job (for example, FF-FF-FF-FF-FF-FF, 00-00-00-00-00-00), enable the WiFi feature on the radio and repeat the Read job. When successful, a unique WiFi MAC address (for example, 4C-CC-34-22-38-C6) is displayed.
- This field is not editable.
- This field is hidden when the Wi-Fi feature is disabled.

Bootloader Version

Description

Displays the bootloader version programmed in the radio. The bootloader is the software component used to upgrade the firmware and codeplug of the radio.

Controller FPGA Version

Description

Displays the version of the Field Programmable Gate Array (FPGA) software image that is built in the controller board of a MTR3000 base radio/repeater.

Wireline FPGA Version

Description

Displays the version of the Field Programmable Gate Array (FPGA) software image that is built in the wireline card for a MTR3000 base radio/repeater with the Wireline board installed.

RX Frequency Range (MHz)

Description

Displays the radio's RX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

RX Frequency Range (MHz) (800/900 MHz radios)

Description

Displays the radio's RX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Note

- This feature is applicable to MOTOTRBO Conventional Repeater 800/900 MHz.

RX Frequency Range (MHz) (SL Series 800/900 MHz radios)

Description

Displays the radio's RX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Note

- This feature is applicable to MOTOTRBO 2.0 SL Series 800/900 MHz radios.

TX Frequency Range (MHz)

Description

Displays the radio's TX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Note

- This feature is disabled when the **Voting Mode** feature is set to *Analog Satellite Receiver* or *Digital Satellite Receiver*. This feature is still disabled even though the user sets **Voting Mode** to *Normal Repeater* or *Digital Voting Repeater* until the user reads a device with **Voting Mode** set to those values.

TX Frequency Range (MHz) (800/900 MHz radios)

Description

Displays the radio's TX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Notes

- This feature is applicable to MOTOTRBO Conventional Repeater 800/900 MHz.

- This feature is disabled when the **Voting Mode** feature is set to *Analog Satellite Receiver* or *Digital Satellite Receiver*. This feature is still disabled even though the user sets **Voting Mode** to *Normal Repeater* or *Digital Voting Repeater* until the user reads a device with **Voting Mode** set to those values.

TX Frequency Range (MHz) (SL Series 800/900 MHz radios)

Description

Displays the radio's TX frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is allowed to operate.

Note

- This feature is disabled when the **Voting Mode** feature is set to *Analog Satellite Receiver* or *Digital Satellite Receiver*. This feature is still disabled even though the user sets **Voting Mode** to *Normal Repeater* or *Digital Voting Repeater* until the user reads a device with **Voting Mode** set to those values.
- This feature is applicable to MOTOTRBO 2.0 SL Series 800/900 MHz radios.

Language Packs

Language Pack Memory Usage Chart

Description

This feature displays language pack information based on the languages loaded into the radio. This is a radio-wide feature.

Note

- This feature is applicable to MOTOTRBO Conventional radios for Display model only.

Language Packs

Description

The radio is capable of operating in the native language of the user. This can be achieved by loading the appropriate language pack for the desired language into the radio.

Note

- This feature is applicable to MOTOTRBO Conventional radios for Display model only.

Free Space (bytes)

Description

Displays the available memory size of the radio.

Name

Description

Displays the name of the language pack.

ID

Description

Displays the ID associated with the language contained in the language pack.

Version

Description

Displays the version of the language pack.

Size (bytes)

Description

Displays the size of the language pack.

Device Features

Feature

Description

Displays the available features for purchase Capacity Plus - Single Site , IP Site Connect, Digital, Enhanced Privacy, Transmit Interrupt, Dynamic Mixed Mode, Connect Plus, Enhanced GNSS, Convert to 3600 Trunking, Digital Phone Patch, Connect Plus Mandown, Radio Mandown, Restricted Access to System, Capacity Plus - Multi Site , Data Services Via Bluetooth, Digital Emergency, Remote Monitor, Radio Inhibit, PDT Option Board, Network Application Interface Data and Network Application Interface Voice, Digital Voting, Bluetooth Permanent Discoverable, Symmetric Keys, Multi-Button PTT, End of Train, CB Frequency, Satellite Receiver, Text to Speech, GNSS Priority over Voice, Enhanced Noise Suppressor, Extended Text Messages, Wi-Fi, and Authenticated Radio Disable, Analog RX Audio Leveling, and Digital Rx Audio Leveling.

Notes

- The user must enable the CB Frequency in order to use the CB Zone feature.
- This feature is non-editable.

See Also

- Purchasing Radio Features

Status

Description

Displays the current status (Free, Purchased or Available for Purchase) of the available features for purchase.

General Settings

Radio Name

Description

Sets an alias for the radio. When the radio powers up, this alias shows up as the welcome text, if the Welcome Image is not used. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters. This is a radio-wide feature.

Note

- This feature is not applicable for SL Series Commercial radios.

- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.
- For MOTOTRBO 2.0 radios, you are not allowed to leave a blank value for this field. This dependency is only applicable in CPS 11.0 and higher.
- This field resets to the default value if it has a blank value during a read operation. This dependency is only applicable in CPS 11.0 and higher, and MOTOTRBO radios.
- If the user enters a value more than 12 characters long, the resets to the previous value. This dependency is only applicable for SL Series Commercial radios with MOTOTRBO Light codeplugs versions 08.00.XX+.
- If the user enters a value more than 4 characters long, the value resets to the previous value. This dependency is only applicable for SL Series Commercial radios with MOTOTRBO Light codeplugs versions before 08.00.XX.

See Also

- Intro Screen.

Welcome Image

Description

Load a bitmap as a welcome screen to the radio. Click the **Select** button to select a bitmap picture or click the **Remove** button to remove the screen from the radio display.

Notes

- The resolution and color depth for the picture are as follow: 160 pixel (width) * 72 pixel (height) and 256 color for Mobile, 132 pixel (width) * 90 pixel (height) and 256 color for Portable Full Keypad model, and 132 pixel (width) * 72 pixel (height) and monochrome color for Portable Limited Keypad model. In Handheld Control Head (HCH) mode, the resolution and color depth for the picture is 132 pixel (width) * 90 pixel (height).
- For SL Series radios, the resolution and color depth for the picture are as follows: 320 pixel (width) * 240 pixel (height) and 16bit (R5-G6-B5) color.
- When the Welcome Image is used, the Radio Name text will not be displayed during the power up sequence.
- If the mobile radio is in HCH mode, you cannot customize the Welcome Bitmap for HCH. Therefore, the default Welcome Image will be used on the welcome screen regardless of your selection on bitmap image.

Radio ID

Description

Sets an individual ID that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. In the IP Site Connect system, this ID is used to uniquely identify the IP Site peers and the IP Site masters. For a radio that is used as an IP data gateway control station, it is recommended that the Radio ID be set to 16448250 as this number translates to an easy-to-remember radio air interface network IP of 12.250.250.250. If multiple IP data gateway control stations are required in the system, they can be assigned alternative numbers so long as the numbers are unique to each of them. This is a radio-wide feature.

Range	
Maximum	16776415 (for Non-Capacity Plus - Single Site system), 65535 (for Capacity Plus - Single Site System).
Minimum	1
Increment	1

Note

- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

SIT (ms)

Description

The Subscriber Inactivity Timer (SIT) controls how long the repeater will continue transmitting with absence of subscriber activity on the uplink. If the repeater is operating on shared-use frequencies, it cannot remain keyed indefinitely for the benefit of broadcasting synchronization signals to subscriber units. The repeater will likely be de-keyed most of the time; thereby requiring subscriber units to first activate the repeater (via the uplink frequency) and acquire synchronization (via the downlink frequency) before completing the call setup request and subsequent first transmission. The net result of these extra procedures is increased access time; therefore, it is desirable to avoid these steps, whenever possible. There is a trade-off to minimizing access time by keeping the repeater keyed for as long as practically possible, while complying with the regulations regarding shared-use channels, which essentially require the repeater to dekey when the channel is not in use. This can be balanced with the use of the Subscriber Inactivity Timer.

The Subscriber Inactivity Timer (SIT) starts when there is no inbound subscriber activity on either time slot (Slot 1 or 2) of a repeater. When the Subscriber Inactivity Timer (SIT) expires, the repeater will stop transmitting until awoken again by a subscriber. To accommodate the reserved hang time after each transmission, the SIT timer should always be equal or greater than the Hang Time (group, private, or emergency hang time; whichever the longest) in the repeater. This will allow the reserved hang time and a short unreserved hang time after each transmission prior to the repeater dekeying.

If shared use is not a concern, the SIT can be set to the maximum value. If shared use is a concern, the SIT should be set equal to or slightly longer than the configured call hang timers.

For Connect Plus, the SIT value that is programmed with MOTOTRBO RM will be overwritten by the XRC when it establishes its link with the repeater. The SIT value is not programmable in the MOTOTRBO Connect Plus Network Manager, but the XRC does consider other Network Manager-configurable values (the Call Hang Timers) when setting the SIT. The repeater will use the SIT value supplied by the XRC as long as it maintains connectivity to the controller. It is important to know that MOTOTRBO CPS always displays the CPS-configured value, even when connected to the XRC. The repeater utilizes the CPS-configured value when it doesn’t have a connection to the XRC (such as when the repeater is operating in Conventional Fallback mode).

For Capacity Plus—Single-Site and Capacity Plus—Multi-Site, the SIT should be set greater than the longest hang timer to avoid the possibility of missing the Capacity Plus Status CSBK transmitted at the end of a call. This ensures that the radio moves to either the rest channel or to another active call of interest in the most efficient way possible.

Range	
Maximum	7000 ms
Minimum	1000 ms
Increment	500 ms

Note

- This feature is disabled if **Repeater Mode** is set to *Analog*.
- This feature is supported in Digital mode only.

GNSS

Description

Global Navigation Satellite System (GNSS) is a satellite navigation system that is used to determine a radio's precise location. This feature allows the dispatcher to monitor a radio's current position. The required GNSS hardware is built into the radio on GNSS equipped models.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.
- This feature is available only for GNSS models.

GNSS

Description

This droplist allows you to choose the global navigation satellite system for your radio. The possible choices depend on the GNSS hardware available in the radio. The choices may be a combination of *GNSS, GLONASS, Beidou, Galileo,* and *QZSS* (in that order and separated by slashes)*. If there are two chips in the radio that supports those combinations, you may have GNSS/GLONASS, Beidou/QZSS as the choices.*

Note

- This field is greyed out when GNSS is unchecked.

Mute Timer (hour)

Description

This feature enables privacy when the user enters into a quiet environment (for example, an important meeting) and the user does not expect the radio to play out any audibles such as over the air (OTA) voice, tone, voice announcements, or Text to Speech announcements. The mute mode feature provides the functionality to address such scenarios.

Range	Functionality
Minimum	0.5 hours
Maximum	6 hours
Increment	0.5 hours

Face Down Mute Enable

Description

This feature determines if the face down detection function is enabled or not. When the checkbox is enabled, the radio enters Mute Mode when radio is switched to face-down position and exit mute mode when radio leaves face-down position. This feature is for non-display radio models.

ARS Initialization Delay (min)

Description

Configures the duration of the random range delay before an Automatic Registration Service (ARS) registration. When many radios, for instance a hundred radios, power up at the same time, channel collisions will happen and it will take a long time for all the radios to register successfully. The user can avoid this by configuring different delay durations for the radios. For example, setting the timer to 0 minute corresponds to the radio using a random timer from 5 to 15 seconds to send the ARS. Setting the timer to 30 minutes corresponds to the radio using a random timer from 5 seconds to 30 minutes to send the ARS. Setting the timer to 60 minutes corresponds to the radio using a random timer from 5 seconds to 60 minutes to send the ARS and so forth. This is a radio-wide feature.

Range	
Maximum	240 min
Minimum	0 min
Increment	30 min

Note

- This feature is supported in Digital Mode only.

TX Preamble Duration (ms)

Description

Preamble is a string of bits added in front of a data message or control message (Text Messaging, Location Messaging, Registration, Radio Check, Private Call, etc…) before transmission. This preamble prolongs the message in order to reduce the chances of the message being missed by the receiving radio. The **Transmit (TX) Preamble Duration** sets the duration of the preamble. This duration needs to be increased as the number of scan members increases on the target radio (refer to the MOTOTRBO system planner for guidance on how to set the duration). This value can be increased in all the transmitting radios if scanning radios are often missing data messages. However, a larger preamble occupies the channel longer. Therefore, increasing the Transmit Preamble duration will increase the success rate of data received while other radios are scanning, but will decrease the amount of data that can be transmitted on the channel. This is a radio-wide feature.

Range	
Maximum	8640 ms
Minimum	0 ms
Increment	60 ms

Note

- The TX Preamble feature is disabled if the duration is set to 0.
- If the Portable is configured in single site conventional repeat mode and Battery Saver is disabled, this feature should not be set to 0. This recommendation applies if MTR base radios/repeaters are being used in single site conventional system.
- This feature is supported in Digital mode only.

TX Inhibit Quick Key Override

Description

Allows transmission to be sent on a busy channel. The user accomplishes this by double pressing the PTT within one second.

Note

- This feature is supported in Analog mode only.

Battery Saver

Description

Enabling this feature causes an idle radio to automatically enter battery saver mode where it places certain radio functions on standby. After a certain duration or when there is any user button action, the radio returns to normal operation and checks the channel for incoming calls. If no calls are detected, it returns to the battery saver mode. While results vary across battery chemistry and user conditions, battery saver can deliver about a 10% improvement in battery life, but also causes a delay in response time.

When this feature is enabled, it is important to note that for the transmitting radios, there will be a slight delay in call setup (in the range of milliseconds) when pressing the Push-to-Talk (PTT) button. For the receiving radios, there may be an increase in late entry due to radios in battery saver mode having less opportunity to properly synchronize. This may cause the radios to miss the initial second of some audio transmissions in poor radio frequency (RF) conditions. This, however, will not be experienced in good RF coverage. Although they are important to note, these delays are considered minor versus the 10% improved battery life, therefore it is recommended to enable battery saver mode for all radios. This is a radio-wide feature.

Monitor Type

Description

Sets the Monitor mode to either *Open Squelch* or *Silent*. The user can access the Monitor feature by assigning a short or long programmable button press (*Monitor* (Portable only) or *Permanent Monitor*) or assigning and asserting a GPIO pin (*Monitor* (Mobile only)) to its active level. This is a radio-wide feature.

Option	Functionality
Open Squelch	Radio unmutes regardless of whether there is any channel activity. If no activity is present, noise is heard through the speaker.
Silent	Radio unmutes only if there is channel activity.

Note

- If the Monitor feature is activated by pressing the button or triggering the pin assigned to the *Monitor* option, the **PL Type** feature in Scan will be overridden, if PL Type is enabled.
- This feature is supported in Analog mode only.

Intermediate Frequency Filter (KHz)

Description

Selects the appropriate intermediate frequency filter bandwidth value to be used on a radio wide basis from the choices of 7.8 or 5.76.

Note

- This feature is supported in 3600 Trunking capable radios only.

Min Speaker Volume Level (dB)

Description

Sets the minimum audio level the radio produces regardless of the radio's volume selector level. The minimum level prevents the user from turning the radio volume level too low and forgetting to turn it back up, thus missing calls.

This is a radio-wide feature.

MOTOTRBO 2.0 Range	
Maximum	12 or *Muted* (Portable), 18 or *Muted* (Mobile) dB
Minimum	-30 (Portable), -39 (Mobile) dB
Increment	1 dB

MOTOTRBO 3600 Trunking Range	
Maximum	9 or *Muted* (Portable), -1 or *Muted* (Mobile) dB
Minimum	-52 (Portable), -47 (Mobile) dB
Increment	1 dB

Notes

- The maximum and minimum range showed in these tables vary by radio models. The range displayed for your model may be different than what is shown above.
- Selecting *Muted* mutes the radio speaker when the audio level is adjusted to the minimum.
- This feature overrides any value set in Volume Offset if it is set to any value other than *Muted*.

Off-Hook Disables PL

Description

If enabled, the Mobile unmutes to all channel activity when the microphone is off the hook. There will be no checking for Private Line (PL). This is a radio-wide feature.

Note

- Enabling this feature overrides the **Admit Criteria** feature when the microphone is off the hook, if the **Admit Criteria** is set to *Always.* Enabling this feature also overrides the **PL Type** feature in Scan when the microphone is off the hook, if PL Type is enabled.
- This feature is supported in Analog mode only.

800 MHz TX Low Power (W)

Description

Sets the 800 MHz radio Transmit (TX) Low Power value of a Mobile. This is a radio-wide feature.

Note

- This value must be lower than or equal to the 800 MHz TX High Power value.
- The range of power values is model dependent.
- This feature is applicable to MOTOTRBO Conventional Mobile and Repeater 800/900 MHz and 3600 Trunking capable Mobile only.

800 MHz TX High Power (W)

Description

Sets the 800 MHz radio Transmit (TX) High Power value of a Mobile. This is a radio-wide feature.

Note

- This value must be greater than or equal to the 800 MHz TX Low Power value.
- The range of power values is model dependent.
- This feature is applicable to MOTOTRBO Conventional Mobile and Repeater 800/900 MHz and 3600 Trunking capable Mobile only.

900 MHz TX Low Power (W)

Description

Sets the 900 MHz radio Transmit (TX) Low Power value of a Mobile. This is a radio-wide feature.

Note

- This value must be lower than or equal to the 900 MHz TX High Power value.
- The range of power values is model dependent.

- This feature is applicable to MOTOTRBO Conventional Mobile and Repeater 800/900 MHz and 3600 Trunking capable Mobile only.

900 MHz TX High Power (W)

Description

Sets the 900 MHz radio Transmit (TX) High Power value of a Mobile. This is a radio-wide feature.

Note

- This value must be greater than or equal to the 900 MHz TX Low Power value.
- The range of power values is model dependent.
- This feature is applicable to MOTOTRBO Conventional Mobile and Repeater 800/900 MHz and 3600 Trunking capable Mobile only.

Digital TX Low Power (W) (SL Series Commercial)

Description

This edit box allows user to set the digital low power 1(W) for the SL Series Commercial radios. This is a radio-wide feature.

Notes

- This value must be lower than or equal to the TX High Power value.
- The range of power values is model dependent.
- This feature is applicable to the MOTOTRBO 2.5 SL Series Commercial UHF radio models only.

Digital TX High Power (W) (SL Series Commercial)

Description

This dropdown list allows user to set the Transmit (TX) High Power value. Available options are 1W, 2W, and 3W. The default value is 3W.This is a radio-wide feature.

Notes

- This value must be greater than or equal to the TX Low Power value.
- The range of power values is model dependent.
- This feature is applicable to the MOTOTRBO 2.5 SL Series Commercial radio UHF models only.
- In the factory default state, the power level 3.0* corresponds to 3.0W. If you use the MOTOTRBO Tuner to retune the High Power to 2.5W, then the 3.0* power level corresponds to 2.5W instead of 3.0W.

Digital TX High Power (W) Explanation Message (SL Series Commercial)

Description

Displays an explanation message for the choices of Digital Tx High Power (W) (SL Series Commercial).

Note

- In the factory default state, the power level 3.0* corresponds to 3.0W. If you use the MOTOTRBO Tuner to retune the Digital Tx High Power to 2.5W, then the 3.0* power level corresponds to 2.5W instead of 3.0W.

Analog TX Low Power (W) (SL Series Commercial)

Description

This edit box allows user to set the analog low power 1 (W) for the SL Series Commercial radios. This is a radio-wide feature.

Notes

- This value must be lower than or equal to the Analog TX High Power (W) (SL Series Commercial) value.
- The range of power values is model dependent.
- This feature is applicable to the SL Series Commercial radio models.

Analog TX High Power (W) (SL Series Commercial)

Description

This dropdown list allows user to set the analog high power value for the SL Series Commercial radios. Available options are 1W and 2W. The default value is 2W.This is a radio-wide feature.

Notes

- This value must be greater than or equal to the Analog TX Low Power (W) (SL Series Commercial) value.
- The range of power values is model dependent.
- This feature is applicable to the SL Series Commercial radio models.

Digital TX Low Power (W) (SL Series Mid-Tier)

Description

This dropdown list allows user to set the digital low power for the SL Series Mid-Tier radios. This is a radio-wide feature.

Notes

- This value must be lower than or equal to the TX High Power (W) (SL Series Mid-Tier) value.
- The range of power values is model dependent.

Digital TX High Power (W) (SL Series Mid-Tier) Note

Description

If the MOTOTRBO Tuner has been used to re-tune the TX High Power (W) (SL Series Mid-Tier) to 2.5W, then the 3.0* settings in the TX High Power (W) (SL Series Mid-Tier) corresponds to the 2.5W instead of 3.0W.

Digital TX High Power (W) (SL Series Mid-Tier)

Description

This dropdown list allows user to set the Transmit (TX) High Power value. This is a radio-wide feature.

Notes

- This value must be greater than or equal to the TX Low Power (W) SL Series Mid-Tier value.
- The range of power values is model dependent.
- In the factory default state, the power level 3.0* corresponds to 3.0W. If you use the MOTOTRBO Tuner to retune the High Power to 2.5W, then the 3.0* power level corresponds to 2.5W instead of 3.0W.

Analog TX Low Power (W) (SL Series Mid-Tier)

Description

This dropdown list allows user to set the analog low power for the SL Series Mid-Tier radios. This is a radio-wide feature.

Notes

- This value must be lower than or equal to the Analog TX High Power (W) (SL Series Mid-Tier) value.

Analog TX High Power (W) (SL Series Mid-Tier)

Description

This dropdown list allows user to set the analog high power value for the SL Series Mid-Tier radios. This is a radio-wide feature.

Notes

- This value must be greater than or equal to the Analog TX Low Power (W) SL Series Mid-Tier value.

DC TX Power

Description

Configures a repeater-wide DC TX Power level. This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for **DC TX Power** is typically lower than the **TX Low Power (W)** and/or TX High Power (W) if longer runtimes are desired should the primary AC power source be interrupted.

Note

- This feature value must always be less than or equal to the value in **TX High Power (W)**.

12V DC TX Power

Description

Configures a repeater-wide 12-V DC TX Power level. This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for **DC TX Power** is typically lower than the **TX Low Power (W)** and/or TX High Power (W) if longer runtimes are desired should the primary AC power source be interrupted.

Note

- This feature value must always be less than or equal to the value in **TX High Power (W)**.

24V DC TX Power

Description

Configures a repeater-wide 24-V DC TX Power level. This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for **DC TX Power** is typically lower than the **TX Low Power (W)** and/or TX High Power (W) if longer runtimes are desired should the primary AC power source be interrupted.

Note

- This feature value must always be less than or equal to the value in **TX High Power (W)**.

DC TX Power for 800 MHz

Description

Configures a repeater-wide DC TX Power Level for the 800 MHz band. This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for **DC TX Power** is typically lower than the **800 MHz TX Low Power (W)** and/or 800 MHz TX High Power (W) if longer runtimes are desired should the primary AC power source be interrupted.

Note

- This feature must always be less than or equal to the value in **800 MHz TX High Power (W)**.

DC TX Power for 900 MHz

Description

Configures a repeater-wide DC Tx Power Level for the 900 MHz band. This feature allows the station to transmit at a different output power when operating from a DC source. When DC power is considered the backup power source, then the chosen value for **DC TX Power** is typically lower than the **900 MHz TX Low Power (W)** and/or 900 MHz TX High Power (W) if longer runtimes are desired should the primary AC power source be interrupted.

Note

- This feature value must always be less than or equal to the value in **900 MHz TX High Power (W)**.

Quick Key Override Time (ms)

Description

Displays the duration of a PTT press needed to activate the Quick Key Override feature.

Note

- This feature is applicable to 3600 Trunking capable radios only.

Talkaround Group Call Hang Time (ms)

Description

Sets the duration during which a radio will talk back to a received call or continue a transmitted Talkaround Group Call using the previously received or previously transmitted digital group ID. After expiration of the Talkaround Group Call hang timer, the radio will transmit using the TX Contact Name (digital group) specified for this channel in CPS.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Note

- This feature is supported in Digital mode only.

Private Call Talkback Timer

Description

This feature allows you to configure the Private Call Talkback Time for use during the talkaround operation. This feature sets the duration the radio keeps the Talkaround Private Call setup after you release the Push-to-Talk (PTT) button. This is to avoid setting up the call again each time you press the PTT to transmit. During this time, other radios can still transmit since the channel is essentially idle. After the hang timer expires, the radio transmits using the TX Contact Name specified for this channel in CPS.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Note

- This feature is supported in Digital mode only.

Noise Suppressor

Description

The Noise Suppressor feature enables the transmitting radio to automatically suppress noise on the microphone when detected. This gives the radio user a better audio experience by reducing unwanted ambient sounds. It is recommended to always have this feature enabled in the transmitting radio.

Option	Functionality
Disabled	Disables the Noise Suppressor feature.
Basic	Basic noise suppression is applied. Available to all radios.
Enhanced	Advanced noise suppression is applied. This feature is ideal for users operating in a constantly-noisy environment.
Enhanced Auto	Advanced noise suppression is applied dynamically. In quiet environments, the noise suppression is relaxed so that the audio is more natural sounding. In noisy environments, maximum noise suppression is applied.

Note

- The user can purchase the Enhanced and Enhanced Auto options.
- Languages that have guttural sound are impacted by noise suppression. To improve the audio quality, disable this feature.
- For users that are in extremely noisy environments, Noise Suppressor may not effectively remove all ambient noise.
- Maintaining a high S/N (speech to noise) ratio is important for the noise suppressor to be effective. The user can achieve a good S/N by speaking loudly and clearly as well as by holding the radio or accessory microphone in a position that is recommended in the user manual.

Sign In/Sign Out

Description

This feature allows the user to sign in or sign out of a third-party server from the radio with the user's sign-in ID. This feature shows an indication whether the user has signed into the third-party server or not on the home screen of the radio. The sign-in information is kept until the radio powers down or the user signs out manually. The Sign In/ Sign Out message follows the standard protocol of ARS User Register/Deregister.

Home Channel

Description

This drop list allows you to choose a channel as the Home Channel. The Home Channel is the channel that you expect to use most of the time. The radio plays a reminder when you have been away from the Home Channel for too long, based on the Home Channel Reminder Interval (min). The radio emits a tone when playing the reminder. The radio then tells you that the current channel is a non-home channel by using the current selected announcement mechanism.

You cannot use this feature with inhibited or Option Board Trunking channels. The options for this feature are *None* and all personalities that are not in the Channel Pool grid.

Note

- This feature is applicable to MOTOTRBO 2.0 radios only.

Home Channel Reminder Interval (min)

Description

This feature allows you to set the length of the radio's waiting time after each reminder, before the radio plays another reminder telling you that the current selected radio channel is not your Home Channel.

Note

- This feature is applicable to MOTOTRBO 2.0 radios only.

Test Mode

Description

When enabled, the radio enters into the normal Test Mode when the user presses the side button/programmable button 2 for five times within ten seconds of power up. For Portable only, the radio enters into the ART chamber Test Mode when the side button 1 is pressed for five times within ten seconds of power up.

Scrambling Frequency

Description

Allows the user to select the Scrambling frequency. The available choices are 3.39 kHz and 3.29 kHz.

TX Low Power (W)

Description

Sets the Transmit (TX) Low Power value of a Mobile or Repeater. This is a radio-wide feature.

Notes

- This value must be lower than or equal to the TX High Power value.
- The range of power values is model dependent.

TX High Power (W)

Description

Sets the Transmit (TX) High Power value of a Mobile or Repeater. This is a radio-wide feature.

Notes

- This value must be greater than or equal to the TX Low Power value.
- The range of power values is model dependent.

Battery Type

Description

For XiR C1200, XiR C2620, and XiR C2660 radio models, battery type cannot be detected by the radio automatically. The user will have to select the battery type via radio menu or, for non-display radio models, via programmable button. The radio comes with battery type programmable button pre-configured, as well as the Voice Announcement enabled and Motorola pre-recorded Li-Ion Battery Selected or NiMH Battery Selected voice file pre-mapped.

Selected battery type is preserved by the radio through power cycle and firmware upgrades. Therefore, the user only needs to select the battery type when the user changes to a different battery type. *Li-Ion* is the default battery type. Li-Ion will remain the selected battery type if user does not select a new battery type.

Selecting the wrong battery type affects the accuracy of the battery capacity indicator and the low battery status of the radio.

This droplist allows the user to configure the battery type.

Option	Functionality
Li-Ion	If you are using a Li-Ion battery, select this option to allow the radio to detect the battery type.
NiMH	If you are using a NiMH battery, select this option to allow the radio to detect the battery type.

Note

- If a R02.07.xx.xxxx firmware supports both the NNTN8560 and PMNN4489 batteries on MOTOTRBO 2.0 and MOTOTRBO 2.5 radios. Both batteries have been certified for use on both MOTOTRBO 2.0 and MOTOTRBO 2.5 radios.
- For R02.60.xx firmware, the NNTN8560 and PMNN4489 batteries were not cross-certified for MOTOTRBO 2.0 and MOTOTRBO 2.5 radios. Therefore, NNTN8560 is only compatible with MOTOTRBO 2.5 radios and PMNN4489 battery is only compatible with MOTOTRBO 2.0 radios.

Channel Index and Voice Announcement

Description

This check box allows the user to set the channel index and voice announcement.

Note

- This feature is applicable to the SL Series Commercial radio models.

Codeplug Password

Description

This feature sets a password for the current codeplug. The password prompt appears when the user attempts to do any of these features: read, write, clone, or remote update. This is a radio-wide feature.

To set a password for the codeplug:

1. Enter up to a maximum of 8 characters. Valid characters are alphanumerics, spaces and special characters. Trailing spaces are ignored. The password is masked by solid dots.
2. Save the changes and close the codeplug file. In addition, if the user wants to set a password on the radio, write the file to the radio. The password prompt appears the next time the user tries to open this codeplug file or read/write from/to the radio.

To remove the previously set password from the codeplug:

1. Clear the Codeplug Password text box.
2. Save the changes. In addition, if the user wants to clear the password on the radio, write the file to the radio, at which time they will be prompted for their current password.
3. Close the archived file. The user will not be prompted the next time they try to open this file or read/write from/to the radio.

Notes

- There is no known method of retrieving a lost or forgotten password. The radio can only be recovered using the Device Recover feature to load the default codeplug into the radio.
- Password in the archive is validated while opening an archive.
- After the user has performed a read operation using a valid master password, this feature is set to the default value. This dependency is only applicable when Check for Password is visible.
- The user is not allowed to input all space as password.
- Password is case sensitive.

Eye Control Button

Description

This button allows you to view or hide the password that you have just entered. When you press and hold down this button, the Codeplug Password shows the password in clear text (not masked). When you stop holding down this button, the Codeplug Password feature masks the password as dots or asterisks.

Check for Password

Description

This droplist allows the user to select the password policy for the codeplug password. Choices are *None*, *Read Only*, and *Read/Write*.

Notes

- This droplist is applicable for mobile and portable radios only
- This droplist is greyed out and set to *None* when Codeplug Password is blank.
- The default value for this droplist is *Read Only* when Codeplug Password is not blank.
- If the user selects Read/Write, password will be required during read, write, clone, recover, and convert operations.

Radio Certification Type

Description

The droplist allows the user to choose the certification type of the radio. Valid choices are "None", "FM", and "UL".

Note

- This feature is supported in Digital mode only.
- The chosen selection must match the Hazardous Location (HazLoc) certification marked on the radio.
- This selection instructs the radio to alert the user if a mismatched battery is attached to the radio. For example, if an FM-approved battery is attached to a UL-approved radio, or vice versa, an Alert or Voice Announcement sounds if enabled, and the Wrong Battery message shows on Display radios.
- For list of HazLoc approved radio models and corresponding batteries, refer to the FM Manual (Part Number: 6871532L01) and UL Manual (Part Number: MN001111A01).

Maximum Check for Password Attempts

Description

This configuration allows the user to specify how many attempts to enter the codeplug password is allowed by the radio before the radio is locked.

Notes

- This feature is greyed out and set to the default value when Check for Password is set to *None* or *Read Only*.

Configuration Bits

Description

The configuration bits allows for future configuration requirements of the radio and to enhance the future operational capabilities of the radio if and when required. The format of the options is a 2 digit hexadecimal number that is represented by a 8-bit binary image. For this feature, the last two bits of the configuration byte is used to tune the decode tone duration of the 5 Tone predefined signaling standards.

Option	Functionality
0	Bit 0: 0, Bit 1: 0. See configuration byte.
1	Bit 0: 1, Bit 1: 0. See configuration byte.
2	Bit 0: 0, Bit 1: 1. See configuration byte.
3	Bit 0: 1, Bit 1: 1. See configuration byte.

Note

- This feature is supported in Analog mode only.

Configuration Byte

Last 2 bits of Configuration Byte 2	Decode Tone Duration									
	ZVEI1 / ZVEI2 / ZVEI3		CCIR 20 ms		CCIR 20 ms		EEA		User-defined	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
00	20%	200%	20%	200%	20%	200%	30%	200%	n/a	n/a
01	20%	+ 10 ms	20%	+ 10 ms	20%	+ 10 ms	30%	+ 10 ms	n/a	n/a
10	90%	200%	90%	200%	20%	200%	30%	200%	n/a	n/a
11	90%	+ 10 ms	90%	+ 10 ms	20%	+ 10 ms	30%	+ 10 ms	n/a	n/a

Note

- The actual minimal duration is the specified minimal duration times standard tone duration. The actual maximal duration is the specified maximal duration times or plus standard tone duration.
- The decode tone duration of the Select 5 user-defined signaling standards is not tunable.
- This feature is supported in Analog mode only.

Repeater Mode

Description

Specifies whether the repeater operates in Analog or Digital mode. The repeater does not dynamically switch between these two modes.

Note

- The **Analog Accessory Emphasis**, **Audio Type**, **Audio Priority**, and **Disable Repeat Path** features are disabled if this feature is set to *Digital*.

SIT (ms)

Description

The Subscriber Inactivity Timer (SIT) controls how long the repeater will continue transmitting with absence of subscriber activity on the uplink. If the repeater is operating on shared-use frequencies, it cannot remain keyed indefinitely for the benefit of broadcasting synchronization signals to subscriber units. The repeater will likely be de-keyed most of the time; thereby requiring subscriber units to first activate the repeater (via the uplink frequency) and acquire synchronization (via the downlink

frequency) before completing the call setup request and subsequent first transmission. The net result of these extra procedures is increased access time; therefore, it is desirable to avoid these steps, whenever possible. There is a trade-off to minimizing access time by keeping the repeater keyed for as long as practically possible, while complying with the regulations regarding shared-use channels, which essentially require the repeater to dekey when the channel is not in use. This can be balanced with the use of the Subscriber Inactivity Timer.

The Subscriber Inactivity Timer (SIT) starts when there is no inbound subscriber activity on either time slot (Slot 1 or 2) of a repeater. When the Subscriber Inactivity Timer (SIT) expires, the repeater will stop transmitting until awoken again by a subscriber. To accommodate the reserved hang time after each transmission, the SIT timer should always be equal or greater than the Hang Time (group, private, or emergency hang time; whichever the longest) in the repeater. This will allow the reserved hang time and a short unreserved hang time after each transmission prior to the repeater dekeying.

If shared use is not a concern, the SIT can be set to the maximum value. If shared use is a concern, the SIT should be set equal to or slightly longer than the configured call hang timers.

For Connect Plus, the SIT value that is programmed with MOTOTRBO RM will be overwritten by the XRC when it establishes its link with the repeater. The SIT value is not programmable in the MOTOTRBO Connect Plus Network Manager, but the XRC does consider other Network Manager-configurable values (the Call Hang Timers) when setting the SIT. The repeater will use the SIT value supplied by the XRC as long as it maintains connectivity to the controller. It is important to know that MOTOTRBO CPS always displays the CPS-configured value, even when connected to the XRC. The repeater utilizes the CPS-configured value when it doesn't have a connection to the XRC (such as when the repeater is operating in Conventional Fallback mode).

For Capacity Plus—Single-Site and Capacity Plus—Multi-Site, the SIT should be set greater than the longest hang timer to avoid the possibility of missing the Capacity Plus Status CSBK transmitted at the end of a call. This ensures that the radio moves to either the rest channel or to another active call of interest in the most efficient way possible.

Range	
Maximum	7000 ms
Minimum	1000 ms
Increment	500 ms

Note

- This feature is disabled if **Repeater Mode** is set to *Analog*.
- This feature is supported in Digital mode only.

Group Call Hang Time (ms)

Description

Sets the duration the repeater reserves the channel after the end of a group call transmission. During this time, only members of the Group that the channel is reserved for can transmit. This produces smoother conversation.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Notes

- This feature is disabled if **Repeater Mode** is set to *Analog*.
- The value of this feature must be equal to or less than the **SIT** value.
- Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Private Call Hang Time (ms)

Description

Sets the duration the repeater reserves the channel after the end of a private call transmission. During this time, only the individuals involved in the call that the channel is reserved for can transmit. This produces smoother conversation. The user may want to set a longer hang time than the Group Call Hang Time as an individual tends to take a longer time to reply (talkback) in a Private Call.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Note

- This feature is disabled if **Repeater Mode** is set to *Analog*.
- The value of this feature must be equal to or less than the **SIT** value.
- Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.
- This feature is supported in Digital mode only.

Emergency Call Hang Time (ms)

Description

Sets the duration the repeater reserves the channel after the end of an emergency call transmission. During this time, only members of the Group that the channel is reserved for can transmit. This produces smoother conversation. The user may want to set the longest hang time as compared to the Private and Group Call Hang Time to reserve the channel long enough to receive an emergency response.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Note

- This feature is disabled if **Repeater Mode** is set to *Analog*.
- The value of this feature must be equal to or less than the **SIT** value.
- Do not set this value to 0 ms for repeaters in Capacity Plus–Single-Site and Capacity Plus–Multi-Site systems.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Call Hang Time (sec)

Description

Sets the duration the repeater will reserve the channel for after the end of an analog call transmission. During this time, only members of the call that the channel is reserved for can transmit. This produces smoother conversation. As this hang timer is shared among all types of analog calls (Group, Private, Emergency etc.), the duration should be set following the call type that needs the longest hang time.

Range	
Maximum	7 sec
Minimum	0 sec
Increment	1 sec

Note

- This feature is enabled if **Repeater Mode** is set to *Analog*.

Repeat Gain (dB)

Description

This feature is used to adjust a repeater's gain value in order to maintain uniform audio levels across channels in a multi-repeater system. Uniform audio levels are necessary to keep the radio user from having to constantly adjust the volume levels when changing channels.

Range	
Maximum	6.0
Minimum	-6.0
Increment	0.5

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Antenna Relay Delay Timer (ms)

Description

When the repeater with a single antenna operates as a base station, this feature is used to adjust the duration it takes for switching to occur before the repeater can begin transmitting. When the Repeater is initiated to begin a transmission, it asserts the GPIO pin (*Antenna Relay*) to its active level on the accessory port, and waits for this timer to expire before beginning to transmit. The repeater switches the antenna back to the RX port and sets the the GPIO pin to its inactive state after it stops transmitting. The duration set depends on the type of accessory switch, or relay, being used to switch the antenna between ports. This is a radio-wide feature.

Range	
Maximum	375 ms
Minimum	0 ms
Increment	25 ms

Note

- The Antenna Relay pin selection is assigned to a MOTOTRBO Repeater programmable output pin (**Pin #19, #20, #21, #22, or #24**), or a MTR3000 base radio/repeater programmable output pin (**Pin #4, #5, #15, #21, #24, #8 and #25 or #10 and #12**), and is triggered by the base radio/repeater. The base radio/repeater transmits if this pin is active and after the **Antenna Relay Delay Timer** expires.
- For MTR3000 base radio/repeater, the Antenna Relay pin selection (X371BA), which uses the P10 backplane connector (not the J7), still requires a J7 GPIO to be mapped to the antenna relay function in order for the X371BA option to become operational.

- This feature is applicable to MOTOTRBO Conventional and MTR3000 base radio/repeater and SLR series repeaters in Analog mode only.

Private Calls

Description

This feature allows you to enable or disable the initiation of a Private Call on a digital channel. When disabled, a prohibit tone will sound when the user tries to initiate a Private Call. The user can continue to receive and respond to Private Calls, and is still able to initiate Call Alerts. This is a radio-wide feature.

Note

- This feature is supported in Digital mode only.

Unlink Monitor

Description

This feature allows the Permanent Monitor feature to ignore the Admit Criteria setting. If Admit Criteria is set to *Channel Free*, the user must enable Unlink Monitor for Permanent Monitor to function. If Admit Criteria is set to *Always*, Unlink Monitor has no effect.

Backup Repeater Connected

Description

When disabled, the Repeater is operating in the standalone mode. This feature should be enabled when the Repeater is intentionally operating as the primary Repeater in a redundant Repeater setup. In this setup, the secondary Repeater is operating in the standalone mode. This is a radio-wide feature.

Note

- This feature is applicable to 32MB Repeaters only. Please refer to the MOTOTRBO Repeater Basic Service Manual for the Repeater model specification.

Radio Keep Alive

Description

Allows the user to enable/disable the keep alive signal without interfering with voice communication. This is a radio-wide feature.

Note

- This feature is only applicable for Single Site mode.
- This feature depends on the Digital feature.

Illegal Carrier Timer (sec)

Description

Specify the duration of Illegal Carrier Timer.

Illegal Carrier RSSI Threshold (dBm)

Description

This threshold defines a level at which received burst can be considered to be an illegal carrier, when its color code mismatch with the system's. This is an radio-wide feature.

Illegal Carrier Feature Enable

Description

If this bit is set, illegal carrier check will be enabled..

End of Train

Description

This feature allows you to enable or disable the EOT mode. When the radio is in EOT mode, the frequency scanning will stop if a carrier is detected. You can resume the scan with XCMP Scan Resume Command. FFSK decode is supported in EOT mode. This is a radio-wide feature.

Note

- This feature is only applicable for Single Site mode.
- This feature depends on the Digital feature.

Secure Sign In ID

Description

This checkbox allows you to specify whether or not the Sign In ID will be handled securely, like a password. When this check box is checked, the Sign In ID will not be shown on the Home Screen and the "Signed In" string will be displayed after successfully sign in.

Note

- This feature is greyed out when Sign In/Sign Out is unchecked.

Radio On Indicator

Description

This feature enables the radio to control the LED indicator. When enabled, the radio displays the blinking green LED after power up to indicate that the radio is on.

Antenna Type Selection

Description

This feature allows the user to determine the antenna type that is used in the radio. The following table shows the frequency range for the drop down list:

Selections	Functionality
Stubby	0
Whip 1	136 - 144 MHz
Whip 2	144MHz-156MHz
Whip 3	156MHz-174MHz

Note

- User must ensure that the antenna selected in this field must match with the antenna attached to the radio. If mismatched, user can expect degraded TX/RX performance.
- This selection is only applicable for selected radios only.

Voice Pretime Duration

Description

The Voice Pretime Duration field increases call setup duration by allowing the user to add a pretime burst transmission to the call. This duration allows target radios, with scan enabled, enough time to connect to the channel before audio is transmitted.

Range	
Maximum	2400 ms
Minimum	0 ms
Increment	60 ms

The following table lists the recommendation settings.

Recommendation Voice Pretime (ms)		
Scan Members	Repeater Mode (TPT-disabled)	Direct Mode/Repeater Mode (TPT-enabled)
1	N/A	N/A
2	120	60
3	240	180
4	300	240
5	420	360
6	540	480
7	660	600
8	720	660
9	840	780
10	960	900
11	1080	1020
12	1260	1200
13	1440	1380
14	1560	1500
15	1740	1680
16	1860	1800
16	2280	2220

Note

- Recommended Voice Pretime refers to the Codeplug/CPS value.

Note

- Talk Permit Tone (TPT) is delayed.
- Motorola Solutions recommends getting expert advise before configuring this field. The modification of this field impacts the performance of ongoing calls.

Battery

Battery

Description

This check box allows the user to indicate whether or not the battery is supposed to be connected.

Note

- If the user is operating under a single DC source, the user must check this box and DC Operation Only. This ensures the Low Battery Alarm to be displayed when the battery is nearing end of usefulness.

DC System Nominal

Description

Identifies customer DC system nominal voltage. The values are 12V and 24V.

DC Operation Only

Description

This feature enables or disables the AC Power Alarm. This feature should be enabled when the repeater is intentionally operating in DC (Direct Current) mode. This is a radio-wide setting.

Note

- When DC Operation Only is enabled, DC Primary Source, Battery Charging and Output Charger Voltage is disabled (grayed out).
- This feature is applicable to MTR3000 and MOTOTRBO SLR Series repeater releases only.

DC Primary Source

Description

This checkbox allows the user to set the DC port as the primary power source. The user can then set the Output Charger Voltage (V) accordingly.

Note

- This checkbox is disabled if the user enables DC Operation Only.

Battery Charging

Description

This checkbox allows the user to enable or disable battery charging. The user can then set the Output Charger Voltage (V) accordingly. This feature is unchecked by default. In MOTOTRBO SLR Series repeaters, the charge type is trickle charge.

Note

- This checkbox is disabled if the user enables DC Operation Only.

Output Charger Voltage (V)

Description

This configuration allows the user to configure the Output Charger Voltage (V) value.

Range (V)	
Maximum	15.5
Minimum	0.0
Increment	0.1

Note

- This checkbox is disabled if the user enables DC Operation Only.

Output Charger Voltage 12V (V)

Description

This configuration allows the user to configure the Output Charger Voltage 12V (V) value.

Note

- This checkbox is disabled if the user enables DC Operation Only.

Output Charger Voltage 24V (V)

Description

This configuration allows the user to configure the Output Charger Voltage 24V (V) value.

Note

- This checkbox is disabled if the user enables DC Operation Only.

Real Time Clock

Real Time Clock

Description

The real time clock shall be capable of synchronizing with an NTP source.

Alarm Type

Reference Clock Source Type

Description

This droplist allows the user to select reference clock source type, the choices are *Internal Only*, *External Only* and *Internal Fallback*.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.

External Clock Frequency

Description

This droplist allows the user to select external clock frequency, the choices of *5MHz* and *10MHz* .

Note

- This droplist is enabled if Reference Clock Source Type is set to *External Only* or *Internal Fallback*.
- This droplist is only available for MOTOTRBO SLR Series repeaters only.

RF Power Control Alarm

Description

This droplist allows the user to select alarm type for RF power control alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when transmit output power is higher than set output power or not zero when de-keyed.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Power Alarm

Description

This droplist allows the user to select alarm type for power alarm, the choices of *Major*, *Minor,* and *Informational* .

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.

Modem PA Alarm

Description

This droplist allows the user to select alarm type for modem PA alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when Current draw of modem board is outside of specification.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Temperature Alarm

Description

This droplist allows the user to select alarm type for modem PA Temperature alarm, the choices of *Major*, *Minor,* and *Informational*.

Note

- This droplist is only available for MOTOTRBO SLR series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Power Roll-back Alarm (2dB)

Description

This droplist allows the user to select alarm type for Power Roll-back Alarm (2dB). The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when PA output power is between 2dB to 3dB below the set output power, at least one of the following "primary" alarms also present: any Fan Alarm, any Temp Alarm, Modem Voltage Alarm, VSWR Minor Alarm, or VSWR Major Alarm.

Note

- This droplist is only available for MOTOTRBO SLR series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Power Roll-back Alarm (3dB)

Description

This droplist allows the user to select alarm type for Power Roll-back Alarm (3dB). The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when PA output power is more than 3dB below set output power, at least one of the following "primary" alarms is also present: any Fan Alarm, any Temp Alarm, PA Voltage Alarm, or VSWR Alarm.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

VSWR Minor Alarm

Description

This droplist allows the user to select alarm type for VSWR Minor alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when the Voltage Standing Wave Ratio (VSWR) of the equipment the station is coupled to, is between a 3:1 to 5:1.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

VSWR Major Alarm

Description

This droplist allows the user to select alarm type for VSWR Major alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when the Voltage Standing Wave Ratio (VSWR) of the equipment the station is coupled to, is greater than a 5:1.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

PA Temp Alarm

Description

This droplist allows the user to select alarm type for PA Temp alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when PA temperature is outside specified limits.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

PA Fan Alarm

Description

This droplist allows the user to select alarm type for PA Fan alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when PA fan failed.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Power Supply Fan Alarm

Description

This droplist allows the user to select alarm type for Power Supply Fan alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when Power Supply fan failed.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Power Supply Over Temperature Alarm

Description

This droplist allows the user to select alarm type for Power Supply Over Temperature alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when Power Supply temperature is outside specified limits which would allow rated power to be generated. Power supply will shut down until temperature returns to a usable level.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

AC Power Alarm

Description

This droplist allows the user to select alarm type for AC Power alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when the AC power source has been interrupted and the station is operating on DC power.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Bad Battery Alarm

Description

This droplist allows the user to select alarm type for Bad Battery alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when Battery charger is unable to charge the battery.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Low Battery Alarm

Description

This droplist allows the user to select alarm type for Low Battery alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when the battery is nearing end of usefulness. It will clear after battery charges sufficiently.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only. The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.
- If the user is operating under a single DC source, the user must enable the Battery feature. This is because this alarm will only appear if the Battery feature is enabled.

Battery Disconnected Alarm

Description

This droplist allows the user to select alarm type for Battery Disconnected alarm. The choices are *Major*, *Minor,* and *Informational.* This alarm is triggered when battery is not connected properly. Will clear when battery is connected.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Modem Fan Alarm

Description

This droplist allows the user to select alarm type for Modem Fan alarm. The choices and *Major*, *Minor,* and *Informational.* This alarm is triggered when Modem fan failed.

Note

- This droplist is only available for MOTOTRBO SLR Series repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Illegal Carrier Alarm

Description

This droplist allows the user to select alarm type for illegal carrier alarm. The choices are *Major*, *Minor,* and *Informational.*

Note

- This droplist is only available for MOTOTRBO SLR 5000 repeaters only.
- The repeater enters into a locked state if any major alarms are detected. It can be unlocked by power cycle or reset with the RDAC application. For more information, refer to the System Planner.

Emergency

Alarm Type

Description

Specifies the behavior of the radio's alarm when the emergency button is pressed.

Option	Functionality
Regular	The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.
Silent	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
Silent w/ Voice	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Note

- This feature is applicable to 3600 Trunking capable radios only.

Alarm RX Indication

Description

Determines if audio and visual indication is given by the radio when an emergency alarm is received. If disabled, the radio displays nothing when it receives an emergency alarm.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Call RX Indication

Description

Determines if a visual indication is given by the radio when an emergency call is received.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Alerts

Disable All LEDs

Description

Turns off all LEDs during radio power up (except for repeater) and while radio is in use. All LEDs are disabled including the backlight and power up LED, regardless of the backlight setting. This is a radio-wide feature.

Note

- For SL Series Mid-Tier radios models, enabling this checkbox only disables all LEDs. It does not turn off the keypad backlight.

Disable All Tones

Description

Allows the user to disable all alert tones (Keypad tones, Call Ringers, Escalert, Talk Permit Tone and Channel Free Indication) except for the incoming Emergency alert tone. This feature can be toggled on/off via a short or long programmable button press (*All Alert Tones On/Off*) or **Tones/Alerts** (Utilities Menu) feature. This is a radio-wide feature.

Talk Permit Tone

Description

This alert tone sounds after the Push-to-Talk (PTT) button is pressed and the radio is able to transmit on the channel. This is to prompt the user to begin speaking. This is a radio-wide feature.

Option	Functionality
Analog	This alert tone is enabled only for analog channels.
Digital	This alert tone is enabled only for digital channels.
Analog & Digital	This alert tone is enabled for both analog and digital channels.
None	This alert tone is disabled for both analog and digital channels.

Note

- The **Disable All Tones** feature must be disabled.
- It is recommended to disable this feature when **VOX** is being used.
- Disabling this feature for analog channels does not disable other tones, i.e. PTT Sidetone on MDC systems will still be heard by the user.

Talk Permit Tone (3600 Trunking capable radios - Conventional Channel)

Description

This alert tone sounds after the Push-to-Talk (PTT) button is pressed and the radio is able to transmit on the channel. This is to prompt the user to begin speaking. This is a radio-wide feature.

Note

- The **Disable All Tones** feature must be disabled.
- This feature is applicable to 3600 Trunking capable radios in Conventional mode only.

Channel Free Indication Tone

Description

This feature sounds an alert tone when a voice call ends. It also sounds when the voice call is interrupted on the current channel, for example, by interruptions caused by a third radio making an impolite call or sending an emergency alarm. However, this tone does not sound if the interruption is caused by a corrupted radio signal. Voice calls include Group Call, Private Call, All Call, and Emergency Call. A voice call ends when the user of the calling radio releases the Push-To-Talk (PTT) button, regardless of hang time. This feature alerts the receiving radio that the channel is available for him/her to respond producing a smoother flow of conversation. This alert tone does not sound at the end of a Remote Monitor transmission, or during Priority Scan when the voice call ends while the radio is sampling the priority channel(s). This is a radio-wide feature.

Note

- The **Disable All Tones** feature must be disabled.
- This feature is supported in Digital mode only.

See Also

- Group Call Hang Time.
- Talkaround Group Call Hang Time.
- **Private Call Hang Time**.
- **Talkaround Private Call Hang Time**.
- **Emergency Call Hang Time**.
- **Priority Sample Time**.
- **Disable All**.

Escalert Tone

Description

The radio gradually increases the volume of a repetitive alert tone (for example, a repetitive tone on an incoming call). The alert tone volume starts from a predefined minimum volume in the radio and increases, by a constant step size, until the volume level reaches the maximum volume. This is a radio-wide feature.

Note

- The **Disable All Tones** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only and 3600 Trunking capable radios only.
- For MOTOTRBO Conventional radios, this feature is available only when the Digital feature is enabled in the device.

Self Test Pass Tone

Description

Allows the user to enable or disable Self Test Pass Alert Tone. This is the tone that the radio sounds after it is successfully powered up. This is a radio-wide feature.

Prohibit Tone On Interrupt

Description

This checkbox allows the user to change the behavior when a call is pre-empted by a priority transmission. If this field is disabled, the prohibit tone will not be played and the transmission will be played immediately without waiting for the receiver to release the Push-to-Talk button.

Block Pending Private Calls

Description

When enabled and the radio receives multiple Call Alerts or Private Calls, the first Call Alert or Private Call received by the radio shall be displayed to the user. Successive Call Alerts or Private Calls shall be ignored unless the source information of the call is identical to the first Call Alert or Private Call received by the radio. This is a radio-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios only.

Volume Offset (dB)

Description

Sets an offset level for the alert tone volume. Setting this causes the alert tone volume level to be constantly higher, lower, or equal to the audio volume level controlled by the radio's volume knob. This is a radio-wide feature.

Range	
Maximum	25 dB
Minimum	-25 dB
Increment	1 dB

Fixed Volume

Description

Enabling this feature causes the Alert Tones to be played at 1/2 full rated volume, regardless of the volume knob position. Use the Volume Offset (dB) option to apply an additional offset.

RX Low Battery Interval (sec)

Description

The Receive (RX) Low Battery tone is an alert tone that sounds when the radio's low battery threshold is reached while a call is being received, or while the radio is in idle mode. The RX Low Battery Interval sets the interval for the generation of this tone. This is a radio-wide feature.

Range	
Maximum	635 sec
Minimum	0 sec
Increment	5 sec

Note

- This feature is disabled if the duration is set to 0.

Emergency Search Tone

Description

This check box allows you to enable or disable the Emergency Search Tone. When enabled, the radio emits a loud and distinct tone that allows other people to locate the person holding the radio. When enabled, the CPS of the radio is able to specify the route of the Emergency Search Tone/incoming voice; whether to the internal speaker or the accessory speaker.

When the user enables the Emergency Search Tone and the *Emergency Alarm* is activated, the radio emits a loud and distinct tone that allows other people to locate the person holding the radio. After the Emergency Alarm is sent successfully, the Emergency Search Tone will stop.

When the user enables the Emergency Search Tone and the *Emergency Alarm with Call* is activated, the Emergency Search tone will continue because the radio is still in an emergency state.

If this feature is not enabled, this routing option will not take effect by the radio and the emergency initiating subscriber will follow all the legacy emergency ergonomics indications.

Notes

- This feature is supported in Direct Mode, Talkaround mode, 6.25e direct mode, and repeater mode in Conventional Single Site, IP Site Connect, Capacity Plus - Single Site , and Capacity Plus - Multi Site .
- This feature is hidden when you disable the Digital feature.

Emergency Search Tone Volume

Description

This feature allows you to choose the volume of the Emergency Search Tone.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is hidden when you disable the Digital feature.

Emergency Search Tone Speaker

Description

This droplist allows you to choose whether to use the internal speaker (Radio) or the external speaker (Accessory) to play the Emergency Search Tone. Select "Radio" if you want the internal speaker to play the Emergency Search Tone. Select "Accessory" if you want the external speaker to play the Emergency Search Tone.

If you select "Accessory", but there are no accessories attached, the radio ignores the CPS configuration and plays out the tone/incoming voice to the internal speaker. The external speaker can be a Bluetooth speaker or another type of external speaker. When the search tone speaker is set to "Accessory" and there is more than one accessory speaker connected, the radio simply follows the existing priority rules among these different accessory speakers to route the search/incoming voice to the external speaker with the highest priority.

Notes

- This feature is hidden when the Digital feature is disabled.
- This feature is only applicable when the Emergency Search Tone is enabled.

Emergency Alert Tone Duration (min)

Description

This spin edit allows you to choose the sound duration of the Emergency Alert Tone before this tone is automatically silenced.

Notes

- This feature is hidden when you disable the Digital feature.
- This feature is applicable for MOTOTRBO 2.0 radios only.

Call Alert Tone Duration (sec)

Description

Configures the call alert tone sound duration for the radio decoding of the digital/MDC/QCII selective call alert. This is a radio-wide feature.

Range	
Maximum	∞ sec
Minimum	5 sec
Increment	5 sec

Notes

- The **Disable All Tones** feature must be disabled.
- If the Infinity (∞) option is selected, the call alert tone will continuously sound until the user cancels the call alert indication. For the 3- and 4- button radio models, user must not select the Infinity (∞) because the front buttons of the 3 and 4-button radio models cannot cancel the call alert indication.

Text Message Alert Tone Duration (min)

Description

Sets the duration the alert tone is played when the **Text Message Alert Tone (Digital Call)** or **Text Message Alert Tone (Capacity Plus - Single Site)** is set to *Repetitive*. This is a radio-wide feature.

Range	
Maximum	∞ min
Minimum	1 min
Increment	1 min

Notes

- The **Disable All Tones** feature must be disabled.
- If the Infinity(∞) option is selected, the text message alert tone will continuously sound until the user cancels the alert indication. For the 3- and 4- button radio models, user must not select the Infinity (∞) because the front buttons of the 3 and 4-button radio models cannot cancel the call alert indication.
- This feature is supported in Digital mode only.

ARTS Tone

Description

Indicates whether the radio sounds audible indications when a valid transmission is received.

Option	Functionality
Disabled	The radio does not sound audible indications when a valid transmission is received.
Once	The radio sounds audible indications when range status changes.
Always	The radio sounds audible indications when range status changes or radio, which is in range, receives valid transmissions.

Note

- This feature is disabled when **Disable All Tones** is enabled.
- This feature is supported in Analog mode only.

Visual Indication

Description

Displays the ARTS visual indications when range status changes or the radio is out of range. If disabled, the radio does not display any visual indications.

Note

- This feature is supported in Analog mode only.

Clear Call Received

Description

Enable this check box to use the clear call receive tone on an encrypted channel.

Channel Knob Tone

Description

This alert tone indicates that the knob has successfully changed the channel.

Note

- This feature is disabled if the **Disable All Tones** is enabled.

Out of Range Indication

Description

Selects the Out of Range Indicator from the available choices. An alert (audible and/or visual) is provided to the user when the radio detects it is out of range. This is a radio-wide feature.

Option	Functionality
No Indication	No audible or visual alert will be provided to the user when the radio detects out or range.
Display Only	A visual indication will be provided to the user when the radio detects out or range (applicable to Display model only).
Alert Only	An audible alert will be provided to the user when the radio detects out of range.
Display & Alert	An audible and visual indication will be provided to the user when the radio detects out of range (applicable to Display model only).

Note

- The *Alert Only* and *Display & Alert* options are only available when the **Disable All Tones** feature is disabled (i.e. not checked).
- This feature is applicable to 3600 Trunking capable radios only.

Imbalanced Coverage Indication

Description

Selects the Imbalanced Coverage Indicator from the available choices. An alert (audible and/or visual) is provided to the user when the radio detects an imbalanced coverage condition. This is a radio-wide feature.

Option	Functionality
No Indication	No audible or visual alert will be provided to the user when the radio detects a coverage imbalance condition.

Display Only	A visual indication will be provided to the user when the radio detects a coverage imbalance condition (applicable to Display model only).
Alert Only	An audible alert will be provided to the user when the radio detects a coverage imbalance condition.
Display & Alert	An audible and visual indication will be provided to the user when the radio detects a coverage imbalance condition. (applicable to Display model only).

Note

- The *Alert Only* and *Display & Alert* options are only available when the **Disable All Tones** feature is disabled (i.e. not checked).
- This feature is applicable to 3600 Trunking capable radios only.

CWID

ID

Description

This ID consists of identification characters that are assigned by the local regulatory agency and are periodically transmitted in Morse Code over the air. The user may enter up to a maximum of 44 characters. Trailing spaces are ignored. The ID's Character range is shown as below.

Name	Character
Number	0 - 9
Alphabet	A – Z
Space	
Quote	’
Double Quote	“
Question Mark	?
Colon	:
Alias Sign	@
Minus Sign	-
Comma	,
Period	.
Forward slash	/
Open parenthesis	(

Close parenthesis	)
Exclamation mark	!

Note

- If this feature is left blank, all the CWID features are disabled.

Tone Frequency (Hz)

Description

Specifies the frequency at which the Morse Code Station ID (CWID) is transmitted.

Range	
Maximum	2000 Hz
Minimum	400 Hz
Increment	200 Hz

Note

- This feature is disabled if the ID field is blank.

TX Interval (min)

Description

The station will generate a Continuous Wave Identification (CWID) when the repeater has no other repeat audio requests (either analog or digital), analog or all digital hang time has finished and the programmed transmission interval timer period has expired. This feature should be set to a period shorter than the Mix Mode Timer to allow the station the opportunity to send a CWID at the end of a set of user radio exchanges prior to having to send the ID mixed with analog repeat audio.

Range	
Maximum	255 min
Minimum	5 min
Increment	1 min

Notes

- This feature is disabled if the value is set to 255.
- This feature is disabled if the ID field is blank.

Rate (WPM)

Description

This feature is used to specify the Continuous Wave Identification (CWID) transmission rate, which is measured in words per minute. The maximum transmission rate allowed varies across different countries and radio services. The repeater has more time to repeat audio signals when the CWID is transmitted at a higher rate.

Range	
Maximum	30
Minimum	15
Increment	5

Note

- This feature is disabled if the ID field is blank.

Mix Mode Timer (min)

Description

The station will generate a Continuous Wave Identification (CWID) mixed with analog audio when the repeater is repeating analog signals or is in analog hang time and the programmed mix mode timer has expired. This feature should be set to a period longer than the TX Interval to allow the station the opportunity to send a CWID by itself at the end of a set of user radio exchanges rather than having to send the ID mixed with analog repeat audio.

Range	
Maximum	255 min
Minimum	5 min
Increment	1 min

Notes

- This feature is disabled by the repeater if the value is set to 255.
- This feature is disabled if the ID field is blank.
- This feature is not applicable to digital repeater operation as CWID will not be generated while digital repeat is in progress.
- This feature is not applicable to Dynamic Mixed Mode.

Strip PL

Description

If enabled, Continuous Wave Identification (CWID) is transmitted without PL tone or DPL code.

Notes

- This feature is disabled if **Repeater Mode** is set to *Digital*.
- This feature is disabled if the ID field is blank.

Voting

Operation Mode

Description

This feature allows user to configure the Operation Mode feature.

Option	Functionality
Normal Repeater	Allows the repeater to operate with both Transmitter and Receiver RF functionality without Digital Voting feature.
Analog Satellite Receiver	Limits the repeater's RF functionality to analog receive only in both voting and non-voting systems.
Digital Satellite Receiver	Limits the repeater's RF functionality to digital receive only in voting systems.
Digital Voting Repeater	Allows the repeater to operate with both transmitter and receiver RF functionality with the Digital Voting feature.

Notes

- **Warning:** When changing from *Analog Satellite Receiver* or *Digital Satellite Receiver* to *Normal Repeater*, the MTR3000 Satellite Receiver will become disabled after power up.
- The *Analog Satellite Receiver* option is only available for MTR3000 repeaters only.
- The *Digital Voting Repeater* option is hidden when the Digital Voting feature is disabled.
- When the user set this feature to *Analog Satellite Receiver* or *Digital Satellite Receiver*, all transmit parameters in the TX in all channels will be non-editable (greyed-out).
- Setting this feature to *Analog Satellite Receiver* or *Digital Satellite Receiver* will also greyed-out the Offset (MHz), Dual Capacity Direct Mode (DCDM), and Copy buttons in all channels.
- When you set this feature to *Normal Repeater* or *Digital Voting Repeater*, the application displays a dialog box warning you to configure MTR3000 Satellite Receiver models as a Satellite Receiver in order to function. This dialog prompts out after you modify this feature only. This dependency applies to MTR3000 repeaters only.

Digital Voter Peer ID

Description

This feature allows user to set the Digital Voter Peer ID for a Voting Repeater (that the current satellite receiver belongs to). This field is used to store the Timer value at which point a call stream is selected by a Voting Repeater. The satellite receiver must be connected to a Voting Repeater via IP (either LAN or WAN). For the satellite receiver to operate correctly, this feature needs to know which voting repeater it is associate to. This is a radio-wide feature.

Range	
Maximum	16776415
Minimum	1
Increment	1

Notes

- The value specified by this field is the distance to the corresponding voting repeater slot boundary.
- This feature is not editable when Operation Mode feature is set to *Normal Repeater*, *Analog Satellite Receiver*, or *Digital Voting Repeater*.

Digital Voting Stability Factor

Description

This feature allows user to set the Digital Voting Stability factor to a satellite receiver. This is a radio-wide feature.

Range	
Maximum	5.0
Minimum	0.5
Increment	0.5

Notes

- The default value of 0.5 only needs to be changed to a larger value when the timeslot swap occurs due to extreme environmental conditions (for example, congested network).
- This feature is greyed-out when Operation Mode feature is set to *Normal Repeater*, *Analog Satellite Receiver*, or *Digital Voting Repeater*.

Backlight

On Receiving Over-the-Air Event

Description

This checkbox allows you to enable or disable the On Receiving Over-the-Air Event feature. When you enable this checkbox, the backlight automatically turns on when the radio receives a voice call alert, text message, job ticket, missed call, or emergency alarm. When you disable this checkbox, the backlight does not turn on automatically in those cases, but may still be turned on in other ways.

On User Event

Description

This checkbox allows you to enable or disable the On User Event feature. When you enable this checkbox, the backlight automatically turns on when you change the channel, volume, or press a keypad or programmable button on the radio. When you disable this checkbox, the backlight does not turn on automatically in those cases, but may still be turned on in other ways.

Timeout Timer

Description

This droplist allows you to choose the amount of time that the backlight remains on before being automatically turned off. Choices are Infinity (∞), 3, 5, 10, 15, 20, 25, 30, 40, 50, and 60 seconds.

Audio Profile

User Selectable Audio Profiles

Description

User Selectable Audio Profiles (USAP) allows you to optimize the audio experience for specific environments. You can select one environmental profile and one user preference profile at a given time. This feature is an RX-side feature. You can use audio preference profile to control an Rx-side filter. Audio Environment and audio Preference profile are both independent fields.

For Display models, you can select Environment or Preference through CPS and Radio Menu. For Plain models, you can select Environment or Preference through CPS only. This is a radio-wide feature and only available in Digital mode.

Interaction with Bluetooth

When bluetooth device is connected to the radio, Audio Ambience and Audio Profile menu on the radio are blocked and you are not allowed to access this feature. Audio profile and ambience will behave as default. For Plain models, you are able to select the audio ambience and audio profile and flash to radio. However, the audio profile and ambience will behave as default.

Note:

- Refer to the Feature Demo Video to view the feature.

See Also:

- **Environment**
- Preference
- **Intelligent Audio Response**
- **AF Suppressor**
- **Noise Suppressor**
- **Trill Enhancement**

Intelligent Audio Response

Description

The Intelligent Audio feature automatically adjusts the volume emitted from the radio speaker, depending on the noise in the surrounding environment, so that the radio transmission can be heard above the ambient noise. When this feature is enabled, the volume knob defines the volume floor (i.e the lowest allowable speaker volume level). For those systems which utilize the 13W external speaker attached to a mobile radio, it may or may not be possible to place the external speaker for optimal performance of Intelligent Audio.

Option	Functionality
Disabled	Disables the Intelligent Audio Response feature. The audio volume will follow the volume knob position, but will not be automatically adjusted with ambient noise level.
Normal	The noise threshold of the intelligent audio follows the volume knob position. Once the ambient noise is above the noise threshold, the audio volume is boosted.

Note

- This feature is supported in Digital mode only.
- Refer to the Feature Demo Video to view the feature.

Language

Description

This droplist allows you to select the audio profile language.

Note

- This feature is supported in Digital mode only.

Environment

Description

This droplist allows you to choose an audio ambience. To use this feature, select the current environment profile for your working environment. Available choices are Default, Loud, and Work Group. For more information about USAP, refer to User Selectable Audio Profile.

Option	Functionality
Default	When this feature is set to Default, this feature is disabled. At the Rx side, when you set this feature as Default, the expected result is there are no difference on the audio heard. It is normal encode and decode activity.
Loud	When this feature is set to Loud, the receiver is in a high noise environment. The Noise Supressor is enabled (by default). Selecting this option boosts the Rx volume around 8dB.
Workgroup	When this feature is set to Workgroup, the receiver is in a Control Room. The AF Suppressor is enabled in the radio menu (the radio menu is disabled by default). Digital Mic AGC is disabled in the radio menu.

Preference

Description

This droplist allows you to choose your preferred audio profile. To use this feature, select any of the choices for your listening experience. Available choices are Default, Level 1, Level 2, Level 3, Trebel Boost, Mid Boost, and Bass Boost. If you select Default, this feature is disabled (normal Tx and Rx audio is heard). If you select Level 1, Level 2, Level 3, Trebel Boost, Mid Boost, or Bass Boost, the DSP processes the audio with some predefined filters for the respective selections. Level 1, Level 2, Level 3, Trebel Boost, Mid Boost, and Bass Boost have different sound effects that are distinctive from one another. For more information about USAP, refer to User Selectable Audio Profile.

AF Suppressor

Description

The AF Suppressor feature enables the radio to automatically suppress howling in the received audio when detected. This gives the radio user a better audio experience in potential acoustic feedback environment. This feature can be toggled between on and off via a short or long programmable button press (Toggle AF Suppressor).

Notes

- This feature is supported in Digital mode only.
- Refer to the Feature Demo Video to view the feature.

Noise Suppressor

Description

The Noise Suppressor feature enables the transmitting radio to automatically suppress noise on the microphone when detected. This gives the radio user a better audio experience by reducing unwanted ambient sounds. It is recommended to always have this feature enabled in the transmitting radio.

Option	Functionality
Disabled	Disables the Noise Suppressor feature.
Basic	Basic noise suppression is applied. Available to all radios.
Enhanced	Advanced noise suppression is applied. This feature is ideal for users operating in a constantly-noisy environment.
Enhanced Auto	Advanced noise suppression is applied dynamically. In quiet environments, the noise suppression is relaxed so that the audio is more natural sounding. In noisy environments, maximum noise suppression is applied.

Note

- The user can purchase the Enhanced and Enhanced Auto options.
- Languages that have guttural sound are impacted by noise suppression. To improve the audio quality, disable this feature.
- For users that are in extremely noisy environments, Noise Suppressor may not effectively remove all ambient noise.
- Maintaining a high S/N (speech to noise) ratio is important for the noise suppressor to be effective. The user can achieve a good S/N by speaking loudly and clearly as well as by holding the radio or accessory microphone in a position that is recommended in the user manual.

Trill Enhancement

Description

This checkbox allows you to enable or disable Trill Enhancement. Trill Enhancement improves the voice quality for languages that have an alveolar trill sound (also known as a 'Rolling R'). Some examples of such as languages include Spanish, Italian, Finnish, Catalan, Swedish, Hungarian, Polish, Czech, Basque, Lithuanian, Arabic, and Tamil, among others. It is not recommended to enable this feature for languages that do not have an alveolar trill sound (for example, English), because it may decrease voice quality for those languages.

Notes

- Refer to the Feature Demo Video to view the feature.

Analog RX Audio Leveling

Description

Rx Audio Leveling (RAL) allows a radio user to have a better audio experience when the received digital audio level is soft or too loud. It enables the radio to automatically control the active speech level in the received audio once detected on an Rx radio.

When the *Analog RX Audio Leveling* is enabled, the user can use the Rx Audio Leveling on the analog channels.

Note

- This feature is supported in Analog mode only.

Digital RX Audio Leveling

Description

Rx Audio Leveling (RAL) allows a radio user to have a better audio experience when the received digital audio level is soft or too loud. It enables the radio to automatically control the active speech level in the received audio once detected on an Rx radio.

When *Digital RX Audio Leveling* is enabled, the user can use the Rx Audio Leveling on the digital channels.

Note

- This feature is supported in Digital mode only.

Radio Certification Type

Description

The droplist allows the user to choose the certification type of the radio. Valid choices are "None", "FM", and "UL".

Note

- This feature is supported in Digital mode only.
- The chosen selection must match the Hazardous Location (HazLoc) certification marked on the radio.
- This selection instructs the radio to alert the user if a mismatched battery is attached to the radio. For example, if an FM-approved battery is attached to a UL-approved radio, or vice versa, an Alert or Voice Announcement sounds if enabled, and the Wrong Battery message shows on Display radios.
- For list of HazLoc approved radio models and corresponding batteries, refer to the FM Manual (Part Number: 6871532L01) and UL Manual (Part Number: MN001111A01).

Language

Description

This droplist allows you to select the audio profile language.

Note

- This feature is supported in Digital mode only.

Respond Caller

Description

This feature allows the user to control the Push-To-Talk (PTT) behavior not only on the call alert/notification list screen, but also to Missed Call and Capacity Max Status in the Notification List. Choices are 0 (False) and 1 (True). If the user selects 1 (True), the radio follows the MOTOTRBO radios behavior of responding with a private call. If the user selects 0 (False), when the user clicks the PTT button, the radio goes back back to home screen and start a UKP call.

Note

- This feature is supported in Digital mode only.

Microphone

Mic Selection Rule

Description

Allows users to configure Mic Selection Rule. Mic Selection Rule defines the transmit audio routing behavior when an external microphone is connected to the Portable.

Option	Functionality
Default	When an external accessory is connected to the Portable, the external microphone is always turned on. When there is no external accessory connected to the Portable, the internal microphone is always turned on. This option should NOT be selected with receive only accessories.
External PTT Only	When an external accessory is connected to the Portable, the external microphone is turned on when the external microphone PTT is pressed. However, the Portable PTT button is disabled. When there is no external accessory connected to the Portable, the internal microphone is always turned on. This option should NOT be selected with receive only accessories. **Note:** This option is not applicable to some MOTOTRBO 1.0 radios operating in Connect Plus mode. Only the *Default* and *Mic Follow PTT* options are available.

Mic Follow PTT	When an external accessory is connected to the Portable, the microphone selection depends on the PTT press. The external microphone is turned on when the external microphone PTT is pressed. The internal microphone is turned on when the Portable PTT is pressed. When there is no external accessory connected to the Portable, the internal microphone is always turned on.

Mic Distortion Control

Description

Allows the user to enable or disable the Mic Distortion Control feature.

Note

- This feature is applicable in Digital mode only.

Analog Mic AGC

Description

Controls the transmitting radio's microphone gain automatically. AGC stands for Automatic Gain Control and is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 6 dB) to a nominal value.

Notes

- Enabling this feature overrides all the mic gain features, i.e. Analog Mic Gain (dB) (Portable), Analog Accessory Mic Gain (dB) (Portable), Analog Front Mic Gain (dB) (Mobile) and Analog Rear Mic Gain (dB) (Mobile/Repeater).
- For SL Commercial radios, enabling this feature will disable the Analog Mic Gain (dB) (Portable) and Analog Accessory Mic Gain (dB) (Portable).
- It is recommended to turn this feature on.
- On VOX-enabled channels, disabling this feature and adjusting the Analog Accessory Mic Gain (dB) (Portable) will affect VOX Sensitivity.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only for all radio types and 3600 Trunking capable radios for Portable only.

See Also

- Analog Front Mic AGC
- Analog Rear Mic AGC

Digital Mic AGC

Description

Controls the transmitting radio's microphone gain automatically. AGC stands for Automatic Gain Control and is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 6 dB) to a nominal value.

The AGC is intended to provide consistent level audio for a wide range of input voice levels. When the AGC is disabled in digital mode, soft spoken users sound very soft to the receiving radios and naturally loud spoken users may be undesirably loud.

Notes

- Enabling this feature overrides all the mic gain features, i.e. **Digital Mic Gain (dB)** (Portable), **Digital Accessory Mic Gain (dB)** (Portable), **Digital Front Mic Gain (dB)** (Mobile) and **Digital Rear Mic Gain (dB)** (Mobile/Repeater).
- For SL Commercial radios, enabling this feature will disable the **Digital Mic Gain (dB)** (Portable) and **Digital Accessory Mic Gain (dB)** (Portable).
- It is highly recommended to turn this feature on.
- On VOX-enabled channels, disabling this feature and adjusting the **Digital Accessory Mic Gain (dB)** (Portable) will affect VOX Sensitivity.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Analog Mic Gain (dB)

Description

Defines the amplification of the Portable's microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Conventional Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

MOTOTRBO 2.0 Range	
Maximum	31 dB or 20 dB
Minimum	0 dB or -20 dB
Increment	1 dB

MOTOTRBO Light Range	
Maximum	20 dB
Minimum	-18 dB
Increment	1 dB

Notes

- Depending on your MOTOTRBO 2.0 portable radio model, the maximum value for Analog Mic Gain (dB) can be 31 or 20.
- Depending on your MOTOTRBO 2.0 portable radio model, the minimum value for Analog Mic Gain (dB) can be 0 or -20.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- This gain value has no effect after you enable the **Analog Mic AGC** feature.

Digital Mic Gain (dB)

Description

Defines the amplification of the Portable's microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Conventional Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

MOTOTRBO 2.0 Range	
Maximum	31 dB or 20 dB
Minimum	0 dB or -20 dB
Increment	1 dB

MOTOTRBO Light Range	
Maximum	20 dB
Minimum	-18 dB

Increment	1 dB

Notes

- Depending on your MOTOTRBO 2.0 portable radio model, the maximum Digital Mic Gain (dB) can be 31 or 20.
- Depending on your MOTOTRBO 2.0 portable radio model, the minimum value for Digital Mic Gain (dB) can be 0 or -20.
- This gain value has no effect and resets to the default value after you enable the **Digital Mic AGC** feature.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

VOX Sensitivity

Description

This feature adjusts the VOX sensitivity level. Of the six available levels, Level 1 is the most sensitive level,while level 6 is the least sensitive level. VOX sensitivity should be configured properly to avoid situations where VOX is frequently triggered unintentionally or where it is difficult to trigger VOX. Several factors should be considered when configuring this feature, such as the type of accessory used, the environment in which the radio performs, the radio user's regular speech volume, etc.

Depending on the environment in which the radio is used, the VOX sensitivity level needs to be adjusted for optimal performance. Level 2 is recommended for most accessories.
It is recommended that the VOX sensitivity for Lightweight D-Style Earsets be set to Level 3 for quiet environments and Level 5 for noisy environments.

This is a radio-wide feature.

Range	
Maximum	Level 6
Minimum	Level 1
Increment	1

Hot Mic Source

Description

The Hot Microphone (Hot Mic) feature causes the radio to key up automatically for a predetermined amount of time during Remote Monitor and Emergency Alarm followed by Voice.

The Hot Mic Source feature identifies which microphone should become active (hot) during this predetermined transmission period.

Option	Functionality
Accessory	Hot Mic feature uses the attached accessory microphone (portable radio).
Internal	Hot Mic feature uses the internal microphone (portable radio).
Front Accessory	Hot Mic feature uses the front accessory microphone (mobile radio).
Rear Accessory	Hot Mic feature uses the rear accessory microphone (mobile radio).

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only and 3600 Trunking capable radios in Analog mode only.

See Also

- **Hot Mic Duration (sec)**.

Battery Saver

Preamble

Description

This feature enables or disables the battery saver preamble. The radio sends a preamble before each transmission to enhance the ability of receiving radios in battery saver mode to synchronize in preparation for transmissions; reducing the occurrence of late-entry. To avoid interoperability issues, it is recommended that all radios in a system share the same setting for this field. The value of this field does not affect Capacity Plus - Single Site channels. This is a radio-wide feature.

Note

- The Receive feature is disabled if this feature is disabled (unchecked).

Receive 

Description

Enabling this feature causes an idle radio to automatically enter battery saver mode where it places certain radio functions on standby. After a certain duration or when there is any user button action, the radio returns to normal operation and checks the channel for incoming calls. If no calls are detected, it returns to the battery saver mode. While results vary across battery chemistry and user conditions, battery saver can deliver about a 10% improvement in battery life, but also causes a delay in response time.

When this feature is enabled, it is important to note that for the transmitting radios, there will be a slight delay in call setup (in the range of milliseconds) when pressing the Push-to-Talk (PTT) button. For the receiving radios, there may be an increase in late entry due to radios in battery saver mode having less opportunity to properly synchronize. This may cause the radios to miss the initial second of some audio transmissions in poor radio frequency (RF) conditions. This, however, will not be experienced in good RF coverage. Although they are important to note, these delays are considered minor versus the 10% improved battery life, therefore it is recommended to enable battery saver mode for all radios. This is a radio-wide feature.

Notes

- This feature is disabled if Preamble is disabled (unchecked).
- This feature is disabled if **Option Board Trunking** is enabled (checked).

Backlight (Battery Saver) 

Description

When enabled, the Portable screen will not be displayed in any receive operation like an incoming call until any user operation is invoked, such as a key press. This is to save the battery energy.

Note

- This feature only applies when an audio accessory (wired or Bluetooth) is attached.
- This feature is exited when an emergency call or alarm is triggered.
- This feature is supported in Digital mode only.
- This feature is applicable to SL Series radios.

Over-the-Air Programming

Authentication Key ID 

Description

The Over-the-Air Programming (OTAP) feature verifies that the radio and the programming application are owned by the same user prior to performing an over the air action. This ID together with the key value are used to produce an OTAP authentication key for the radio. When establishing the OTAP connection, the radio supplies this ID and the OTAP Application must have matching key ID to continue.

Range	
Maximum	65535
Minimum	0
Increment	1

Note

- If the ID is out of range, the ID returns to the first available ID.
- This feature is enabled when the Over-the-Air Programming feature is enabled.

Authentication Key Alias

Description

The Over-the-Air Programming (OTAP) feature verifies that the radio and the programming application are owned by the same user prior to performing an over the air action. This key value in HEX format together with **key ID** are used to produce an OTAP authentication key for the radio. The key is used for authentication purposes when establishing an OTAP connection.

Range	
Maximum	FFFFFFFFFF
Minimum	1
Increment	1

Notes

- This feature is enabled when the Over-the-Air Programming feature is enabled.
- This feature value displays a hidden symbol represented by the symbol 0x20e0 when the radio is read.
- If the user enters 10F's and leaves this parameter, it is an invalid value and will be changed to the 0x20e0 symbol.

Persistent LRRP Requests

Save (Persistent LRRP Requests)

Description

This feature allows the user to enable or disable the Save Persistent LRRP (Location Request and Response Protocol) Requests. When enabled, all persistent LRRP requests are kept in the radio's memory. This is a radio-wide feature.

Note

- This feature is also available for GNSS model.

Delete (Persistent LRRP Requests)

Description

This feature allows the user to enable or disable the Delete Persistent LRRP (Location Request and Response Protocol) Requests. When enabled, all persistent LRRP requests are cleared from the radio's memory, and the radio will only transmit location updates upon receiving the next persistent LRRP request. Otherwise, all the saved LRRP requests in the radio are preserved. This is a radio-wide feature.

Note

- This feature is also available for GNSS model.

Lone Worker

Response Timer (min)

Description

This timer is part of the Lone Worker feature. It determines how long the radio waits since the last user activity before it begins sending reminders. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

Range	
Maximum	255 min
Minimum	1 min
Increment	1 min

Reminder Timer (sec)

Description

This timer is part of the **Lone Worker** feature. It determines how long the radio waits since the Response Time has expired before raising the emergency. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Smart PTT Periodic Time (sec)

Description

Specifies the time interval that telegrams will be sent when the PTT Keyup Mode feature is set to *Smart PTT*.

Range	
Maximum	60 sec
Minimum	20 sec
Increment	5 sec

Note

- This feature is supported in Analog mode only.

Carrier Gone Timer (sec)

Description

Specifies the duration that the radio is not allowed to transmit after carrier is gone. This feature is used to prevent operators currently not involved in calls from transmitting over other users who may be active on the channel, but are de-keyed with their auto-reset timers running.

Range	
Maximum	60 sec
Minimum	0 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

Power Up

MDC Status 

Description

When enabled, upon powering up, the radio automatically displays the Status list menu and the selected entry is the last status acknowledged. Else, the radio displays the home screen after powering up.

Note

- This feature is supported in Analog mode only.

Desired Powerup Channel 

Description

Specifies the channel that the radio will power up on. The choices are *Last Selected Channel* and all available channels. If the *Last Selected Channel* option is selected, the radio will always power up on the last used channel prior to power down.

Note

- The value of this feature is set to the *Last Selected Channel* if the selected channel is deleted or the pasted value does not exist in the available choices.

Password and Lock

Enable 

Description

Allows the user to enable or disable the Password and Lock feature. This feature protects the radio from unauthorized usage via a password. When enabled, the user is prompted to enter a password at radio power up. The radio will be locked for 15 minutes if three incorrect passwords are entered consecutively. After 15 minutes, the user will be prompted to enter the password again. The radio will remain locked until the correct password is entered. This is a radio-wide feature.

Password 

Description

Sets the password that the user must enter in order to use the radio functionality when the Password and Lock **Enable** feature is enabled. The length of the password must be 4 characters long. The first character in the password must be a number between 0 to 9. The range for the subsequent digits is 0 to 9 for Mobile and Portable Display models.

For Non-Display portable models, the user must still input the first password character (between 0 to 9) via the channel knob position, but the user must input the subsequent password characters via the side buttons (between 1 to 3). For 3- and 4-button portable radio models, the user must input all passwords via the side buttons (between 1 to 3).

In general, the password range depends on the number of side buttons available on the radio. For example, if there are 3 side buttons in the portable radio model, the length of the password is 1 to 3 characters long. If there are 2 side buttons in the portable radio model, the length of the password is 1 to 2 characters long. This is a radio-wide feature.

Notes

- This feature is available when the Enable feature is checked.
- This feature filters any invalid characters and if it still has more characters than the maximum, it truncates to the maximum length allowed.

Front Panel Programming

Mode (Front Panel Programming)

Description

Configures the level of access for the Front Panel Programming (FPP) operation. The FPP feature lets the user change certain codeplug settings directly from the radio when not having a CPS, e.g. when the user is on the field.

Option	Functionality
Disabled	The Front Panel Programming feature is disabled. Under this setting, certain features are disabled (see Note) or assigned to a radio programmable button.
User	The user can access all features options (see Note) in the Menu tree and options assigned to the radio programmable buttons.
Dealer	After the user enters the Front Panel Programming password, the user can access additional features in the **Program Radio** menu options in the radio.

Notes

- Features disabled when Mode Option is set to "**Disabled**" and features enabled when Mode option is set to **"User"**:
  - Scrambling
  - Enable/Disable Power Up Tone
  - Enable/Disable VOX
  - Scan – Add Scan List Member
  - Scan – Delete Scan List Member
  - Scan – Set / Clear Priority 1.2
  - Scan – Scan List Selection
  - Alert Tones – Volume
  - Alert Tones – Disable / Enable All Tones
  - Alert Tones – Disable / Enable Talk Permit Tone
  - Alert Tones – Disable / Enable Escalert
  - Alert Tones – Disable / Enable Keypad Tones
  - Alert Tones – Set Call Ringer per Call Type
  - Toggle LED Indicators
  - Backlight
  - RF Power Level
  - Menu Timer
  - Disable / Enable Introduction Screen
  - Toggle Repeater, Talk Around Mode
  - Language Selection
  - Analog Mic AGC
  - Digital Mic AGC
  - Squelch Level
  - Digital UCL – Add Contact
  - Digital UCL – Update Contact
  - Voice Announcement

    - Flexible RX List
- Additional features available for edit when Mode Option is set to "Dealer" once the Front Panel Programming password is entered:
    - Signaling Systems
    - Edit Zone
    - Edit Channel
    - Radio Button
    - Accessories Button

Password (Front Panel Programming)

Description

Prevents unauthorized access to programming the “Protected" codeplug parameters in Dealer Mode. The user enters this password when accessing the “Protected" codeplug parameters. This password must always be exactly eight characters and cannot be empty. This password is not modifiable from the radio and can only be changed from the CPS.

Note

- This feature is enabled if the **Mode** feature is set to *Dealer*.
- This feature value is set to the original value when the changes that is committed is blank or invalid, i.e. the user only inputs one digit and then tabs out to commit the changes.
- This feature filters any invalid characters, e.g. if the user tries to copy "101 12 1aa3bg4", it will be pasted as "10112134".

5 Tone Radio ID

5 Tone Radio ID

Description

Specifies the variable 5 Tone radio ID digit(s). Radio ID digits allow a user to input the Radio ID and use them in 5 Tone Encode and Decode sequences. The length of the ID is 1 to 8 digits. Valid digits are 0-9, A-F.

Note

- If a digit is specified to be a group or repeat tone in any of the signaling systems, it is not allowed to be specified within the radio ID.
- This feature is supported in Analog mode only.

Delete All

Delete All

Description

The field contains the Delete All fields.

Text Messages

Description

The feature allows you to configure the radio to delete all Text Messages.

Note

- This feature is hidden when the Digital feature is disabled.

See Also

- Adding Text Messages
- Delete All
- Copying and Pasting Items for ways of copying and pasting text messages.

Job Tickets

Description

Allows user to set the radio to delete all job tickets.

Note

- This feature is supported in Digital mode only.

Call Log

Description

This feature allows the user to set the radio to delete all items in the call log items.

User Contacts

Description

This feature allows the user to set the radio to delete all user contacts.

Accessories

Hook Type

Description

Defines the interaction between the Auto Reset Timer and hook state change for the Mobile. This feature allows the user to take manual control of the radio when on channel, but not actively making or receiving a call. Specifically, it takes the radio into auto-reset squelch mode and overrides the auto-reset timer.

Option	Functionality
Disabled	The Hook feature is completely inactive.
Timed	The **Auto Reset Timer** will be started when the radio goes Off Hook (Used when the microphone is left Off Hook, e.g. on the seat beside them.)
Permanent	The **Auto Reset Timer** is disabled while the radio is Off Hook.

Note

- This feature is supported in Analog mode only.

Volume Control

Description

If enabled, allows the volume to be controlled from both the radio and the accessory (if an accessory that supports volume control is attached to the radio). Otherwise, volume is controlled only from the accessory, if the accessory supports volume control. This is a radio-wide feature.

Ignition Sense

Description

Allows the Mobile to sense the car ignition status for the radio's power On/Off control. This can prevent the vehicle's battery from being discharged due to possible continuous use of the radio when the engine is not running. This is a radio-wide feature.

For MOTOTRBO Conventional radios:

Option	Functionality
Disable Ignition Off	The radio powers on by following the ignition sense or power button. The radio will power off by power button or Ignition Sense Auto Power Down Timer (min).
Follow Ignition Only	The radio powers on or off by following the ignition sense on/off. The radio's power button will be ignored.
On/Off Or Ignition	The radio powers on or off by following either the power On/Off button or ignition sense.
PTT Disabled	Loss of ignition sense disables the radio's Push-to-Talk (PTT) button.

For 3600 Trunking capable radios:

Option	Functionality
Disable Ignition Off	The radio powers on by following the ignition sense or power button. The radio will power off only by power button.
Follow Ignition Only	The radio powers on or off by following the ignition sense on/off. The radio's power button will be ignored.
On/Off Or Ignition	The radio powers on or off by following either the power On/Off button or ignition sense.
TX Inhibit	Activates the TX Inhibit feature when the radio senses that the ignition is off. The TX Inhibit feature prevents the radio from transmitting.

Ignition Sense Auto Power Down Timer (min)

Description

Sets the amount of minutes that the radio waits before automatically powering off. This is a radio-wide feature.

Range	
Maximum	840 min
Minimum	-0 min
Increment	1 min

Analog Accessory Mic AGC

Description

Controls the transmitting radio's rear microphone gain automatically. AGC stands for Automatic Gain Control and is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 6 dB) to a nominal value.

Notes

- Enabling this feature overrides the Analog Accessory Mic Gain feature.
- It is recommended to turn this feature on.
- This feature is applicable to 3600 Trunking capable radios only.

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Analog Accessory Mic Gain (dB)

Description

Defines the amplification of the accessory microphone of a Portable. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Conventional Range	
Maximum	45 dB
Minimum	-30 dB
Increment	1 dB

MOTOTRBO 2.0 Range	
Maximum	31 dB or 45 dB
Minimum	0 dB or -24 dB
Increment	1 dB

MOTOTRBO Light Range

Maximum	20 dB
Minimum	-18 dB
Increment	1 dB

Notes

- Depending on your MOTOTRBO 2.0 portable radio model, the maximum value for Analog Accessory Mic Gain (dB) can be 31 or 45.
- Depending on your MOTOTRBO 2.0 portable radio model, the minimum value for Analog Accessory Mic Gain (dB) can be 0 or -24.
- This feature is disabled and resets to the default value after you enable Analog Mic AGC.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- For MOTOTRBO Conventional radios, the effective VOX Sensitivity level increases with higher Analog Accessory Mic Gain values and decreases with lower Analog Accessory Mic Gain values.
- This feature is supported in Analog Mode only.

Digital Accessory Mic Gain (dB)

Description

Defines the amplification of the accessory microphone of a Portable. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

MOTOTRBO Range	
Maximum	45 dB
Minimum	-30 dB
Increment	1 dB

MOTOTRBO 2.0 Range	
Maximum	31 dB or 45 dB
Minimum	0 dB or -24 dB
Increment	1 dB

MOTOTRBO Light Range	
Maximum	20 dB
Minimum	-18 dB

Increment	1 dB

Notes

- Depending on your MOTOTRBO 2.0 portable radio model, the maximum value for Digital Accessory Mic Gain (dB) can be 31 or 45.
- Depending on your MOTOTRBO 2.0 portable radio model, the minimum value for Digital Accessory Mic Gain (dB) can be 0 or -24.
- This feature is disabled and resets to the default value after you enable Digital Mic AGC.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- The effective VOX Sensitivity level increases with higher Digital Accessory Mic Gain values and decreases with lower Digital Accessory Mic Gain values.
- This feature is supported in Digital mode only.

Handset

Description

Allows the user to communicate via a telephone-style handset connected to a radio's accessory port. When the handset is lifted (i.e. 'off hook'), the radio routes the received audio to the handset. Audio can only be heard through the handset until it is placed back on the cradle. This is a radio-wide feature.

Note

- This feature is **NOT** applicable to Trunking 3600, MOTOTRBO and MOTOTRBO 2.0.

Analog Front Mic AGC

Description

Controls the transmitting radio's front microphone gain automatically. AGC stands for Automatic Gain Control and is used to suppress loud audio (maximum suppression of 12 dB) or boost soft audio (maximum boost of 6 dB) to a nominal value.

Note

- Enabling this feature overrides the Analog Front Mic Gain feature.
- It is recommended to turn this feature on.
- This feature is applicable to 3600 Trunking capable radios only.

Analog Front Mic Gain (dB)

Description

Allows user to configure the Analog Front Mic Gain. This feature defines the amplification of the accessory microphone connected to the Mobile's front port. The audio level of the transmitting radio will

be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Notes

- This feature is disabled and resets to the default value after you enable Analog Mic AGC.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- For 3600 Trunking capable radios, enabling the Analog Front Mic AGC feature overrides this feature and resets its value to default.

Digital Front Mic Gain (dB)

Description

Defines the amplification of the accessory microphone connected to the Mobile's front port. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Note

- This feature is disabled and resets to the default value after you enable **Digital Mic AGC**.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- This feature is supported in Digital mode only.

Analog Front Mic Gain (dB)

Description

Defines the amplification of the accessory microphone connected to the Base Station's front port. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Note

- For MTR3000 base radio/repeater, enabling the Analog Mic AGC feature overrides this feature and resets its value to default.
- This feature is supported in Analog Mode only.

Analog Rear Mic Gain (dB)

Description

Defines the amplification of the accessory microphone connected to the Mobile's or Repeater's rear port. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

Range for MOTOTRBO Conventional Radios	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Range for MOTOTRBO 2.0 Radios	
Maximum	45 dB
Minimum	-24 dB
Increment	1 dB

Range for MOTOTRBO Light Radios	
Maximum	45 dB

Minimum	-15 dB
Increment	1 dB

Notes

- This feature is disabled and resets to the default value after you enable Analog Mic AGC.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- For 3600 Trunking capable radios, enabling the Analog Rear Mic AGC feature overrides this feature and resets its value to default.
- This feature is supported in Analog Mode only.

Digital Rear Mic Gain (dB)

Description

Defines the amplification of the accessory microphone connected to the radio rear port. The audio level of the transmitting radio will be amplified by this value. The user on the receiving radio can still adjust the speaker level. This is a radio-wide feature.

Range for MOTOTRBO Conventional Radios	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Range for MOTOTRBO 2.0 Radios	
Maximum	45 dB
Minimum	-24 dB
Increment	1 dB

Range for MOTOTRBO Light Radios	
Maximum	45 dB
Minimum	-15 dB
Increment	1 dB

Notes

- This feature is disabled and resets to the default value after you enable **Digital Mic AGC**.
- When configuring the mic gain for MOTOTRBO Conventional radios' Intelligent Audio, the workable range is +/-3dB of default mic gain. If the mic gain is set higher than 3dB of default mic gain, user will notice that the speaker volume is higher than normal. If mic gain is set lower than 3dB of default mic gain, user will notice the speaker volume is lower than normal, and if the mic gain is low enough (20 dB lower than default mic gain), user will notice the volume does not increase even if middle noise environment (98dB spl).
- This feature is supported in Digital mode only.

Analog Mic Gain (dB) (Bluetooth)

Description

Allows user to configure the Bluetooth Analog Mic Gain. This feature defines the amplification of the Bluetooth microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level.

Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Notes

- This feature is supported in Analog mode only.
- This feature is greyed-out when Permanent Discoverable is enabled.

Digital Mic Gain (dB) (Bluetooth)

Description

Allows user to configure the Bluetooth Digital Mic Gain. This feature defines the amplification of the Bluetooth microphone. The audio level of the transmitting radio will be amplified by this value. However, the user on the receiving radio can still adjust the speaker level.

Range	
Maximum	20 dB
Minimum	-20 dB
Increment	1 dB

Notes

- This feature is supported in Digital mode only.
- This feature is greyed-out when Permanent Discoverable is enabled.

Rx Audio Type

Description

Selects the configuration of the audio output line. This allows the user to determine the type of audio that is passed to the accessory connector from a Mobile. Different accessories such as modems or public address (PA) systems require different RX Audio types.

Option	Functionality
Filtered Squelch	Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL).
Filtered Unsquelch	Passes audio all the time regardless of the Squelch Type.
Flat Unsquelch	Passes audio all the time regardless of the Squelch Type and will also pass any low speed signaling tones (e.g. TPL) that are normally filtered out.
Flat Squelch	Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL) and will also pass any low speed signaling tones (e.g. TPL) that are normally filtered out.

Note

- Filtered audio only allows audio in the voice range to pass. This gives better voice audio quality compared to flat (unfiltered) audio. Therefore, for voice communication, set the **RX Audio Type** to a filtered audio option. For data communication, set the **RX Audio Type** to the *Flat Unsquelch* option.
- For MOTOTRBO and 3600 Trunking capable radios in Conventional mode, *Companding* and *Hear Clear* are not supported in **Audio Enhancement** if this feature is set to *Flat Unsquelch*.
- Starting from MOTOTRBO 2 radios, **Audio Enhancement** is disabled if this feature is set to *Flat Unsquelch*.
- This feature is supported in Analog mode only.

Data Revert Channel

Description

Allows the user to transmit and receive data on a designated channel. This channel is activated from an external data device connected through the radio's Accessory Connector. Any analog or 5 Tone channel can be the revert channel. The *Selected* option can be chosen if the user wishes to transmit data on the channel indicated by the radio's channel selector. This is a radio-wide feature.

Note

- The *Data Revert* pin selection must be assigned to a programmable input pin (**Pin #17, #19, #21, #20, #22 or #24**).
- This feature does not influence internal MOTOTRBO data applications (e.g. text messages and location updates). It only applies to accessories.
- This feature is supported in Analog mode only.

See Also

- GPIO Feature - *Data Revert Channel*.

Debounce Duration (ms)

Description

Defines how long a pin is asserted before the radio recognizes the press as a valid action prior to activating a feature. This is a radio-wide feature.

Range	
Maximum	375 ms
Minimum	0 ms
Increment	25 ms

See Also

- **Debounce**.

Cable Type

Description

The radio automatically detects an IMPRES™ cable type. If there are specialty applications which need to connect to a radio to perform a specific function, this feature allows the user to configure the connection type according to the cable used.

Option	Functionality
Motorola Solutions	The cable attached is an IMPRES™ cable (e.g. the cable used for programming the radio). This is the default setting.
Generic	When a cable is attached, the connector is configured to operate for external device (e.g. Option Board) to access the three programmable GPIO pins. The microphone and speaker will be muted. (applicable to Portable configuration only).
Multi-Button PTT	When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.
PC & Audio	When a cable is attached, the radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Portable configuration only) .
Data Accessory	When a cable is attached, the radio connection is configured to operate as a USB Device for Non-IP communications. The microphone and speaker will be muted. (applicable to Portable configuration only).
Telemetry	When a cable is attached, the connector is configured to operate for Telemetry function. The microphone and speaker will be muted. (applicable to Portable configuration only).

Front PC & Audio	When a cable is attached, the front radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Mobile configuration only).
Rear PC & Audio	When a cable is attached, the rear radio connection is configured to operate as a USB Device for IP and audio communications. (applicable to Mobile configuration only).
Front Data Accessory	When a cable is attached, the front radio connection is configured to operate as a USB Device for Non-IP communication. The microphone and speaker will be muted. (applicable to Mobile configuration only).
Rear Data Accessory	When a cable is attached, the rear radio connection is configured to operate as a USB Device for Non-IP communication. The microphone and speaker will be muted. (applicable to Mobile configuration only).

Note

- This feature must be configured correctly before connecting to the radio with a cable type other than an IMPRES™ cable. If there is a mismatch between this feature setting and the actual cable type used, damage to the attached hardware may occur.

Analog Accessory Emphasis

Description

Emphasis enhances audio clarity for higher frequencies by applying an audio filter to reduce noise in the radio signal. If *None* is selected, no filter is applied to the transmit and receive signals. Pre-emphasis (*Pre*) indicates the filtering of the transmit signal while De-emphasis (*De*) indicates the filtering of the receive signal.

Option	Functionality
None	Audio filtering is not applied to the transmit and receive signals.
De & Pre	Audio filtering is applied to both the transmit and receive signals.

Notes

- This feature is set to *None* and is unavailable if Audio Type is set to *Flat Unsquelch* in MOTOTRBO Repeaters/MOTOTRBO SLR series repeaters or *RX & TX Flat* in MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters.
- This feature is disabled if **Repeater Mode** is set to *Digital*.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters, and MTR3000 base radio/repeater in Analog mode only.

Audio Type

Description

This feature selects the configuration of the audio output line. This is used to determine the type of audio that is passed through.

For MOTOTRBO Conventional radios/MOTOTRBO SLR Series repeaters:

Option	Functionality
Filtered Squelch	Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL). For transmit signals, this is used for external mic data. For receive signals, this is required for console operators.
Flat Unsquelch	Passes audio all the time regardless of the Squelch Type, hence repeater is constantly unmuted. For transmit signals, this is used for low speed signal tones (e.g. PL data) that are normally filtered out. For receive signals, this is required for trunking controllers.

For MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters :

Option	Functionality
RX & TX Filtered Squelch	Passes audio that meets the unmute rule governed by Squelch Type (e.g. CSQ, TPL, DPL). For transmit signals, this is used for external mic data. For receive signals, this is required for console operators.
RX & TX Flat	Passes audio all the time regardless of the Squelch Type, hence repeater is constantly unmuted. For transmit signals, this is used for low speed signal tones (e.g. PL data) that are normally filtered out. For receive signals, this is required for trunking controllers.
RX Flat Only	Passes RX audio all the time regardless of the Squelch Type but filters the TX audio according to the unmute rule.
TX Flat Only	Passes TX audio all the time regardless of the Squelch Type but filters the RX audio according to the unmute rule.

Note

- Filtered audio only allows audio in the voice range to pass. This gives better voice audio quality compared to flat (unfiltered) audio. Therefore, for voice communication, set the **Audio Type** to the *Filtered Squelch* option. For data communication, set the **Audio Type** to the *Flat Unsquelch* option.
- The values for **Analog Accessory Emphasis** and **Emphasis** are set to *None*, and are both disabled when **Audio Type** is set to *Flat Unsquelch*.
- This feature is disabled if **Repeater Mode** is set to *Digital*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only and base radio/repeater.

TX Audio Priority (SLR Series)

Description

This droplist allows the user to configure the preempt priority of transmitting. Available values are *0* and *1*. The higher value means the higher the priority.

Range	
Maximum	1
Minimum	0
Increment	1

Notes

- This feature is disabled if the **Disable Repeat Path** feature is enabled.
- This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.

Repeat Audio Priority

Description

This droplist allows the user to configure the preempt priority of Repeating. Available values are 0 and 1. The higher value means the higher the priority.

Range	
Maximum	1
Minimum	0
Increment	1

Notes

- This feature is applicable to MOTOTRBO SLR Series repeaters in Analog mode only.
- This feature is disabled if the **Disable Repeat Path** feature is enabled.

Audio Priority (Conventional MOTOTRBO Repeaters)

Description

This feature determines which audio source has higher priority on the repeater when the Disable Repeat Path feature is disabled, and when GPIO Pins programmed with the Repeater Knockdown option is inactive. The repeater transmits the audio source identified as having higher priority when both a console and a radio key-up simultaneously.

Option	Functionality
External PTT	Transmissions from the console have higher priority than transmissions from the radio.
Repeat Path	Transmissions from the radio have higher priority than transmissions from the console.
None	Priority is on a first come first served basis.

Note

- This feature is disabled if the **Disable Repeat Path** feature is enabled.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.
- This feature is not supported for digital transmission in Dynamic Mixed Mode. Priority is on a first come first served basis.

FP TX Audio Priority

Description

This field determines the FP Tx Audio priority used for pre-emption.

Range	
Maximum	3
Minimum	0
Increment	1

Wireline TX Audio Priority

Description

This field determines the Tx Audio priority used for pre-emption.

Range	
Maximum	3
Minimum	0
Increment	1

Disable Repeat Path 

Description

This feature enables or disables the repeat functionality of the repeater. When this feature is enabled, a console or an external device controls when the repeater keys-up, hence turning the repeater into a base station. As a base station, the console operator then decides when to key-up the repeater's transmitter. This allows the console operator full control over the repeater's outbound traffic.

Notes

- The *Repeater Knockdown* pin selection is assigned to a programmable input pin (**Pin #17, #19, #20, #21, or #22**), and only disables the repeat path when the **Disable Repeat Path** feature is disabled.
- The **Audio Priority** feature is disabled when this feature is enabled.
- This feature is disabled when Repeater Mode is set to Digital.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.
- This feature is not supported for digital transmission in Dynamic Mixed Mode.

Digital Audio

Speaker Slot 

Description

On a repeater wide basis, the repeater provide the configuration for speakerphone to play back. Choices are *None*, *Audio Received on Slot #1, Audio Received on Slot #2*, and *Mix of Audio Received on Slot #1 & #2*.

Options	
0	None (digital audio receive at FP is de-activated)
1	Audio received on slot #1 (one of the two digital channels)
2	Audio received on slot #2, (another digital channel),
3	Mix of audio received on slot #1 & #2 (both digital channels

Microphone Slot 

Description

On a repeater wide basis, the repeater CPS shall provide the configuration to enable microphone audio. Choices are *Slot #1 and Slot #2*.

Options	
1	Transmitted on slot #1 (one of the two digital channels)
2	Transmitted on slot #2 (another digital channel)

Microphone Call Type

Description

This field is used to represent the microphone pre-configured call type. The call type specified by this field is used as the target call type. Choices are *Individual Call*, *Group Call,* and *All Call*.

Note

- Call Type could be set to All Call.
- Call Type can be set to *1* (Individual Call), *2* (Talkgroup Call) or *3* (All Call).

Microphone Call Target

Description

This field represents the pre-configured radio or talkgroup ID that is used by the repeater as the target address when a front panel microphone call is initiated. When the *Call Type* is set to *Individual Call* or *Talkgroup Call*, this field is configurable and must be filled correctly; However when the *Pre-configured Call Type* is set to *All Call*, this field should be non-configurable since the all call ID is fixed (0xFFFFFF in Single Site mode) and does not need manual configuration. That is, when *Pre-configured Call Type* is set to *All Call*, this field is ignored and the repeater sets the all call ID (0xFFFFFF in Single Site mode) correctly. The Call ID range in CPS is always 1 to 16,776,415 (0xFFFCDF).

Note

- When Microphone Call Type is set to *All Call*, this field cannot be editable.

Repeat Audio Priority

Description

Repeater shall assigned priority to (1) Repeat audio: audio originated from a subscriber in DMR voice call repeated by local repeater. (2) Emergency repeat audio: audio originated from a subscriber in DMR emergency voice call repeated by local repeater. (3) Local audio: audio originated from microphone.

Range	
Maximum	3
Minimum	0
Increment	1

Note

- The higher the number, the higher the priority.

Emergency Repeat Audio Priority

Description

Repeater shall assigned priority to (1) Repeat audio: audio originated from a subscriber in DMR voice call repeated by local repeater. (2) Emergency repeat audio: audio originated from a subscriber in DMR emergency voice call repeated by local repeater. (3) Local audio: audio originated from microphone.

Range	
Maximum	3
Minimum	0
Increment	1

Note

- The higher the number, the higher the priority.

Local Audio Priority

Description

Repeater shall assigned priority to (1) Repeat audio: audio originated from a subscriber in DMR voice call repeated by local repeater. (2) Emergency repeat audio: audio originated from a subscriber in DMR emergency voice call repeated by local repeater. (3) Local audio: audio originated from microphone.

Range	
Maximum	3
Minimum	0
Increment	1

Note

- The higher the number, the higher the priority.

GPIO Pins

Pin #2 Function Select (SLR1000)

Description

This droplist allows the user to select the functionality for Pin #8 (for SLR5000 and SLR8000) or Pin #2 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older

codeplugs, Pin #8 was known as GPIO Pin #6. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process.

	For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #2 Function Select 

Description

This droplist allows the user to select the functionality for Pin #2 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #2 was known as GPIO Pin #1. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #4 Function Select 

Description

This droplist allows the user to select the functionality for Pin #4 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #4 was known as GPIO Pin #2. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #5 Function Select (SLR1000)

Description

This droplist allows the user to select the functionality for Pin #10 (for SLR5000 and SLR8000) or Pin #5 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #10 was known as GPIO Pin #7. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #5 Function Select

Description

This droplist allows the user to select the functionality for Pin #5 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #5 was known as GPIO Pin #10. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #6 Function Select (SLR1000)

Description

This droplist allows the user to select the functionality for Pin #6 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #6 was known as GPIO Pin #9. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #6 Function Select (SLR5000 and SLR8000)

Description

This droplist allows the user to select the functionality for Pin #6 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #6 was known as GPIO Pin #9. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #8 Function Select (SLR1000)

Description

This droplist allows the user to select the functionality for Pin #23 (for SLR5000 and SLR8000) or Pin #8 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #23 was known as GPIO Pin #4. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #8 Function Select (SLR5000 and SLR8000)

Description

This droplist allows the user to select the functionality for Pin #8 (for SLR5000 and SLR8000) or Pin #2 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #8 was known as GPIO Pin #6. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #5 Function Select (SLR1000)

Description

This droplist allows the user to select the functionality for Pin #10 (for SLR5000 and SLR8000) or Pin #5 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #10 was known as GPIO Pin #7. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #10 Function Select (SLR5000 and SLR8000)

Description

This droplist allows the user to select the functionality for Pin #10 (for SLR5000 and SLR8000) or Pin #5 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #10 was known as GPIO Pin #7. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #11 Function Select

Description

This droplist allows the user to select the functionality for Pin #11 from the GPIO function choices. Data direction for the pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.

Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #12 Function Select

Description

This droplist allows the user to select the functionality for Pin #12 from the GPIO function choices. Data direction for the pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.

Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #15 Function Select

Description

This droplist allows the user to select the functionality for Pin #15 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #15 was known as GPIO Pin #3. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #21 Function Select

Description

This droplist allows the user to select the functionality for Pin #21 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #21 was known as GPIO Pin #8. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #23 Function Select (SLR5000 and SLR8000)

Description

This droplist allows the user to select the functionality for Pin #23 (for SLR5000 and SLR8000) or Pin #8 (for SLR1000) from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #23 was known as GPIO Pin #4. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #24 Function Select

Description

This droplist allows the user to select the functionality for Pin #24 from the GPIO function choices. Data direction for the pin is input only. In older codeplugs, Pin #24 was known as GPIO Pin #5. For configuration of the physical pins, refer to Rear Accessory Pins.

Option	Functionality
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Channel Select 6	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater.
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Unassigned	No functionality is assigned to the pin.

Notes

- The pin options are model dependent.
- This feature is for MOTOTRBO SLR Series repeaters only.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #2 and Pin #11 Function Select

Description

This feature selects the radio accessory or functionality for Pin #2 and Pin #11. The data direction for these pins is input only. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).

TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #3 Function Select 

Description

Selects the radio accessory or functionality for Pin #3. Data direction for the pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #3 was known as GPIO Pin #1.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off	This is an input line used to indicate that the microphone is “off hook”, similar to

Hook	the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/ DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
Respond Inhibit	This is an input line where it allows user to place the radio in a state (through a button press) whereby the radio will not generate any outgoing transmissions in response to unsolicited incoming transmissions. This includes not transmitting back to "Radio Check", "Radio Monitor", "Radio Disable", "Confirmed Private Calls", "Confirmed Text Messages", and so forth. In this state, the user will still be able to initiate outgoing transmissions manually (for example, voice transmissions and text messages).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio's audio even though the radio has met all the unmuting conditions (applicable to Analog mode).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality.
Generic Input 5	Refer to *Generic Input 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #4 Function Select

Description

This feature selects the radio accessory or functionality for Pin #4. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Side Accessory Pins. In older codeplugs, Pin #4 was known as GPIO Pin #1.

Option	Functionality
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Multi-Button PTT	When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Unassigned	No functionality is assigned to the pin.

Notes

- For the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #4 Function Select

Description

This feature selects the radio accessory or functionality for Pin #4. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.

Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #4 Function Select 

Description

Selects the radio accessory or functionality for Pin #4. Data direction for the pin is output only. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #4 was known as GPIO Pin #2.

Option	Functionality
Ext Alarm/Horn & Lights	This is an output line to toggle the external alarm (horn or/and lights). The alarm is used to inform user using the horn or/and lights if there is an incoming call alert/private call when the user is not in their vehicle.
PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality.
Generic Output 5	Refer to *Generic Output 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #5 Function Select

Description

This feature selects the radio accessory or functionality for Pin #5. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).

PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment. Note that this line does not work when the Active Level is Low (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #6 Function Select 

Description

Selects the radio accessory or functionality for Pin #6. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #6 was known as GPIO Pin #3.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and Transmit Inhibit on Busy can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is off hook, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/ DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice

	or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
Respond Inhibit	This is an input line where it allows user to place the radio in a state (through a button press) whereby the radio will not generate any outgoing transmissions in response to unsolicited incoming transmissions. This includes not transmitting back to "Radio Check", "Radio Monitor", "Radio Disable", "Confirmed Private Calls", "Confirmed Text Messages", and so forth. In this state, the user will still be able to initiate outgoing transmissions manually (for example, voice transmissions and text messages).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radios audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.

Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality.
Generic Input 5	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality.
Generic Output 5	Refer to *Generic Output 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #8 and Pin #25 Function Select

Description

This feature selects the radio accessory or functionality for Pin #8 and Pin #25. The data direction for these pins can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).

Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.

FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #8 Function Select

Description

Selects the radio accessory or functionality for Pin #8. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #8 was known as GPIO Pin #4.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).

CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/ DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
Respond Inhibit	This is an input line where it allows user to place the radio in a state (through a button press) whereby the radio will not generate any outgoing transmissions in response to unsolicited incoming transmissions. This includes not transmitting back to "Radio Check", "Radio Monitor", "Radio Disable", "Confirmed Private Calls", "Confirmed Text Messages", and so forth. In this state, the user will still be able to initiate outgoing transmissions manually (for example, voice transmissions and text messages).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor

	any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality.
Generic Input 5	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality.
Generic Output 5	Refer to *Generic Output 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this

causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #9 Function Select

Description

This feature selects the radio accessory or functionality for Pin #9. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Side Accessory Pins. In older codeplugs, Pin #9 was known as GPIO Pin #3.

Option	Functionality
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #10 and Pin #12 Function Select

Description

This feature selects the radio accessory or functionality for Pin #10 and Pin #12. The data direction for these pins can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode).

PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #5 Function Select

Description

Selects the radio accessory or functionality for Pin #5. Data direction for the pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #5 was known as GPIO Pin #2.

- MOTOTRBO Conventional radios GPIO Pin #5 options
- 3600 Trunking capable radios GPIO Pin #5 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio any present on the Ext Mic input line. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode, Repeater configuration only).

Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected. In Dynamic Mixed Mode (applicable to repeater only), the user is able to listen to the analog traffic. However, for digital traffic, the repeater will emit audible alert tone on speaker and Rx audio accessory pins, but it will not unmute to the actual voice or data traffic in process.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
Multi-Button PTT	When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio's audio even though the radio has met all the unmuting conditions (applicable to Analog mode).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode and Dynamic Mixed mode, Repeater configuration only). **Note**: In Dynamic Mixed mode, this feature is not supported during an ongoing digital transmission.
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).

FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).

Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #12 Function Select

Description

This feature selects the radio accessory or functionality for Pin #12. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Side Accessory Pins. In older codeplugs, Pin #12 was known as GPIO Pin #4.

Option	Functionality
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Multi-Button PTT	When a cable is attached, the MB_PTT (active) causes the radio to change to a specified channel and assert the PTT. In other words, one button press on the accessory triggers a Channel Change and PTT. This choice is hidden when the Multi-Button PTT feature is disabled.
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #12 Function Select

Description

Selects the radio accessory or functionality for Pin #12. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #12 was known as GPIO Pin #7.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/ DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.

Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality.

Generic Input 5	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality.
Generic Output 5	Refer to *Generic Output 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #14 Function Select

Description

Selects the radio accessory or functionality for Pin #14. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #14 was known as GPIO Pin #8.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has

	keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/ DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality.
Generic Input 5	Refer to *Generic Input 1* functionality.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality.
Generic Output 5	Refer to *Generic Output 1* functionality.
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #15 Function Select

Description

This feature selects the radio accessory or functionality for Pin #15. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode).
PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.

Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #17 Function Select

Description

Selects the radio accessory or functionality for Pin #17. Data direction for the pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #17 was known as GPIO Pin #1.

- MOTOTRBO Conventional radios GPIO Pin #17 options
- 3600 Trunking capable radios GPIO Pin #17 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio any present on the Ext Mic input line. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode, Repeater configuration only).

Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected. In Dynamic Mixed Mode (applicable to repeater only), the user is able to listen to the analog traffic. However, for digital traffic, the repeater will emit audible alert tone on speaker and Rx audio accessory pins, but it will not unmute to the actual voice or data traffic in process.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio's audio even though the radio has met all the unmuting conditions (applicable to Analog mode).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode and Dynamic Mixed mode, Repeater configuration only). **Note**: In Dynamic Mixed mode, this feature is not supported during an ongoing digital transmission.
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).

Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.

Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio's audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #19 Function Select 

Description

Selects the radio accessory or functionality for Pin #19. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #19 was known as GPIO Pin #2.

- MOTOTRBO Conventional radios GPIO Pin #19 options
- 3600 Trunking capable radios GPIO Pin #19 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and Transmit Inhibit on Busy can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode only).
	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).

Ext Mic Off Hook	This is an input line used to indicate that the microphone is off hook, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
	This is an input line, that when activated, will disable the internal repeater master functionality. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radios audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred. (applicable to Repeater configuration only).
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure (applicable to Repeater configuration only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).

Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).

Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is off hook, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radios audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #20 Function Select

Description

Selects the radio accessory or functionality for Pin #20. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #20 was known as GPIO Pin #6.

- MOTOTRBO Conventional radios GPIO Pin #20 options
- 3600 Trunking capable radios GPIO Pin #20 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode only).
	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).

Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
	This is an input line, that when activated, will disable the internal repeater master functionality. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred (applicable to Repeater configuration only).
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure (applicable to Repeater configuration only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).

Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data

	to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #21 Function Select

Description

Selects the radio accessory or functionality for Pin #21. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #21 was known as GPIO Pin #3.

- MOTOTRBO Conventional radios GPIO Pin #21 options
- 3600 Trunking capable radios GPIO Pin #21 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel (applicable to Mobile configuration only). See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 3	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 4	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 5	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and Transmit Inhibit on Busy can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode, Mobile configuration only). This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode, Mobile configuration only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode, Mobile configuration only).

Ext Mic Off Hook	This is an input line used to indicate that the microphone is off hook, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan (applicable to Mobile configuration only).
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons (applicable to Mobile configuration only).
	This is an input line, that when activated, will disable the internal repeater master functionality. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Mobile configuration only).
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode, Mobile configuration only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radios audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode, Mobile configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode, Mobile configuration only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred (applicable to Repeater configuration only).
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure (applicable to Repeater configuration only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).

Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.

Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is off hook, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radios audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #21 Function Select

Description

This feature selects the radio accessory or functionality for Pin #21. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).

PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #22 Function Select

Description

Selects the radio accessory or functionality for Pin #22. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #22 was known as GPIO Pin #7.

- MOTOTRBO Conventional radios GPIO Pin #22 options
- 3600 Trunking capable radios GPIO Pin #22 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode only).
	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).

Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
	This is an input line, that when activated, will disable the internal repeater master functionality. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the analog channel regardless of PL/DPL codes (applicable to Analog mode, Repeater configuration only).
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode, Repeater configuration only).
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred. (applicable to Repeater configuration only).
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure (applicable to Repeater configuration only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).

Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data

	to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).
Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #23 Function Select

Description

This feature selects the radio accessory or functionality for Pin #23. The data direction for this pin is input only. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).

TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.
- This feature is applicable to MTR3000 only.

Pin #24 Function Select

Description

Selects the radio accessory or functionality for Pin #24. Data direction for the pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #24 was known as GPIO Pin #8.

- MOTOTRBO Conventional radios GPIO Pin #24 options
- 3600 Trunking capable radios GPIO Pin #24 options

For MOTOTRBO Conventional radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode only).

CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected.
PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and the radio's Unmute Rule is satisfied on the channel.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Analog mode only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.

Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).
Generic Input 1	This input line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Input 2	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 3	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.

For 3600 Trunking capable radios:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
Channel Select 5	Refer to *Channel Select 1* functionality.
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Conventional mode only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Conventional mode only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons.
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of TX Admit Criteria is selected (applicable to Conventional mode only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Conventional mode only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all the unmuting conditions (applicable to Conventional Analog mode only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Conventional mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Conventional mode only).

Unassigned	No functionality is assigned to the pin.

Note

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Pin #24 Function Select

Description

This feature selects the radio accessory or functionality for Pin #24. The data direction for this pin can be input or output. For configuration of the physical pins, refer to Rear Accessory Pins (MTR3000).

Option	Functionality
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
Enable/Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined

	with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
PL Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting.
Unassigned	No functionality is assigned to the pin.

Note

- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this

condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

- This feature is applicable to MTR3000 only.

Pin #26 Function Select

Description

Selects the radio accessory or functionality for Pin #26. Data direction for the pin is output only. For configuration of the physical pins, refer to Rear Accessory Pins. In older codeplugs, Pin #26 was known as GPIO Pin #10.

Option	Functionality
Ext Alarm/Horn & Lights	This is an output line to toggle the external alarm (horn or/and lights). The alarm is used to inform user using the horn or/and lights if there is an incoming call alert/private call when the user is not in their vehicle.
PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature.
Generic Output 1	This output line allows for status indication to the option board and level switching from the option board (applicable to Mobile configuration only).
Generic Output 2	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 3	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.

Note

- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

Feature

Description

Assigns a specific function to a General Programmable Input Output (GPIO) pin. It also sets the GPIO pin to Input or Output based on the function assigned to that pin.

- MOTOTRBO Conventional Radios GPIO Pin Options
- 3600 Trunking Capable Radios GPIO Pin Options
- MTR3000 GPIO Pin Options
- MOTOTRBO SLR Series Repeaters

For MOTOTRBO Conventional Radios GPIO Pin Options:

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel (applicable to Mobile and Repeater configuration only). See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality (applicable to Mobile and Repeater configuration only).
Channel Select 3	Refer to *Channel Select 1* functionality (applicable to Mobile and Repeater configuration only).
Channel Select 4	Refer to *Channel Select 1* functionality (applicable to Mobile and Repeater configuration only).
Channel Select 5	Refer to *Channel Select 1* functionality (applicable to Mobile and Repeater configuration only).
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode, Mobile configuration only).
CSQ Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier on the current channel (applicable to Analog mode, Mobile configuration only).
	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode, Repeater configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode, Mobile configuration only).

Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode, Mobile configuration only). See also **Data Revert Channel**.
Ext Alarm/Horn & Lights	This is an output line used to inform user using the horn or/and lights if there is an incoming call alert/private call when the user is not in their vehicle (applicable to Mobile configuration only). See also **Alarm (Horn & Lights)**.
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan (applicable to Mobile configuration only).
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons (applicable to Mobile configuration only).
	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio any present on the Ext Mic input line. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode, Repeater configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of **TX Admit Criteria** is selected (applicable to Mobile configuration only). In Dynamic Mixed Mode (applicable to repeater only), the user is able to listen to the analog traffic. However, for digital traffic, the repeater will emit audible alert tone on speaker and RX audio accessory pins, but it will not unmute to the actual voice or data traffic in process.
	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the RX signal (applicable to Analog mode, Repeater configuration only).
Multi-Button PTT	This is an input line used to transmit. GPIO Physical Pins (Pin#4, Pin#5 and Pin#12 in the CPS) are used for Multi Button PTT feature. If one of the pins is not configured as Multi Button PTT, this feature cannot work. The active state of PIN#4,#5,#12 act as index of Multi Button PTT revert channel (from 1 to 7). This choice is hidden when the Multi-Button PTT feature is disabled.
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).

PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature (applicable to Mobile configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode, Mobile configuration only).
Response Inhibit	This is an input line where it allows user to place the radio in a state (through a button press) whereby the radio will not generate any outgoing transmissions in response to unsolicited incoming transmissions. This includes not transmitting back to "Radio Check", "Radio Monitor", "Radio Disable", "Confirmed Private Calls", "Confirmed Text Messages", and so forth. In this state, the user will still be able to initiate outgoing transmissions manually (for example, voice transmissions and text messages).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio's audio even though the radio has met all of the unmute conditions (applicable to Analog mode, Mobile configuration only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode, Mobile configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode, Mobile and Repeater configuration only).
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode and Dynamic Mixed Mode, Repeater configuration only). **Note**: In Dynamic Mixed mode, this feature is not supported during an ongoing digital transmission.
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio. See also Configuring Telemetry Messages.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Antenna Relay	This is an output line that, when activated, waits for the Antenna Relay Delay Timer to expire. It then enables a repeater with a single antenna performing as a base station to transmit (applicable to Repeater configuration only).

Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred. (applicable to Repeater configuration only).
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure (applicable to Repeater configuration only).
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state (applicable to Repeater configuration only).
Reset	This is an input line, that when activated, resets the repeater (applicable to Repeater configuration only).
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level (applicable to Repeater configuration only).
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	The Option Board Accessory Connector Control provides a generic interface at the Mobile rear connector for Option Board in MOTOTRBO Mobiles operating in Analog or Digital mode to control and monitor the attaching third party data communication module. This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	The Option Board Accessory Connector Control provides a generic interface at the Mobile rear connector for Option Board in MOTOTRBO Mobiles operating in Analog or Digital mode to control and monitor the attaching third party data communication module. This output line allows for status indication to the option board and level switching from the option board.

Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.
5 Tone Decoder Output Control	This is an output line that is asserted or deasserted based on the Decoder Output Control options programmed in the radio upon successful decoding of a telegram sequence (available when the 5 Tone feature is enabled in the device).
5 Tone Call 1	This is an output line, that when activated, sends the telegram as configured for Call buttons (Call 1, Call 2, Call 3, Call 4, Call 5 and Call 6). The same telegram is sent when Call 1 button is pressed (available when the 5 Tone feature is enabled in the device).
5 Tone Call 2	Refer to *5 Tone Call 1* functionality.
5 Tone Call 3	Refer to *5 Tone Call 1* functionality.
5 Tone Call 4	Refer to *5 Tone Call 1* functionality.
5 Tone Call 5	Refer to *5 Tone Call 1* functionality.
5 Tone Call 6	Refer to *5 Tone Call 1* functionality.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).

For 3600 Trunking Capable Radios GPIO Pin Options:

Option	**Functionality**
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel (applicable to Mobile configuration only). See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).

Channel Select 3	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 4	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 5	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Mobile configuration only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Mobile configuration only). See also **Data Revert Channel**.
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan (applicable to Mobile configuration only).
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons (applicable to Mobile configuration only).
Monitor	This is an input line that allows the user to monitor a channel. The user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of **TX Admit Criteria** is selected.
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Mobile configuration only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all of the unmute conditions (applicable to Analog mode, Mobile configuration only).
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Mobile configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Mobile configuration only).
Unassigned	No functionality is assigned to the pin.

For MTR3000 GPIO Pin Options:

Option	Functionality
CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Monitor	This is an input line that allows the user to monitor an analog channel by putting the receiver into Carrier Squelch mode (applicable to Analog mode only).
PL/Talkgroup Detect	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater.
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.
Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Enable/Disable	
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box.

FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Wireline Mute	This is an output line, that when activated, indicates if a particular personality (channel) is actively transmitting. Note that the actual channel mapping of this particular GPIO function is perform within the “Channels” field of the CPS. For information regarding the use of the “Wireline Mute” function for the support of Tn-nR systems, please see the Appendix section within the MTR3000 Basic Service Manual regarding Tn-nR systems.
Unassigned	No functionality is assigned to the pin.

Notes

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines. To map the CPS pin numbers to the Mobile pin numbers, see Rear Accessory Pins.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

For MOTOTRBO SLR Series Repeaters GPIO Pin Options:

Option	**Functionality**
AC Power Failure	Allows user to enable/disable the AC Power Failure. When it is enabled, repeater shows the alarm related to the AC failure.
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel (applicable to Mobile configuration only). See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 3	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 4	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 5	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).
Channel Select 6	Refer to *Channel Select 1* functionality (applicable to Mobile configuration only).

CSQ Detect	This is an output line that indicates to the user when an RX signal is present (applicable to Analog mode only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode).
Data PTT	This is an input line used for data transmission from a device connected to a radio to another radio or device. When the device that is connected to the radio wants to send data over the air, for instance, MDC data or GNSS coordinates, it triggers the *Data PTT* before it sends the data to the radio which in turn transmits the data over the air to the target radio or another device (applicable to Analog mode, Mobile configuration only). **Overrides Voice**
TOC / Reverse Burst Disable	This is an input line used to inhibit the transmission of the TPL Reverse Burst or the DPL Turn-Off Code (applicable to Analog mode, Mobile configuration only).
Ext Mic Off Hook	This is an input line used to indicate that the microphone is “off hook”, similar to the HUB (hook switch) in the internal microphone. The hook feature can be used to defeat PL/DPL and to suspend scan (applicable to Mobile configuration only).
Request To Send	This is an input line for initiating a data call from an external device and in doing so, the radio transmits without sending sub-audible signaling, i.e. the following are disabled: PL encode, Reverse Burst/TOC, and PTT ID (applicable to Analog mode, Mobile configuration only).
Clear To Send	This is an output line used for indicating to an external modem that the radio has keyed up and data transmission may begin. This feature is useful because the line will not be asserted until audible transmission can really take place. MDC side-tones and “Transmit Inhibit on Busy” can result in delayed or blocked channel access (applicable to Analog mode, Mobile configuration only).
Data Revert	This is an input line used for predefining an alternative channel to be used during data transmission (applicable to Analog mode, Mobile configuration only). See also **Data Revert Channel**.
Ext Mic PTT	This is an input line used for voice transmission via an external microphone with Push-to-Talk (PTT) buttons (applicable to Mobile configuration only).
	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio any present on the Ext Mic input line. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode, Repeater configuration only).
RX Audio Mute	This is an input line that, when activated, will mute the receiving radio’s audio even though the radio has met all of the unmute conditions (applicable to Analog mode, Mobile configuration only).
Monitor	This is an input line that allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to *Always*. A channel cannot be monitored if any other value of **TX Admit Criteria** is selected (applicable to Mobile configuration only). In Dynamic Mixed Mode (applicable to repeater only), the user is able to listen to the analog traffic. However, for digital traffic, the repeater will emit audible alert tone on speaker and RX audio accessory pins, but it will not unmute to the actual voice or data traffic in process.

	This is an input line that allows the user to monitor an analog channel. The repeater will unmute to the RX signal (applicable to Analog mode, Repeater configuration only).
PL/Talkgroup Detect	This is an output line used for permitting an output to be activated when the radio is receiving carrier and radio's Unmute Rule has been satisfied on the channel (applicable to Mobile configuration only).
	This is an output line that indicates to the user whether the PL/DPL codes received on the channel match those configured in the repeater (applicable to Repeater configuration only).
Unassigned	No functionality is assigned to the pin.
Ext Alarm/Horn & Lights	This is an output line used to inform user using the horn or/and lights if there is an incoming call alert/private call when the user is not in their vehicle (applicable to Mobile configuration only). See also **Alarm (Horn & Lights)**.
PA Relay	This is an output line to toggle the power supply of external speakers to on/off for the public address (PA) feature (applicable to Mobile configuration only).
Telemetry VIO 1	This line can be an input or output line depending on the configuration in radio. Setting the input or output capability on this line allows the user to control and monitor it's own pin or another radio's pin, which in turn can control and monitor any external hardware that is attached to the radio. See also Configuring Telemetry Messages.
Telemetry VIO 2	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 3	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 4	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Telemetry VIO 5	Refer to *Telemetry VIO 1* functionality. This is another line that can be configured as Telemetry VIO.
Repeater Knockdown	This is an input line, that when activated, will disable the internal repeat path of the repeater for as long as the pin is activated. An external device can then control when the repeater keys-up (applicable to Analog mode only).
Antenna Relay	When the radio is operating as a Base Station (instead of as a Repeater), an antenna relay may be employed to share the antenna between the receiver and transmitter connectors. When the radio is in the receive mode, the Antenna Relay pin is set to an "INACTIVE" signal condition and the antenna relay is deactivated. When transitioning to the transmit state, the Antenna Relay pin is set to an "ACTIVE" signal condition, the antenna relay is activated and after a short delay the repeater/base station will begin transmitting.
Major Alarm	This is an output line that is activated by a repeater when it enters a locked state after three instances of major hardware failure have occurred.
Minor Alarm	This is an output line, that is activated by a repeater when it is reporting an alarm triggered by minor hardware failure.

Disable	This is an input line, that when activated, disables the repeater. When this is de-activated, the repeater is re-enabled. Note that the repeater will reset before changing its state.
Reset	This is an input line, that when activated, resets the repeater.
TX Power Level High	This is an input line, that when activated, sets the repeater to use the high power level for TX transmission. When de-activated, the repeater uses the low power level for TX transmission. Note that the repeater will reset before changing its TX power level.
FCC Type 2 Monitor	This is an input line, that when activated, prevents the repeater from keying up and from repeating inbound calls in a IP Site Connect environment (applicable to Repeater configuration only).
External PTT	This is an input line, that when activated, will key the repeater and cause the repeater to transmit audio present on the TX pins of the J7 backplane connector. PTT priority is determined by the Audio Priority setting in CPS (applicable to Analog mode only).
Football Knockdown	This is an input line, that when activated, disables the receive and transmit operations of the repeater for as long as the pin is activated. CWID will not be transmitted while this option line is active (applicable to Single Site Digital mode, Repeater configuration only).
Generic Input 1	The Option Board Accessory Connector Control provides a generic interface at the Mobile rear connector for Option Board in MOTOTRBO Mobiles operating in Analog or Digital mode to control and monitor the attaching third party data communication module. This input line allows for status indication to the option board and level switching from the option board.
Generic Input 2	Refer to *Generic Input 1* functionality.
Generic Input 3	Refer to *Generic Input 1* functionality.
Generic Input 4	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 5	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Input 6	Refer to *Generic Input 1* functionality (applicable to Mobile configuration only).
Generic Output 1	The Option Board Accessory Connector Control provides a generic interface at the Mobile rear connector for Option Board in MOTOTRBO Mobiles operating in Analog or Digital mode to control and monitor the attaching third party data communication module. This output line allows for status indication to the option board and level switching from the option board.
Generic Output 2	Refer to *Generic Output 1* functionality.
Generic Output 3	Refer to *Generic Output 1* functionality.
Generic Output 4	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 5	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).
Generic Output 6	Refer to *Generic Output 1* functionality (applicable to Mobile configuration only).

5 Tone Decoder Output Control	This is an output line that is asserted or deasserted based on the Decoder Output Control options programmed in the radio upon successful decoding of a telegram sequence (available when the 5 Tone feature is enabled in the device).
5 Tone Call 1	This is an output line, that when activated, sends the telegram as configured for Call buttons (Call 1, Call 2, Call 3, Call 4, Call 5 and Call 6). The same telegram is sent when Call 1 button is pressed (available when the 5 Tone feature is enabled in the device).
5 Tone Call 2	Refer to *5 Tone Call 1* functionality.
5 Tone Call 3	Refer to *5 Tone Call 1* functionality.
5 Tone Call 4	Refer to *5 Tone Call 1* functionality.
5 Tone Call 5	Refer to *5 Tone Call 1* functionality.
5 Tone Call 6	Refer to *5 Tone Call 1* functionality.
Carrier Operated Relay	This is an output line to the Analog Phone Patch box that is activated whenever the Repeater starts transmission to the Analog Phone Patch box and deactivated whenever the Repeater ends transmission to the Analog Phone Patch box (applicable to Repeater configuration only).
TX PL Inhibit	This is an input line that, when activated, will inhibit the transmission of sub-audible signaling (applicable to Analog mode, Mobile and Repeater configuration only).

Notes

- For MOTOTRBO Conventional radios, for the Telemetry feature, the user needs to assign Telemetry VIO to GPIO lines. To map the CPS pin numbers to the Mobile pin numbers, refer to Rear Accessory Pins.
- The pin options are model dependent.
- There is an internal pull-up resistor that pulls the input line high if no external equipment is connected to that line. In this situation, when the Active Level of the input line is set to High, this causes the event assigned to the input line to be triggered on power up of the radio. Avoid this condition on input lines that are not connected to any external equipment by setting the Active Level to Low instead.

See Also

- Active Level.
- Debounce.

Active Level

Description

This is a programmable option that sets a pin's voltage level to *High* or *Low* in order to trigger a selected functionality.

Active Level 02

Description

This is a programmable option that sets the pin's voltage level from *High,* or *Low* for pin #5, in order to trigger a selected functionality. This is for MOTOTRBO 2.0 portable radios only.

Debounce

Description

If this feature is enabled, the General Programmable Input Output (GPIO) pin must remain active for the duration set in the Accessories **Debounce Duration** feature before the selected function is activated. This is a radio-wide feature.

Debounce 02

Description

This checkbox allows the user to disable the debounce for pin #5. If this feature is enabled, the pin must remain active for the duration set in the Accessories **Debounce Duration** feature before the selected function is activated. This is a radio-wide feature. This is for MOTOTRBO 2.0 portable radios only.

GNSS Report

Description

CPS allows you to enable or disable triggering a GNSS Report for each GPIO line. If the radio receives an LRRP request for GPIO pin status change condition, an LRRP report will be sent to the originator of the LRRP request if the following conditions are met:when the GNSS Report checkbox is enabled and when the active level is triggered.

To enable GNSS report, the GPIO pin must be set as *Generic Input* or *Telemetry VIO* and the telemetry action is set as an output command (output command indicates that the Telemetry VIO is an input pin). For portable radios, the user can only enable the GNSS Report when the cable type is set as *Generic Cable* or *Telemetry Cable* or *Motorola Solutions Cable* for Telemetry.

For more information about setting GPIO pin as *Telemetry VIO*, refer to Configuring Telemetry Messages.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #12

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #12.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #17

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #17.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #4

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #4.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #5

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #5.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #8

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #8.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #9

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #9.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #19

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #19.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #20

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #20.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #9

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #9.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #12

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #12.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #21

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #21.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #22

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #22.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #24

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #24.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

GNSS Report #26

Description

This checkbox allows the user to enable or disable the GNSS Report for pin #26.

Note

- This feature is greyed out when the value of the corresponding feature field is set to a value other than *Telemetry VIO 1* to *Telemetry VIO 5* or *Generic Input 1* to *Generic Input 6*.

Rear Accessory Pins (MOTOTRBO and MOTOTRBO 2.0 Radios)

Pin No.	Pin Name	CPS Programmable	Pin Function
1	D+	No	USB + (Data)
2	D-	No	USB - (Data)
3	Vbus	No	USB Power (5V from USB accesory/cable)
4	USB / MAP_ID Ground	No	USB/MAP_ID Ground
5	MAP_ID_2	No	Accessory Identifier
6	MAP_ID_1	No	Accessory Identifier
7	SW B+	No	Switched Battery Voltage
8	Power Ground	No	Ground
9	Spkr-	No	Speaker - (3.2 ohm minimum impedance)
10	Spkr+	No	Speaker + (3.2 ohm minimum impedance)
11	TX Audio	No	Rear External Microphone Input[4]
12	Audio Ground	No	Audio Ground

Pin No.	Pin Name	CPS Programmable	Pin Function
14	Rx Audio	No	Receive Live Audio [2]
15	Aux Audio Out 2 / TxD	No	PUBLIC Address 2
16	Ground	No	Ground
17	GP5_1	Yes	5V Level GPIO, PTT Input [1]
18	Ground	No	Ground
19	GP5_2	Yes	5V Level GPIO, Monitor Input [3]
20	GP5_6	Yes	5V Level GPIO
21	GP5_3	Yes	5V Level GPIO, Channel Activity Function
22	GP5_7	Yes	5V Level GPIO
23	Emerg Sw	No	Emergency Switch Input
24	GP5_8	Yes	5V Level GPIO
25	Ign Sense	No	Ignition Sense [5]

13	Aux Audio Out 1 / RxD	No	PUBLIC Address 1		26	VIP_ 1	Yes	12V Tolerant, External Alarm

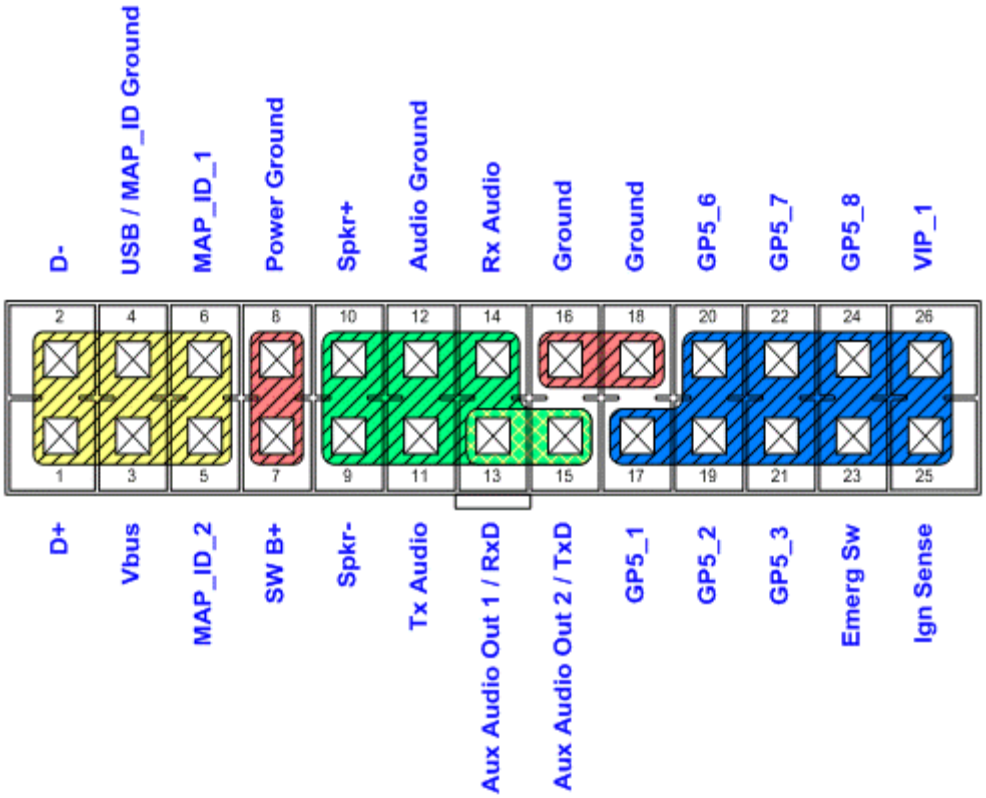
[1] *Activating the PTT function will also activate the AUX_MIC input.*

[2] *This input has a fixed level (independent of volume level) for received audio signal, including alert tones. Output voltage is approximately 330 mVrms per 1kHz of deviation.*

[3] *This input can be used to detect when a microphone is taken off-hook.*

[4] *The nominal input level is 80mVrms for 60% deviation. The DC impedance is 660 ohms and the AC impedance is 560 ohms.*

[5] *Refer to the Radio Installation (Dash Mount) and Cabling Interconnect Diagram for Dash Mount diagrams in the MOTOTRBO Mobile Installation Guide for wiring information.*



Pin Configuration of the Rear Accessory Connector (as viewed from the rear of the radio)

Rear Accessory Pins (MOTOTRBO Light Radios)

MOTOTRBO Light Mobile (Standard Models)

Pin No.	Pin Name	Pin Function
1	Speaker-	Speaker - (3.2 ohm minimum impedance)
2	Ext Mic Audio	Rear External Microphone Input[4]
3	GPI_1 (PTT)	5V Level GPIO, PTT Input [1]
4	VIP_1 (Ext Alarm)	12V Supply, External Alarm
5	Flat TX Audio	Data Input [3]
6	UART CTS	Motorola Internal Use Only[7]
7	Ground	Ground
8	GPIO_4	5V Level GPIO
9	Emergency SW	Emergency Switch Input
10	Ignition Sense	Ignition Sense Input[6]

Pin No.	Pin Name	Pin Function
11	RX Audio	Receive Live Audio[2]
12	GPIO_7	5V Level GPIO
13	SWB+	Switched Battery Voltage
14	GPIO_8	5V Level GPIO
15	RSSI	Receive Signal Strength Indicator[5]
16	Speaker+	Speaker + (3.2 ohm minimum impedance)
17	UART TX	Motorola Internal Use Only[7]
18	UART RX	Motorola Internal Use Only[7]
19	UART RTS	Motorola Internal Use Only[7]
20	Ground	Ground

[1] *Pulling this line to ground activates the Ext Mic Audio input.*

[2] *This input has a fixed level (independent of volume level) for received audio signal, including alert tones. Flat or de-emphasis are programmed by CPS. Output voltage is approximately 330 mVrms per 1kHz of deviation.*

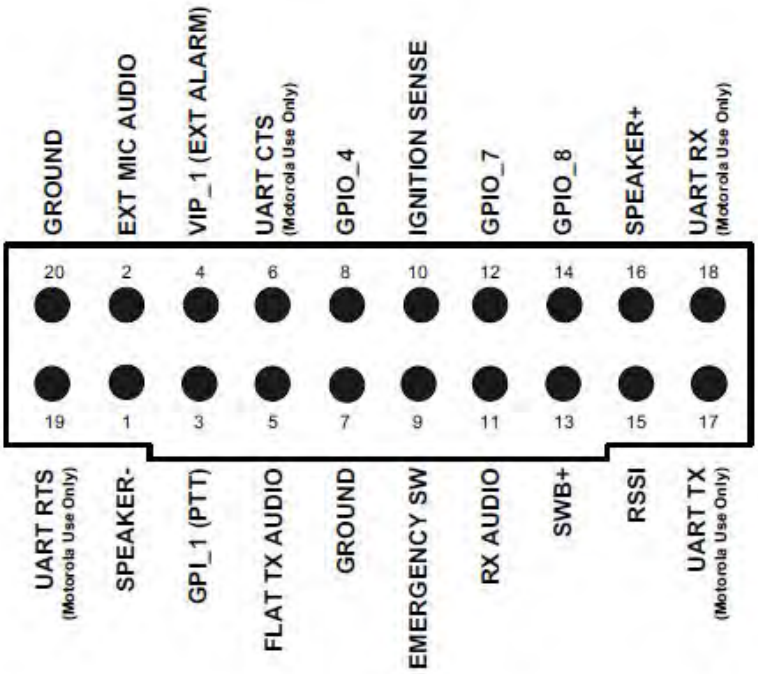
[3] *This input is for injecting signals into the transmit path that should not be filtered; for example, the analog output of a modem. The nominal input level is 150 mVrms for 60% deviation and the input impedance is greater than 25k.*

[4] *This microphone signal is independent of the microphone signal on the front microphone connector. The nominal input level is 80 mVrms for 60% deviation. The DC impedance is 660 ohms and the AC impedance is 560 ohms.*

[5] *A receive signal strength of -120 dBm gives about 1.12 Vdc at pin 15. A receive signal strength of -60 dBm gives about 2.44 Vdc at pin 15. The receive signal strength for levels in between can be linearly calculated. For signals strengths greater than -60 dBm, the voltage stays relatively flat at ~ 2.44 Vdc.*

[6] *Refer to the Radio Installation (Dash Mount) and Cabling Interconnect Diagram for Dash Mount diagrams in the MOTOTRBO Mobile Installation Guide for wiring information.*

[7] ***Caution:** Applying greater than 5V to the pin can cause damage to the circuit.*



Pin Configuration of the Rear Accessory Connector for the standard MOTOTRBO Light Mobile Radios (as viewed from the rear of the radio).

MOTOTRBO Light Mobile (Models with Premium System Software Features Available)

Pin No.	Pin Name	Pin Function
1	Speaker-	Speaker - (3.2 ohm minimum impedance)
2	Ext Mic Audio	Rear External Microphone Input[4]
3	GPI_1 (PTT)	5V Level GPIO, PTT Input [1]
4	VIP_1 (Ext Alarm)	12V Supply, External Alarm
5	Flat TX Audio	Data Input [3]
6	GPIO_3	5V Level GPIO
7	Ground	Ground
8	GPIO_4	5V Level GPIO

Pin No.	Pin Name	Pin Function
11	RX Audio	Receive Live Audio[2]
12	GPIO_7	5V Level GPIO
13	SWB+	Switched Battery Voltage
14	GPIO_8	5V Level GPIO
15	RSSI	Receive Signal Strength Indicator[5]
16	Speaker+	Speaker + (3.2 ohm minimum impedance)
17	USB D+	Universal Serial Bus Data +[7]
18	USB D-	Universal Serial Bus Data -[7]

9	Emergency SW	Emergency Switch Input	19	VBUS	USB Power (5V from USB Cable)[7]
10	Ignition Sense	Ignition Sense Input[6]	20	USB Ground	Universal Serial Bus Ground

[1] *Pulling this line to ground activates the Ext Mic Audio input.*

[2] *This input has a fixed level (independent of volume level) for received audio signal, including alert tones. Flat or de-emphasis are programmed by CPS. Output voltage is approximately 330 mVrms per 1kHz of deviation.*

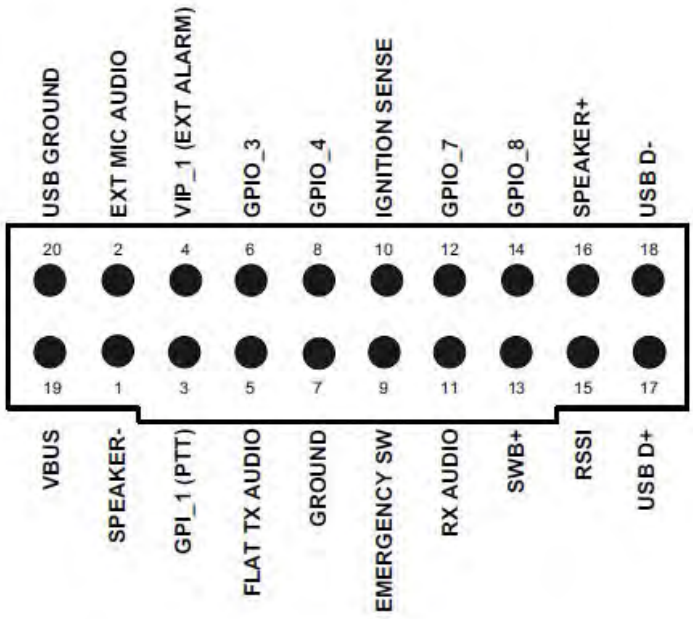
[3] *This input is for injecting signals into the transmit path that should not be filtered; for example, the analog output of a modem. The nominal input level is 150 mVrms for 60% deviation and the input impedance is greater than 25k.*

[4] *This microphone signal is independent of the microphone signal on the front microphone connector. The nominal input level is 80 mVrms for 60% deviation. The DC impedance is 660 ohms and the AC impedance is 560 ohms.*

[5] *A receive signal strength of -120 dBm gives about 1.12 Vdc at pin 15. A receive signal strength of -60 dBm gives about 2.44 Vdc at pin 15. The receive signal strength for levels in between can be linearly calculated. For signals strengths greater than -60 dBm, the voltage stays relatively flat at ~ 2.44 Vdc.*

[6] *Refer to the Radio Installation (Dash Mount) and Cabling Interconnect Diagram for Dash Mount diagrams in the MOTOTRBO Mobile Installation Guide for wiring information.*

[7] ***Caution:** Applying greater than 5V to the pin can cause damage to the circuit.*

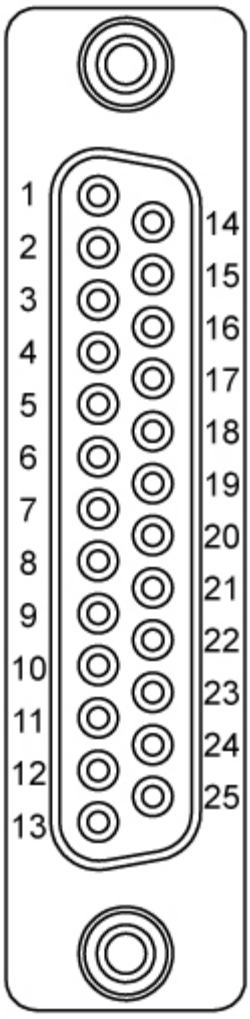


Pin Configuration of the Rear Accessory Connector for the MOTOTRBO Light Mobile Radios with Premium System Software Features Available (as viewed from the rear of the radio).

J7 Connector (MTR3000)

Pin No.	Pin Name	CPS Programmable	Pin Function	Pin No.	Pin Name	CPS Programmable	Pin Function
1	TX Audio	No	Transmit Audio	14	Reserved	No	Reserved
2	GPI_1	Yes	Programmable Input (Tied to Pin #11)	15	GPIO_3	Yes	Programmable I/O
3	Aux Rx Audio	No	Auxilary Receive Audio	16	GND	No	Ground
4	GPIO_2	Yes	Programmable I/O	17	GND	No	Ground
5	GPIO_10	Yes	Programmable I/O	18	GND	No	Ground
6	GPIO_9	Not Supported	Programmable I/O	19	GND	No	Ground
7	Rx Audio	No	Receive Audio	*20	Fused 14.2VDC	No	Power source for third party boxes
8	GPIO_6	Yes	Programmable I/O (Tied to Pin #25)	21	GPIO_8	Yes	Programmable I/O
9	GND	No	Ground	22	Emph TX Audio	No	Emphasized TX Audio
10	GPIO_7	Yes	Programmable I/O (Tied to Pin #12)	23	GPI_4	Yes	Programmable Input
11	GPI_1	Yes	Programmable Input (Tied to Pin #2)	24	GPIO_5	Yes	Programmable I/O
12	GPIO_7	Yes	Programmable I/O (Tied to Pin #10)	25	GPIO_6	Yes	Programmable I/O (Tied to Pin #8)
13	TX Data	No	Low Speed Trunking Data or PL or DPL	-	-	-	-

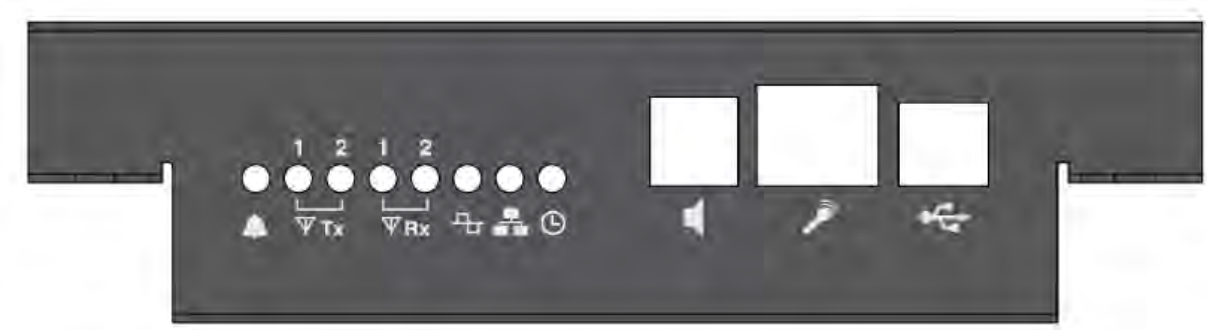
**This pin has a limit of 1 Amp. It is recommended that external current limiting devices be used.*



Pin Configuration of the J7 Connector (as viewed from the rear of the radio)

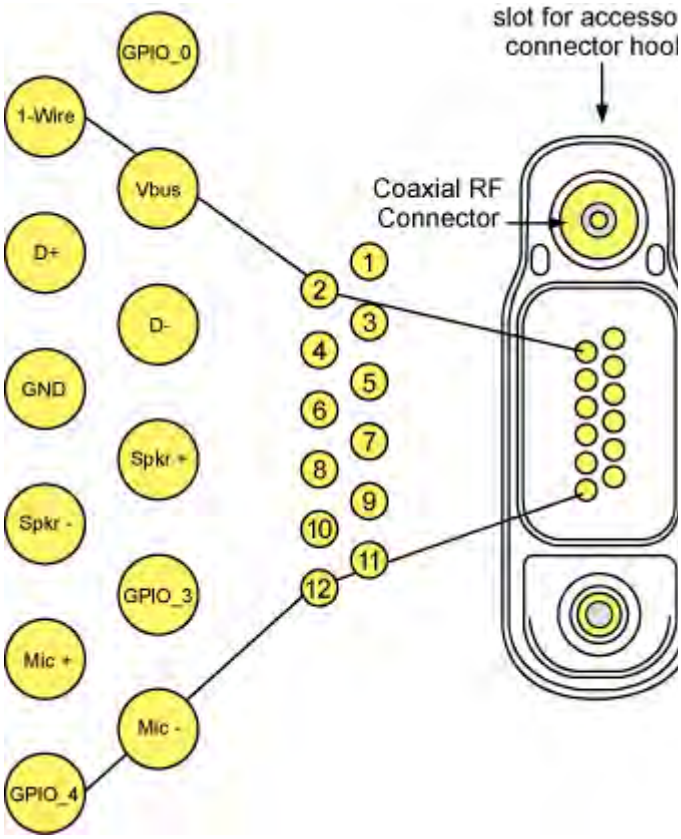
Front Panel Connectors (MTR3000)

Connector Symbol	Connector Name
	Speaker
	Mic
	USB



Side Accessory Pins (Universal Connector)

Pin No.	Pin Name	CPS Programmable	Pin Function	Pin No.	Pin Name	CPS Programmable	Pin Function
1	GPIO_0	No	5V Level GPIO	7	Spkr+	No	Speaker + (16 ohm minimum impedance)
2	1-Wire	No	1-Wire [ADS]	8	Spkr-	No	Speaker - (16 ohm minimum impedance)
3	Opt_5V/ VBus	No	USB Power (5V from USB accessory/cable)	9	GPIO_3	Yes	GPIO
4	GPIO_1 / D+	Yes	USB+ (Data) / GPIO	10	Mic+	No	External Microphone Input +
5	GPIO_2 / D-	No	USB- (Data)	11	Mic-	No	External Microphone Input -
6	GND	No	Ground	12	GPIO_4	Yes	GPIO



Pin Configuration of the Side Accessory Connector (as viewed from the side of the radio)

Multi-Button PTT

Index (Multi-Button PTT)

Description

These droplists allow the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 1-7 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 1 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 1 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 2 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 2 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 3 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 3 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 4 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 4 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 5 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 5 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 6 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 6 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Index 7 (Multi-Button PTT)

Description

This droplist allows the user to specify which personality to use when the Multi-Button PTT GPIO pin combination corresponding to Index 7 is triggered. Valid choices are *None* and all digital personalities that are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Note

- This droplist is hidden when the Multi-Button PTT feature is disabled.
- Digital personalities are only valid choices if they are not RX only, do not have Dual Capacity Direct Mode enabled, do not have IP Site Connect enabled, and do not have a scan list selected.

Horn and Lights

Alarm (Horn/Lights)

Description

Allows the user to be alerted to an incoming call when away from the vehicle. The vehicle's Horn or Lights or both are used depending on which option is connected to the accessory port. When the radio receives a call alert, there will be a delay before activating the Horn and/or Lights. The delay is programmable using the Horn & Lights **Delay Time** feature. Once activated, the Horn and/or Lights remains active for the duration specified by the Horn & Lights Duration feature. The user may turn the Horn and/or Lights off by pressing any keypad or button except the backlight button and volume knob. The Horn & Lights feature can be toggled between on or off, via a short or long programmable button press (*Horn & Lights On/Off*) or **Horn/Lights** (Utilities Menu) feature. This is a radio-wide feature.

Option	Functionality
Alarm Re-Arm	Upon power up, the Horn and Lights feature is enabled or disabled depending on its status at last power down.

Non-Permanent Manual Re-Arm	The Horn and Lights feature needs to always be manually enabled (i.e. by toggling the programmable button or menu assigned to this feature).
Permanent External Alarm	The radio always power up with the Horn and Lights feature on, regardless of its status at last power down.

See Also

- **GPIO Feature - *Ext Alarm/Horn & Lights***

Duration (sec) (Horn/Lights)

Description

Sets the amount of time the vehicle's horn and/or lights are active. This is a radio-wide feature.

Range	
Maximum	∞ sec
Minimum	5 sec
Increment	5 sec

Note

- The vehicle's horn and/or lights will be permanently active if the Infinity option is selected.

See Also

- Alarm (Horn & Lights).

Delay Time (sec) (Horn/Lights)

Description

Specifies the delay duration before the vehicle's horn and/or lights are activated. This is a radio-wide feature.

Range	
Maximum	15 sec
Minimum	0 sec
Increment	1 sec

See Also

- Alarm (Horn & Lights).

Wireline TRC Function Select

Function Tone 2050 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1950 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1850 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1750 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1650 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1550 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1450 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1350 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1150 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1250 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 1050 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 950 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 850 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 750 Hz

Description

If the remote control mode is selected as *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 650 Hz

Description

If the remote control mode is selected *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Function Tone 550 Hz

Description

If the remote control mode is selected *TRC*, CPS provides means to define the function associated with each of 7 function tones. For the functionality *Channel Select N*, *N* indicates the index of the target channel's icon.

Wireline 2

PTT Dropout Timer (ms) for Wireline 2

Description

This specifies the configuration of the wireline PTT dropout timer. In tone remote control mode, the time delay from loss of LLGT to de-assertion of PTT. In DC remote control mode, the time from loss of the control current to de-assertion of PTT. The unit is millisecond. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	0
Increment	1

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

See Also

- Wireline (Glossary)

HLGT ALC Mode for Wireline 2

Description

Allows the user to enable or disable the High Level Guard Tone Automatic Level Control (HLGT ALC) Mode. If enabled, the radio automatically adjusts the transmit audio up to -4/+6dB to compensate for changes in the line levels. This adjustment is made when HLGT is detected. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None* or *DC*.

See Also

- Wireline (Glossary)

TX Guard Tone for Wireline 2

Description

Sets the guard tone frequency detector and notch on the transmit path of the wireline to either Disabled, 2100 Hz, 2175 Hz or 2325 Hz. When 2-wire or 4-wire tone remote control is desired (TRC), the wireline guard tone frequency must be set to the same guard tone frequency as generated by the console or deskset. If the tone remote control is not used, it is recommended to set the guard tone frequency to *Disabled* for full spectrum audio. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None* or *DC*.
- This feature is applicable to MTR3000 base radio/repeater and SLR series repeaters only.

.

See Also

- Wireline (Glossary)

Line Impedance for Wireline 2

Description

Sets the wireline RX audio (output) and TX audio (input) impedance of the wireline board. The impedance of the wireline board must be set to match that of the backhaul interface. The Line Impedance is based on the country or region. This is a radio-wide feature.

Option	Functionality
600 Ohm	For Argentina, Canada, Chile, Columbia, Ecuador, El Salvador, Guam, Hong Kong, India, Indonesia, Japan, Jordan, Kazakhstan, Kuwait, Macao, Malaysia, Mexico, Oman, Pakistan, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, UAE, USA and Yemen.
270 Ohm + (150 nF || 750 Ohm)	For Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Bahrain, Croatia, Cyprus, Czech Republic, Egypt, Hungary, Israel, Latvia, Lebanon, Malta, Morocco, Nigeria, Poland, Romania, Slovakia and Slovenia.
220 Ohm + (115 nF || 820 Ohm)	For Australia, Bulgaria and South Africa.
370 Ohm + (310 nF || 620 Ohm)	For New Zealand.
200 Ohm + (100 nF || 680 Ohm)	For China.

See Also

- Wireline (Glossary)

Wire Mode for Wireline 2

Description

Sets the wireline interface for either a 2-wire mode or 4-wire mode operation. This is a radio-wide feature.

Option	Functionality
2 Wire	The console audio to and from the radio shares a single pair of conductors which interface to the radio at Line 2 of the J6 backplane connector.
4 Wire	The console sends transmitter audio to the radio via a dedicated pair of conductors to Line 1 of the radio, while receive audio from Line 2 of the radio will be sent to the console on a separate dedicated pair of conductors.

Note

- The RX Squelch Mode, Status Tone, RX Guard Tone, and **Repeater Fallback Timer** features are disabled when this feature is set to *2 Wire*.

See Also

- Wireline (Glossary)

Monitor Mode for Wireline 2

Description

Defines the behavior of the Monitor function as either latching or momentary. This is a radio-wide feature.

Option	Functionality
Latching	The monitor function is asserted until the next remote control sequence is sent via the console or deskset.
Momentary	The monitor function is asserted for four seconds.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

.

See Also

- Wireline (Glossary)

Remote Control Mode for Wireline 2

Description

Sets the type of remote control method that the wireline uses to decode the function signals from the console. This is a radio-wide feature.

Option	Functionality
TRC	Allows different channels to be selected, as well as the monitor function and three wild card GPIOs. This option also causes the Revert Channel list to contain only *None* and the channels sorted by position.
DC	Allows five different channels to selected, as well as the monitor function. This option also causes the Revert Channel list to contain only *None* and the first five channels sorted by position.
None	Disables all remote control functions, though the transmit and receive audio paths are still supported via the wireline.

Note

- The **HLGT ALC Mode**, **TX Guard Tone**, **Monitor Mode**, **PTT Dropout Timer (ms)**, and **Revert Channel** features are disabled when this feature is set to *None*.
- The **HLGT ALC Mode** and **TX Guard Tone** features are disabled when this feature is set to *DC*.

See Also

- Wireline (Glossary)

Revert Channel for Wireline 2

Description

Selects the revert channel of the radio from the list of all the available channels or none. The revert channel is the channel that the radio will return to after a call is completed. If *None* is selected, after a call is completed, the radio remains on the channel of the completed call. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

.

See Also

- Wireline (Glossary)

Squelch Hysteresis for Wireline 2 (dB)

Description

Determines how much the level of the transmitter audio must drop below the squelch threshold before the squelch closes. This parameter aids in minimizing squelch chatter. This is a radio-wide feature.

Range	
Maximum	6 dB
Minimum	0 dB
Increment	1 dB

See Also

- Wireline (Glossary)

.

RX Squelch Mode for Wireline 2

Description

Determines the receive qualifier(s) that must be met in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation. This is a radio-wide feature.

Option	Functionality
Always	No checking of the radio receiver squelch is done and the comparator will always interrupt the generation of Status Tone and allowance of RX guard tone generation of the radio.
Carrier	Checks if the radio receiver squelch is Carrier squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.
Carrier or PL/DPL	Checks if the radio receiver squelch is Carrier, PL or DPL squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.
Carrier and PL/DPL	Checks if the radio receiver squelch must be Carrier and PL or Carrier and DPL squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.

Note

- This features is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also

- Wireline (Glossary)

Status Tone for Wireline 2

Description

Allows the user to enable or disable the Wireline Status Tone. When enabled, a Status Tone of 2175Hz will be sent to the voting comparator to indicate that the receiver is squelched. When the receiver unsquelches, the audio which is absent of Status Tone, is sent to the voting comparator to be voted. This is a radio-wide feature.

Note

- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also

- Wireline (Glossary)

RX Guard Tone

Description

Allows the user to enable or disable the Wireline Receive Guard Tone. When enabled, a Guard Tone of 1950Hz, along with the audio, is supplied to the voting comparator once the receive qualifier has been met. The RX Guard Tone is a configurable parameter that is used by some makes of comparators. This is a radio-wide feature.

Note

- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also

- Wireline (Glossary)

Repeater Fallback Timer (ms) for Wireline 2

Description

Specifies the allowed time delay from CSQ (Carrier Squelch Qualifier) to PTT before the wireline board enters repeater fallback mode. When this timer expires, the station is forced into the repeater mode if a PTT is not received from the voting comparator within the selected time of a valid receive qualifier. This is a failsafe if the link between the comparator and the transmitting radio has been compromised. This is a radio-wide feature.

Range	
Maximum	10000 ms
Minimum	0 ms (Disabled)

Increment	10 ms

Note

- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater only.

See Also

- Wireline (Glossary)

RX Status Tone Notch for Wireline 2

Description

This checkbox enables wireline 1's Rx status tone notch or not.

.

See Also

- Wireline (Glossary)

TX Guard Tone Notch

Description

This checkbox enables wireline 1's Tx guard tone notch.

.

See Also

- Wireline (Glossary)

Wireline

Remote Control Mode

Description

Sets the type of remote control method that the wireline uses to decode the function signals from the console. This is a radio-wide feature.

Option	Functionality
TRC	Allows different channels to be selected, as well as the monitor function and three wild card GPIOs. This option also causes the Revert Channel list to contain only *None* and the channels sorted by position.
DC	Allows five different channels to selected, as well as the monitor function. This option also causes the Revert Channel list to contain only *None* and the first five channels sorted by position.
None	Disables all remote control functions, though the transmit and receive audio paths are still supported via the wireline.

Note

- The **HLGT ALC Mode**, **TX Guard Tone**, **Monitor Mode**, **PTT Dropout Timer (ms)**, and **Revert Channel** features are disabled when this feature is set to *None*.
- The **HLGT ALC Mode** and **TX Guard Tone** features are disabled when this feature is set to *DC*.

See Also

- Wireline (Glossary)

Wire Mode

Description

Sets the wireline interface for either a 2-wire mode or 4-wire mode operation. This is a radio-wide feature.

Option	Functionality
2 Wire	The console audio to and from the radio shares a single pair of conductors which interface to the radio at Line 2 of the J6 backplane connector.
4 Wire	The console sends transmitter audio to the radio via a dedicated pair of conductors to Line 1 of the radio, while receive audio from Line 2 of the radio will be sent to the console on a separate dedicated pair of conductors.

Note

- The RX Squelch Mode, Status Tone, RX Guard Tone, and **Repeater Fallback Timer** features are disabled when this feature is set to *2 Wire*.

See Also

- Wireline (Glossary)

Revert Channel

Description

Selects the revert channel of the radio from the list of all the available channels or none. The revert channel is the channel that the radio will return to after a call is completed. If *None* is selected, after a call is completed, the radio remains on the channel of the completed call. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

See Also

- Wireline (Glossary)

Monitor Mode

Description

Defines the behavior of the Monitor function as either latching or momentary. This is a radio-wide feature.

Option	Functionality
Latching	The monitor function is asserted until the next remote control sequence is sent via the console or deskset.
Momentary	The monitor function is asserted for four seconds.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

See Also

- Wireline (Glossary)

Squelch Hysteresis (dB)

Description

Determines how much the level of the transmitter audio must drop below the squelch threshold before the squelch closes. This parameter aids in minimizing squelch chatter. This is a radio-wide feature.

Range	
Maximum	6 dB
Minimum	0 dB
Increment	1 dB

See Also

- Wireline (Glossary)

.

TX Guard Tone

Description

Sets the guard tone frequency detector and notch on the transmit path of the wireline to either Disabled, 2100 Hz, 2175 Hz or 2325 Hz. When 2-wire or 4-wire tone remote control is desired (TRC), the wireline guard tone frequency must be set to the same guard tone frequency as generated by the console or deskset. If the tone remote control is not used, it is recommended to set the guard tone frequency to *Disabled* for full spectrum audio. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None* or *DC*.
- This feature is applicable to MTR3000 base radio/repeater and SLR series repeaters only.

.

See Also

- Wireline (Glossary)

RX Guard Tone

Description

Allows the user to enable or disable the Wireline Receive Guard Tone. When enabled, a Guard Tone of 1950Hz, along with the audio, is supplied to the voting comparator once the receive qualifier has been met. The RX Guard Tone is a configurable parameter that is used by some makes of comparators. This is a radio-wide feature.

Note

- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.

- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also
- Wireline (Glossary)

Repeater Fallback Timer (ms)

Description

Specifies the allowed time delay from CSQ (Carrier Squelch Qualifier) to PTT before the wireline board enters repeater fallback mode. When this timer expires, the station is forced into the repeater mode if a PTT is not received from the voting comparator within the selected time of a valid receive qualifier. This is a failsafe if the link between the comparator and the transmitting radio has been compromised. This is a radio-wide feature.

Range	
Maximum	10000 ms
Minimum	0 ms (Disabled)
Increment	10 ms

Note
- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater only.

See Also
- Wireline (Glossary)

Line Impedance

Description

Sets the wireline RX audio (output) and TX audio (input) impedance of the wireline board. The impedance of the wireline board must be set to match that of the backhaul interface. The Line Impedance is based on the country or region. This is a radio-wide feature.

Option	**Functionality**
600 Ohm	For Argentina, Canada, Chile, Columbia, Ecuador, El Salvador, Guam, Hong Kong, India, Indonesia, Japan, Jordan, Kazakhstan, Kuwait, Macao, Malaysia, Mexico, Oman, Pakistan, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, UAE, USA and Yemen.
270 Ohm + (150 nF || 750 Ohm)	For Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Bahrain, Croatia, Cyprus, Czech Republic, Egypt, Hungary, Israel, Latvia, Lebanon, Malta, Morocco, Nigeria, Poland, Romania, Slovakia and Slovenia.

220 Ohm + (115 nF || 820 Ohm)	For Australia, Bulgaria and South Africa.
370 Ohm + (310 nF || 620 Ohm)	For New Zealand.
200 Ohm + (100 nF || 680 Ohm)	For China.

See Also

- Wireline (Glossary)

RX Squelch Mode

Description

Determines the receive qualifier(s) that must be met in order to interrupt the generation of the Status Tone and the allowance of the RX Guard Tone generation. This is a radio-wide feature.

Option	Functionality
Always	No checking of the radio receiver squelch is done and the comparator will always interrupt the generation of Status Tone and allowance of RX guard tone generation of the radio.
Carrier	Checks if the radio receiver squelch is Carrier squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.
Carrier or PL/DPL	Checks if the radio receiver squelch is Carrier, PL or DPL squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.
Carrier and PL/DPL	Checks if the radio receiver squelch must be Carrier and PL or Carrier and DPL squelch type in order to interrupt the generation of the **Status Tone** and the allowance of the **RX Guard Tone** generation of the radio.

Note

- This features is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also

- Wireline (Glossary)

HLGT ALC Mode

Description

Allows the user to enable or disable the High Level Guard Tone Automatic Level Control (HLGT ALC) Mode. If enabled, the radio automatically adjusts the transmit audio up to -4/+6dB to compensate for changes in the line levels. This adjustment is made when HLGT is detected. This is a radio-wide feature.

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None* or *DC*.

See Also

- Wireline (Glossary)

Status Tone

Description

Allows the user to enable or disable the Wireline Status Tone. When enabled, a Status Tone of 2175Hz will be sent to the voting comparator to indicate that the receiver is squelched. When the receiver unsquelches, the audio which is absent of Status Tone, is sent to the voting comparator to be voted. This is a radio-wide feature.

Note

- This feature is disabled if the **Wire Mode** feature is set to *2 Wire*.
- This feature is applicable to MTR3000 base radio/repeater and SLR Series repeaters only.

See Also

- Wireline (Glossary)

PTT Dropout Timer (ms)

Description

This specifies the configuration of the wireline PTT dropout timer. In tone remote control mode, the time delay from loss of LLGT to de-assertion of PTT. In DC remote control mode, the time from loss of the control current to de-assertion of PTT. The unit is millisecond. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	0
Increment	1

Note

- This feature is disabled if the **Remote Control Mode** feature is set to *None*.

See Also

- Wireline (Glossary)

TX Guard Tone Notch

Description

This checkbox enables wireline 1's Tx guard tone notch.

.

See Also

- Wireline (Glossary)

RX Status Tone Notch

Description

This checkbox enables wireline 1's Rx status tone notch or not.

.

See Also

- Wireline (Glossary)

Antenna Relay

Description

This checkbox enables the wireline's Antenna Relay.

.

See Also

- Wireline (Glossary)

Buttons

Numeric Keypad

Description

Configures the keypad modes.

Option	Functionality
Disabled	No direct entry of channel number, Address or Status digits are allowed when the radio is in the idle state.
Channel in Home Zone	Allows channel selection in current zone by entering the channel number via the keypad. This can only be done when the radio is in the idle condition.
Address	Allows direct entry of Address digits when the radio is in the idle state and is showing the default display.
Status	Allows direct entry of Status digits when the radio is in the idle state and is showing the default display.
Channel in All Zones	Allows channel selection in all the zones by entering the channel number via the keypad. This can only be done when the radio is in the idle condition.

Emergency Short Press Duration (ms)

Description

Sets the duration a button assigned to the Emergency feature is required to be pressed (and held down) to activate the radio's Emergency mode operation. This is a radio-wide feature.

Range	
Maximum	750 ms
Minimum	50 ms
Increment	50 ms

Long Press Duration (ms)

Description

Sets the duration a button is required to be pressed (and held down), for it to be interpreted as a long press. This duration also controls the long press operation of the button assigned to the Emergency feature. This is a radio-wide feature.

Range	
Maximum	3750 ms
Minimum	1000 ms
Increment	250 ms

Dual Knob Press Duration (ms)

Description

Sets the duration of the knob press before changing the dual knob functionality in milliseconds (ms). This duration can help to avoid accidental changing of the dual knob functionality. The user needs to press the knob longer than this timer to change the knob functionality.

Range	
Maximum	3750 ms
Minimum	500 ms
Increment	250 ms

Channel Up/Down via Knob

Description

Dual knob is the Mobile combined volume and channel knob. The user can switch between these two functionality by pressing the knob in alternation. Upon power up, the dual knob works as a volume knob. The user can push the knob to change the functionality to a channel selector. When the Channel Up/Down via Knob feature is disabled, the user can only use the knob for volume adjustment. Therefore, ensure that the *Channel Up/Channel Down* option is assigned to a programmable button.

Button Features

Description

The programmable button feature allows the user to configure the feature that is invoked when the user presses a radio or accessory button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options
- SL Series Radios Programmable Button Options

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity (Mobile) / Backlight Auto On/Off (Portable)	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator (Portable)	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display Portable model only).
Battery Type	Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down (Mobile)	Allows the user to navigate to the previous channel.
Channel Up (Mobile)	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only). See also Adding Analog Calls, Adding Digital Calls.
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off (Mobile)	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio’s internal public address (PA) system.
Flexible RX Group List	Allows user to enable or disable a dynamic RX list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off (Mobile)	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock (Portable)	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off (applicable to Portable model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor (Portable)	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. See also **Monitor Type**.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only). See also Adding One Touch Access.
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off (Mobile)	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to listen to the channel to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).

Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display model only). See also Radio Check Encode/Decode.
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable for both Display and Non-Display models. For Display model, the feature is available when the Radio Inhibit feature is enabled in the device). See also Radio Disable Encode/Decode.
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable for both Display and Non-Display models. For Display model, the feature is available when the Radio Inhibit feature is enabled in the device). See Also Radio Disable Encode/Decode.
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker (Portable)	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable for both Display and Non-Display models. For display model, the feature is available when the Remote Monitor feature is enabled in the device). For Digital mode, refer to Remote Monitor Encode/Decode. For Analog mode, refer to Remote Monitor Encode/Decode (MDC System).
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled or when Announcement Type is set to a value other than *Text to Speech*.
Repeater Access Button #1	Selects the MDC repeater ID used for Repeater Access Control (RAC) Button #1.
Repeater Access Button #1	Selects the MDC repeater ID used for Repeater Access Control (RAC) Button #2.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode. See also **Allow Talkaround**.
Reset Home Channel	Allows you to reset the Home Channel. You can assign this option to a short or long button press.
Scan On/Off	Allows the user to toggle the Scan feature between on or off. See also **Auto Scan**.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Silence Home Channel Reminder	Allows you to silence the Home Channel Reminder. You can assign this option to a short or long button press.
Site Alias	Identifies the current site that the subscriber radio is on when you enable the Capacity Plus - Multi Site feature. This button option is applicable to Display and Non-Display radios. For Display radios, the radio displays and announces the Site Alias. For Non-Display radios, the radio only announces the Site Alias. The radio is only able to make the announcement after you enable Voice Announcement or Text to Speech.
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages. See also Configuring Telemetry Messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only). See also Adding Text Messages.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off (Mobile)	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle AF Suppressor (Portable)	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).

Toggle Internal PA On/Off (Mobile)	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle PA for Voice Announcement (Mobile)	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session (available only when the Transmit Interrupt feature is enabled in the device).
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only). See also Adding Zones and Channels.
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only). See also Adding Zones and Channels.

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity (Mobile) / *Backlight Auto On/Off* (Portable)	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator (Portable)	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display Portable model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only). See also Adding Analog Calls.
External Public Address (Mobile)	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off (Mobile)	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address (Mobile)	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Keypad Lock (Portable)	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. See also **Monitor Type**.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL). See also Adding One Touch Access.

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to listen to the channel to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode. See also **Allow Talkaround**.
Scan On/Off	Allows the user to toggle the Scan feature between on or off. See also **Auto Scan**.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit (Portable)	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only). See also Adding Zones and Channels.
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only). See also Adding Zones and Channels.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity(Mobile) / *Backlight Auto On/Off*(Portable)	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator (Portable)	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display Portable model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only). See also Adding Analog Calls.
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
External Public Address (Mobile)	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off (Mobile)	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address (Mobile)	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Keypad Lock (Portable)	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).

Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL). See also Adding One Touch Access.
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off. See also **Auto Scan**.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Transmit Inhibit (Portable)	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only). See also Adding Zones and Channels.
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only). See also Adding Zones and Channels.

For SL Series Radios Programmable Button Options:

Option	Functionality
Action List	Allows the user to trigger the radio functions attached to the action entries configured in the Actions List table.
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available.
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination.
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features.
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.
Emergency On	Allows the user to set up an emergency call.
External Audio On/Off	Allows the user to toggle the external audio feature between on and off.
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme.
High/Low Power	Allows the user to toggle between high and low power.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad.

Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts.
Manual Site Roam	Allows the user to manually roam to the next available site (applicable when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Message menu.
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Notifications	Provides the user direct access to the Notifications list.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access.
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call.
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers.
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy**.
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user.
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios.
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to Digital mode, Display model only).
Radio Name	Displays the radio alias on the radio display.
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled or when Announcement Type is set to a value other than *Text to Speech*.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Ring Alert Type	Provides the user direct access to the Ring Alert Type menu.

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable when the IP Site Connect feature is enabled in the device).
Text Message	Allows the user to access the Text Message menu.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages. See also Configuring Telemetry Messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
Zone Selection	Allows the user to access the Zone menu to change zone.

Note

- This feature is applicable to SL Series radios.

OK 

Description

This button compares the string in the password edit box with the CPS codeplug. The user is required to enter the password when reading a radio and when opening an archive file of the codeplug.

Notes

- This button shall be greyed out when Codeplug Password is blank.
- The dialog provides three chances to enter the correct password. After three failed attempts, the dialog closes and the current operation is aborted.
- If Codeplug Password is blank, the password prompt will not be shown.
- If Codeplug Password is not blank, the behavior depends on the value of Check for Password and Codeplug Password.

Cancel 

Description

This button closes the password entry screen without checking the password. Any files will not be opened.

Orange Button

Portable

Orange Button Short Press 

Description

Allows the user to change the short press functionality of the Orange Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.
Emergency On	Allows the user to set up an emergency call.
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.

Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and

	transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for the NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for the NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Linked Capacity Plus feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.

Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle Vibrate Strength	Allows the user to toggle the Wi-Fi feature on or off.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off.
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.

Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Orange Button Long Press

Description

Allows the user to change the long press functionality of the Orange Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).

Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.
Emergency On	Allows the user to set up an emergency call.
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.

High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can

	be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).

Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radios display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Buttons

Portable

Side Button 1 Short Press

Description

Allows the user to change the short press functionality of the Side Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for

	ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Battery Type	Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off	Allows the user to terminate an outgoing emergency call (available in certain radio models).
Emergency On	Allows the user to set up an emergency call (available in certain radio models).
Flexible RX Group List	Allows user to enable or disable a dynamic RX list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).

Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker. .
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to

	Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Button 1 Long Press

Description

Allows the user to change the long press functionality of the Side Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-

	Display model only).
Battery Type	Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call (available in certain radio models).
Emergency On	Allows the user to set up an emergency call (available in certain radio models).

Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).

Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.

Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or

	Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Button 2 Short Press

Description

Allows the user to change the short press functionality of the Side Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to

	Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Battery Type	Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or

	initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call (available in certain radio models).
Emergency On	Allows the user to set up an emergency call (available in certain radio models).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or

	off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option

	board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models)).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for

	NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is

	disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
<mx_WAVE><mx_option>WAVE Channel List</mx_option>	<mx_description>Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)</mx_description></mx_WAVE>
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.

Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.

Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Button 2 Long Press

Description

Allows the user to change the long press functionality of the Side Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Battery Type	Allows the user to manually configure the battery type for XiR C1200, XiR C2620, and XiR C2660 radio models.
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front

	panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call (available in certain radio models).
Emergency On	Allows the user to set up an emergency call (available in certain radio models).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.

Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any

	indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola

	Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).

Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the

	feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.

High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).

Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Button 3 Short Press

Description

Allows the user to change the short press functionality of the Side Button 3.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Single Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).

Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Side Button 3 Long Press

Description

Allows the user to change the long press functionality of the Side Button 3.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models)).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
<mx_WAVE><mx_option>WAVE Channel List</mx_option>	<mx_description>Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)</mx_description></mx_WAVE>
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).

Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Buttons

Mobile

Front Button 1 Short Press

Description

Allows the user to change the short press functionality of the programmable Front Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode

	only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.

External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.

Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 1 Long Press

Description

Allows the user to change the long press functionality of the programmable Front Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.

Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.

Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.

Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 2 Short Press 

Description

Allows the user to change the short press functionality of the programmable Front Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then

	only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the

	scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is

	pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 2 Long Press 

Description

Allows the user to change the long press functionality of the programmable Front Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then

	only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the

	scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is

	pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back

	on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 3 Short Press

Description

Allows the user to change the short press functionality of the programmable Front Button 3.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any

	supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.

Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.

Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.

Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to

	the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable

	to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 3 Long Press 

Description

Allows the user to change the long press functionality of the programmable Front Button 3.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or

	unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the

	device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.

Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.

Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing

	noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 4 Short Press 

Description

Allows the user to change the short press functionality of the programmable Front Button 4.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then

	only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the

	scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is

	pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 4 Long Press

Description

Allows the user to change the long press functionality of the programmable Front Button 4.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality

All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).

Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode

	only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.

External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.

Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Portable

Front Button 1 Short Press

Description

Allows the user to change the short press functionality of the programmable Front Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).

Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response	Allows the user to enable or disable the Response Inhibit feature.

Inhibit On/Off	
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session. Note: For SL Series Mid Tier, P1 and P2 have button configuration constraints because both buttons are combination button. Motorola Solutions recommends not to configure these buttons as TX Interrupt Remote Dekey.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).

Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).

Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 1 Long Press

Description

Allows the user to change the long press functionality of the programmable Front Button 1.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.

Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session. Note: For SL Series Mid Tier, P1 and P2 have button configuration constraints because both buttons are combination button. Motorola Solutions recommends not to configure these buttons as TX Interrupt Remote Dekey.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call

	Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).

Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 2 Short Press

Description

Allows the user to change the short press functionality of the programmable Front Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.

Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.

Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Linked Capacity Plus feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion	Allows the user to enable or disable the Mic Distortion Control feature.

Control	This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session. Note: For SL Series Mid Tier, P1 and P2 have button configuration constraints because both buttons are combination button. Motorola Solutions recommends not to configure these buttons as TX Interrupt Remote Dekey.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto	Allows radio display and front panel buttons backlight to illuminate for ease

On/Off	of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency	Allows the user to set up an emergency call. This is the recommended option for

On	the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.

Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Front Button 2 Long Press

Description

Allows the user to change the long press functionality of the programmable Front Button 2.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display

	models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to

	avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session. Note: For SL Series Mid Tier, P1 and P2 have button configuration constraints because both buttons are combination button. Motorola Solutions recommends not to configure these buttons as TX Interrupt Remote Dekey.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid

	Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).

Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.

Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Accessory Buttons

Mobile

No Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory No Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).

External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to

	Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).

Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

No Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory No Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type

	is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel

	will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.

Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back

	on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

1-Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory 1-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.

Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.

Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

1-Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory 1-Dot Button.

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For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).

Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between

	on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.

Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radios internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.

Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radios internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radios display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

2-Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory 2-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then

	only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the

	scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is

	pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to Digital mode, Display model only).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to Digital mode, Display model only).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to Digital mode, Display model only).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.

Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

2-Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory 2-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality

All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.

High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to Digital mode, Display model only).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to Digital mode, Display model only).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to Digital mode, Display model only).

Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.

Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones	Allows the user to enable or disable all the alert tones simultaneously.

On/Off	
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed

	again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.

Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.

Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

A Button Short Press 

Description

Allows the user to change the short press functionality of the programmable Accessory A Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the

	device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Confirm	Allows the user to confirm feature.
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu

	(applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.

PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be

	restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch	Refer to *One Touch Access 1* functionality. This is another option that can be

Access 3	configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

A Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory A Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Confirm	Allows the user to confirm feature.

Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).

Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).

Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or

	Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).

Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.

Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

B Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory B Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is

	connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Confirm	Allows the user to confirm feature.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.

Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).

Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.

Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing

	noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user

Access 1	without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

B Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory B Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type

	is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Confirm	Allows the user to confirm feature.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent*

	Monitor, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).

Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.

VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radios internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radios internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radios display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

C Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory C Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Confirm	Allows the user to confirm feature.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.

Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).

Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled..
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*

Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.

Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.

Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

C Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory C Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and

	front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Channel Down	Allows the user to navigate to the previous channel.
Channel Up	Allows the user to navigate to the next channel.
Confirm	Allows the user to confirm feature.
Contacts	Allows the user to access the Contacts list (Analog or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
Emergency On	Allows the user to set up an emergency call.
Ext PA On/Off	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radios internal public address (PA) system.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.

Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
PA On/Off	Allows the user to control the audio routing by toggling the radio internal public address (PA) system between on or off.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also Privacy (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.

Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle External PA On/Off	Allows the user to toggle the audio routing from incoming audio or radio microphone to the connected public address (PA) speaker at rear port.
Toggle Internal PA On/Off	Allows the user to toggle the audio routing from radio microphone to the connected public address (PA) speaker at rear port.
Toggle PA for Voice Announcement	Allows the user to toggle the Voice Announcement routing between the connected public address (PA) loudspeaker amplifier and the radio public address (PA) system.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not

	be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Note

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.

High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Intensity	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call.
External Public Address	Allows the user to toggle the audio routing between the connected public address (PA) loudspeaker amplifier and the radio's internal public address (PA) system.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Horn & Lights On/Off	Allows the user to toggle the Horn and Lights feature between on or off.
Internal Public Address	Allows the user to control the audio routing by toggling the radio's internal public address (PA) system between on or off.
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch	Refer to *One Touch Access 1* functionality. This is another option that can be

Access 2	configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display (applicable to Display model only).
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Portable

Orange Button Short Press (Accessory Button)

Description

Allows the user to change the short press functionality of the programmable Accessory Orange Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).

Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.
Emergency On	Allows the user to set up an emergency call.
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and

	MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code	Allows the user to toggle the Scrambling Code feature between 3.39 kHz

Toggle	or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Orange Button Long Press (Accessory Button)

Description

Allows the user to change the long press functionality of the programmable Accessory Orange Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button.
Emergency On	Allows the user to set up an emergency call.
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic

	gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Unassigned	No feature is assigned to the programmable button.

Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only

	check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radios display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

No Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory No Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual

	voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX

	Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

No Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory No Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible Rx Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.

Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA

	region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.

Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the

	user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to

	Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).

One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

1-Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory 1-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).

Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual

	voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).

Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).

Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.

WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*

One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).

Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).

Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

1-Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory 1-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).

Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	<mx_description>Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.

Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).

One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).

Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).

Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.

Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).

Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.

Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

2-Dot Button Short Press

Description

Allows the user to change the short press functionality of the programmable Accessory 2-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).

Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).

Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature

	is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).
Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.

Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing

	noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).

Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency On	Allows the user to set up an emergency call. This is the recommended option for the Orange Button.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).

Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled, primarily used while in hazardous environments.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses.
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).

Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

2-Dot Button Long Press

Description

Allows the user to change the long press functionality of the programmable Accessory 2-Dot Button.

- MOTOTRBO Conventional Radios Programmable Button Options
- 3600 Trunking Capable Radios Analog Conventional Programmable Button Options
- 3600 Trunking Capable Radios Trunked Programmable Button Options.

For MOTOTRBO Conventional Radios Programmable Button Options:

Option	Functionality
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Bluetooth Connect	Allows the user to trigger the start, launch inquiry and connect process for a single remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Disconnect	Allows the user to terminate the current connection with all the connected remote Bluetooth device (applicable to Non-Display or Numeric Display model only).
Bluetooth Discoverable On/Off	Allows the user to set the radio Bluetooth to be discoverable by other device (applicable to Non-Display or Numeric Display model only).
Bluetooth Headset Audio Switch	Allows the user to toggle between using the Bluetooth Headset audio path and the internal radio audio path when the Bluetooth Headset is connected to the radio.
Brightness	Allows the user to adjust the brightness level of the radio display and front panel buttons backlight (not applicable to Portable Non-Display).
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes

	available (applicable to Display model only).
Call Forwarding Set/Clear	Allows the user to enable or disable the Call Forward feature, similar to Call Forward (Menu) (available when the 5 Tone feature is enabled in the device).
Call Log Access	Allows the user to access the call log list to easily reinitiate a call using the listed destination (applicable to Display model only).
Cancel	Allows the user to cancel an ongoing call, if call type is *Group Call*, then only call initiator can use this button to cancel an ongoing call; if call type is *Private Call*, then both the call initiator and receiver can use this button to cancel an ongoing call.(applicable to Display model only).
Channel Announcement	Allows the user to playback the predefined zone and channel announcement voice files of the current channel/personality.
Contacts	Allows the user to access the Contacts list (MDC or Digital - depending on the radio's current channel) to make a call or initiate any supplementary call features (applicable to Display model only).
Day/Night Display Toggle	Allows the user to toggle the display scheme between the “Day” and “Night” display scheme (applicable to Display model only).
Flexible RX Group List	Allows user to enable or disable a dynamic Rx list. Provides user the flexibility to add or remove talkgroup members.
GNSS On/Off	Allows the user to toggle the GNSS feature between on and off.
High/Low Power	Allows the user to toggle between high and low power.
Indoor Location On/Off	Allows the user to toggle the Indoor Location feature between on and off.
Intelligent Audio On/Off	Allows the user to toggle the Intelligent Audio feature between on and off.
Job Tickets	Allows the user to access the Job Tickets menu to respond to the job tickets.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).
Mandown	Allows the user to toggle the Mandown feature between on or off. "Mandown" is hidden when the Radio Mandown feature is disabled.
Manual Dial For Private	Provides the user with the flexibility to dial any private number that is unavailable in Contacts (applicable to Digital mode, Display model only).
Manual Site Roam	Allows the user to manually roam to the next available site (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Message	Allows the user to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).

Mic AGC On/Off	Allows the user to enable or disable the internal microphone automatic gain control (AGC) for the analog and digital channel/personality. The AGC function shall not apply to the Bluetooth microphone audio.
Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access* (applicable to Digital mode only).
Option Board Feature 1	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 2	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 3	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 4	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Option Board Feature 5	Allows the user to toggle a feature offered by the option board between on and off for the channel.

Option Board Feature 6	Allows the user to toggle a feature offered by the option board between on and off for the channel.
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor (Portable only)*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Phone Call	Allows the user to access the phone address book (Contacts list) to make a phone call (applicable to Display model, Digital mode only).
Phone Exit	Allows the user to terminate a phone call (applicable to Non-Display or Numeric Display model, Digital mode only).
Phone Manual Dial	Provides the user with the flexibility to dial any phone numbers (applicable to Display model, Digital mode only).
Privacy On/Off	Allows the user to toggle the Privacy feature between on and off for the channel. This feature is not available on certain radio models. See also **Privacy** (applicable to Digital mode only).
Radio Check	Allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user (applicable to both Display and Non-Display models).
Radio Disable	Enables a radio to be remotely disabled, thus this feature can be used to block usage of stolen or lost radios (applicable to both Display and Non-Display models).
Radio Enable	Enables a radio to be remotely enabled after it is disabled (applicable to both Display and Non-Display models).
Radio Name	Displays the radio alias on the radio display (applicable to Display model, Digital mode only).
Radio/Accessory Speaker	Allows the user to toggle between the radio speaker and accessory speaker to use the Bluetooth headset.
Remote Monitor	Enables the user to remotely activate a radio's microphone and transmitter. A call can be silently set up on this radio without any indication given to the user (applicable to both Display and Non-Display models).
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Replay Text to Speech Message	Allows the user to activate Text to Speech feature by replaying text to speech messages. This choice is hidden when the Text to Speech feature is disabled.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Scrambling On/Off	Allows the user to toggle the Scrambling feature between on or off (applicable to Analog mode only and not available for NA region).

Scrambling Code Toggle	Allows the user to toggle the Scrambling Code feature between 3.39 kHz or 3.29 kHz (applicable to Analog mode only and not available for NA region).
Site Alias	Displays the current site that the subscriber radio is on (available when the Capacity Plus - Multi Site feature is enabled in the device, applicable to Non-Display or Numeric Display model only).
Site Lock On/Off	Allows the user to toggle the Site Lock feature between on and off for the channel (applicable to Digital mode only and when the IP Site Connect feature is enabled in the device).
Status	Allows the user to access either the MDC or 5 Tone Status list of the radio menu (available when the 5 Tone feature is enabled in the device).
Switch Speaker	Allows the user to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached Accessory to the internal speaker.
Telemetry Button 1	Allows the radio to control its own or another radio's GPIO pin's logical voltage level by sending Telemetry commands/messages.
Telemetry Button 2	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Telemetry Button 3	Refer to *Telemetry Button 1* functionality. This is another option that can be configured as *Telemetry Button.*
Text Message	Allows the user to access the Text Message menu (applicable to Digital mode, Display model only).
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows the user to toggle the AF Suppressor feature between on and off (applicable to Digital mode only).
Toggle Mic Distortion Control	Allows the user to enable or disable the Mic Distortion Control feature. This feature is applicable in Digital mode only.
Toggle Mute On/Off	Allows the user to enable or disable the Mute Mode feature. Motorola Solutions recommends to set this feature in the Long Press button to avoid triggering the Mute Mode by mistake.
Toggle Response Inhibit On/Off	Allows the user to enable or disable the Response Inhibit feature.
Toggle Vibrate Strength	Allows the user to select the Vibrate Strength levels.
Toggle Wi-Fi On/Off	Allows the user to toggle the Wi-Fi feature on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Trill Enhance On/Off	Allows the user to toggle the Trill Enhance feature between on and off.
TX Interrupt Remote Dekey	Allows the user to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free

	up the channel. This button can also be used to end a Remote Monitor session.
Unassigned	No feature is assigned to the programmable button.
Voice Announcement On/Off	Allows the user to toggle the Voice Announcement feature between on and off.
VOX On/Off	Allows the user to toggle the VOX feature between on and off for the channel.
WAVE Channel List	Allows the user to access the WAVE Channel List options (applicable to Display model only. Only available on supported radios.)
Wi-Fi Status Announcement	Allows the user to toggle the Wi-Fi status announcement on or off. This feature will not be applicable when the Wi-Fi feature is disabled.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

Notes

- For the Telemetry feature, the user needs to assign Telemetry Buttons to physical buttons.
- Flexible RX Group List is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

For 3600 Trunking Capable Radios Analog Conventional Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (applicable to Display model only).

Monitor	Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel. In Analog mode, the user is able to listen to the traffic, i.e. the radio will unmute to the actual voice or data traffic in process. However, in Digital mode, the user can only check if activity is present before transmitting, i.e. the radio will emit an audible/visual alert if there is activity present, but it will not unmute to the actual voice or data traffic in process. For a channel to be monitored, TX Admit Criteria of the channel should be set to "Always". A channel cannot be monitored if any other value of TX Admit Criteria is selected.
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access.*
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Permanent Monitor	*Permanent Monitor* has the same function as *Monitor*, which is to allow the user to monitor the traffic to ensure that there is no activity on it before transmitting. The difference is, for *Permanent Monitor*, once entered, the radio remains in that mode until a button is pressed again to exit the feature.
Repeater/Talkaround	Allows the user to toggle between Repeater and Talkaround mode.
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Tight/Normal Squelch	Allows the user to toggle between tight or normal squelch (applicable to Analog mode only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.

Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

For 3600 Trunking Capable Radios Trunked Programmable Button Options:

Option	**Functionality**
All Alert Tones On/Off	Allows the user to enable or disable all the alert tones simultaneously.
Backlight Auto On/Off	Allows radio display and front panel buttons backlight to illuminate for ease of use in low light areas (applicable to Display model only).
Battery Indicator	Allows the user to check the status of the battery charge via the LED. Solid Green indicates high battery level, Solid Yellow indicates fair battery level and Flashing Red indicates low battery level (applicable to Non-Display model only).
Call Button	Allows the user to select the radio ID number to initiate a selective call. Also serves the purpose of accepting incoming selective call.
Call Alert	Allows a user (radio or dispatcher) to leave a page with another unit which may be a dispatcher or another radio, requesting the busy or unavailable recipient to Call Alert the caller when that recipient becomes available (applicable to Display model only).
Contacts	Allows the user to access the Contacts list (Analog Unified Call List - AUCL) to make a call or initiate any supplementary call features (applicable to Display model only).
Emergency Off	Allows the user to terminate an outgoing emergency call. This is the recommended option for the Orange Button long press.
Hear Clear On/Off	Allows the user to toggle between enabling and disabling the Hear Clear feature. Hear Clear is designed to improve analog voice audio by reducing noise due to the channel characteristics.
High/Low Power	Allows the user to toggle between high and low power.
Keypad Lock	Allows the user to lock or unlock the radio keypad (available in Display model only).
Message Update	Allows the user of a display capable radio to select a message update to send to the dispatcher (applicable to Display Model only).
Nuisance Delete	Allows the user to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.

One Touch Access 1	Allows the user to directly invoke a feature (e.g. Call Alert) to a specific user without needing to navigate the Analog Unified Call List (AUCL).
One Touch Access 2	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 3	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 4	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 5	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
One Touch Access 6	Refer to *One Touch Access 1* functionality. This is another option that can be configured as *One Touch Access*.
Phone	Allows the user to select the Phone Number to be transmitted (applicable to Display model only).
Scan On/Off	Allows the user to toggle the Scan feature between on or off.
Site Display	Allows the user of a display capable radio to view the current Site (Site ID, RSSI value or both depending on the operational situation) on the radio's display. (applicable to Display model only).
Transmit Inhibit	Prevents the Portable from transmitting when enabled.
Site Lock/Unlock	Allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation.
Site Search	Allows the user to enable a site search in SmartZone operation.
Status Update	Allows the user of a display capable radio to select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair. The radio is also capable of transmitting predefined statuses (applicable to Display model only).
Unassigned	No feature is assigned to the programmable button.
Zone Selection	Allows the user to access the Zone menu to change zone (applicable to Display model only).
Zone Toggle	Allows the user to switch between 2 zones (applicable to Non-Display or Numeric Display model only).

One Touch Access

Configuring One Touch Access

Description

Allows the user to directly invoke a feature with one touch of a button. One Touch Access can be assigned to a short or long programmable button press (*One Touch Access*).

For MOTOTRBO Conventional radios, the user can quickly make a Group Call, Private Call, Call Alert or send Quick Text using this feature.

For 3600 Trunking capable radios, the user can quickly make a Private Call, Phone Call, Call Alert, send Status Updates or Message Updates using this feature.

For MOTOTRBO Conventional radios, to configure a One Touch Access before assigning it to a programmable button:

- Select a call member in the Call column. All types of analog and digital calls available in the Analog and Digital folder under Contacts, except for All Call, will appear as valid choices in this column.
- Select the type of call in the Call Type column. If a call of Group type is chosen in the Call column, *Group Call* and *Text Message* will appear as valid choices in the Call Type column. If a call of Private type is chosen, the user can select *Call Alert*, *Private Call* and *Text Message* in the Call Type column. If a call of PC or Dispatch type is chosen, the user can only select *Text Message* in the Call Type column.
- If Text Message is chosen, select the text message in the Text Message column. The selection for *Text Message* in the Text Message column comes from Text Messages. At least one text message needs to be created in Text Messages to enable the PC or Dispatch Call option in this feature.

For 3600 Trunking capable radios, to configure a One Touch Access before assigning it to a programmable button:

- Select the type of call in the Call Type column.
- If Private Call, Phone Call or Call Alert is chosen, select a call member in the Call column, else if Status or Message is chosen, select the Status or Message index in the Status/Message Index column. *Message* comes from Message Updates and *Status* comes from Status Updates.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

One Touch Access

Description

There are 6 rows that can be used to configure one touch access. Each row contains the parameters for a one touch access. Each row can then be assigned to a short or long programmable button press (*One Touch Access*).

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

Mode (One Touch Access)

Description

Allows the user to select the operation mode for the call member selected in the Call column, select the MDC status or message in the Call Type column, or set the Home Revert feature.

Note

- The Call, Call Type, and Text Message features are disabled if this feature is set to *None* or *Home Revert*.
- The 5 Tone Call features are disabled if this feature is set to *Home Revert*.
- The 5 Tone Call in One Touch Access is triggered when the current channel in the radio is a 5 Tone channel. The 5 Tone Call does not depend on any signaling type defined in **Mode**.
- The **Channel** feature is enabled if this feature is set to *Home Revert*.
- The options for Call are digital calls and *None* if this feature is set to *Digital*.
- The options for Call are Capacity Plus - Single Site calls and *None* if this feature is set to *Capacity Plus - Single Site* .
- The options for Call are Phone calls and *None* if this feature is set to *Phone Call*.
- The options for Call Type are *Message* and *Status* if this feature is set to *MDC*.
- In older codeplugs, this feature was known as **Call Mode**.

Channel

Description

Allows the user to select the Home Revert channel for the Mobile from the list of all available Analog and Digital channels.

Note

- This feature is enabled if Mode is set to *Home Revert*.

Call (One Touch Access)

Description

This paragraph is applicable to MOTOTRBO Conventional radios. This column allows the user to select a call member from all types of digital calls available in the Digital or Capacity Plus - Single Site folder under Contacts, i.e. Private Calls, Group Calls, PC calls, Dispatch Calls, or Phone Calls except All Call.

This paragraph is applicable to 3600 Trunking capable radios. This column allows the user to select a call member from all types of calls available in the Phone or Analog folder under Contacts, i.e. Private Calls and Phone Calls.

Note

- For MOTOTRBO Conventional radios, the user chooses the call member first from the Call column and then decides the call member type from the Call Type column. For 3600 Trunking capable radios, the user chooses the call type first from the Call Type column and then decides the call member of the call type from the Call column.
- For MOTOTRBO Conventional radios, if the user selects a call of Group type in the Call column, *Group Call* and *Text Message* will appear as valid choices in the Call Type column. If a call of Private type is chosen, the user can select *Call Alert*, *Private Call* and *Text Message* in the Call Type column. If a call of PC or Dispatch type is chosen, the user can only select *Text Message* in the Call Type column.
- If a call of Phone type is chosen, the user can select *Phone Call* in the Call column. The Phone Call option is available only when the Digital feature is enabled in the device.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

Call Type (One Touch Access)

Description

For MOTOTRBO Conventional radios, this feature allows the user to select a call type for the call member that was selected in the Call column.

For 3600 Trunking capable radios, this feature allows the user to select a call type before selecting the call member of the call type or status/message index if the call type is Status or Message.

Note

- For MOTOTRBO Conventional radios, if the user selects a call of Group type in the Call column, *Group Call* and *Text Message* will appear as valid choices in the Call Type column. If a call of Private type is chosen, the user can select *Call Alert*, *Private Call* and *Text Message* in the Call Type column. If a call of PC or Dispatch type is chosen, the user can only select *Text Message* in the Call Type column. If a call of Phone type is chosen, the user can select *Phone Call* in the Call column.
- For MOTOTRBO Conventional radios, the selection for *Text Message* comes from Text Messages. At least one text message needs to be created in Text Messages to enable the PC or Dispatch Call option in this feature.
- For MOTOTRBO Conventional radios, *Message* comes from MDC Message List and *Status* comes from MDC Status List.
- For 3600 Trunking capable radios, *Message* comes from Message Updates and *Status* comes from Status Updates.

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

5 Tone Call (One Touch Access)

Description

This column allows the user to configure a 5 Tone call member from the choices of Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, and None for One Touch Access.

Note

- This feature is disabled if Mode is set to *Home Revert*.
- This feature is supported in Analog mode only.

Text Message (One Touch Access)

Description

Allows the user to select a Quick Text. The selection for these messages comes from Text Messages.

Note

- This feature is available only when Call Type is set to *Text Message*.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Status/Message Index (3600 Trunking capable radios)

Description

Selects a status or message index from the available index. This index is associated to the Status Updates list (8 entries) or Message Updates list (16 entries).

Note

- This feature is enabled only when Call Type is selected as *Status* or *Message*.
- This feature is supported in Analog mode only.
- This feature is applicable to 3600 Trunking capable radios only.

Status/Message Index (One Touch Access)

Description

Selects a status or message index from the available index. This index is associated to the MDC Status List (16 entries) or MDC Message List list (16 entries).

Note

- This feature is enabled only when Call Type is selected as *Status* or *Message*.
- This feature is supported in Analog mode only.

Number Key Quick Contact Access

Configuring Number Key Quick Contact Access

Description

Allows the user to directly invoke a call with one touch of a key press. Number Key Quick Contact Access can be assigned to any keys from "0" to "9" on the radio numeric keypad. The user can quickly make a Group Call, Private Call, or All Call after configuring this feature. The user can also configure this feature from the radio menu (Program Key).

To associate a call to a numeric key for the Number Key Quick Contact Access feature operation:

1. On the desired **Number Key** row to associate a call with, select the operation mode from the Mode column. Only Digital or Capacity Plus - Single Site mode will appear as valid choices in this column.
2. Select a call member in the **Call** column. Digital calls and *None* will appear as valid choices in this column if Mode is set to *Digital* in the **Mode** column. Capacity Plus - Single Site calls and *None* will appear as valid choices in this column if **Mode** is set to *Capacity Plus - Single Site* in the **Mode** column.

Note

- This feature is supported in Digital mode only.

Number Key (Number Key Quick Contact Access)

Description

This column represents the keys from "0" to "9" on the numeric keypad.

Note

- This feature is supported in Digital mode only.

Mode (Number Key Quick Contact Access)

Description

Allows the user to select the operation mode for the call member selected in the Call column.

Note

- This feature is disabled on the respective **Number Key** row if set to *None*.
- The Call feature is disabled if this feature is set to *None* (disabled).
- The options for Call are digital calls and *None* if this feature is set to *Digital*.
- The options for Call are Capacity Plus - Single Site calls and *None* if this feature is set to *Capacity Plus - Single Site*.
- The options for Call are phone calls and *None* if this feature is set to *Phone Call*.
- The *Capacity Plus - Single Site* option is available only when the Capacity Plus - Single Site feature is enabled in the device.
- This feature is supported in Digital mode only.

Call (Number Key Quick Contact Access)

Description

This column allows the user to select a call member from all types of digital calls available in the Digital or Capacity Plus - Single Site folder under Contacts, i.e. Private Calls, Group Calls, or All Call.

Notes

- This feature is hidden when the Digital feature is disabled.
- This feature is disabled and set to *None* if the Mode feature is set to *None*
- This feature allows the user to only select all available Digital private calls, group calls, all call, *None*, and *User Defined* if the Mode feature is set to *Digital*.
- This feature allows the user to only select all available Capacity Plus - Single Site private calls, group calls, all call, *None*, and *User Defined* if the Mode feature is set to *Capacity Plus - Single Site*.
- This feature is set to *None* if the Mode feature is changed to a different mode.
- This feature allows the user to only select all available Phone calls, *None*, and *User Defined* if the Mode feature is set to *Phone Call*.
- Notwithstanding Note 3, 4, and #6, the *User Defined* choice is only applicable when the existing value in the radio on reading is a *User Contact* type (User Digital, User Capacity Plus, or User Phone Call).
- The *User Defined* choice is removed from the list of choices if the user chooses another choice and then commits the change by moving the focus to another field.
- This feature is supported in Digital mode only.

Actions List

Add (Actions List)

Description

Creates a new entry in the job ticket actions list. Click the **Add** button in the Configuration View. A new row is inserted at the end of the table.

Note

- This feature is supported in Digital mode only.
- This feature is applicable to SL Series radios.

Delete (Actions List)

Description

Action entries may be deleted if they are no longer in use. Click the row to be deleted in the Configuration View. Click the **Delete** button.

Note

- This feature is supported in Digital mode only.
- This feature is applicable to SL Series radios.

Index (Actions List)

Description

Displays the number of the job ticket action entry.

Note

- This feature is supported in Digital mode only.
- This feature is applicable to SL Series radios.

Feature 

Description

Allows user to configure one of the following options: "All Alert Tones On/Off", "Bluetooth Headset Audio Switch", "Call Alert", "Call Log Access", "Channel Announcement", "Contacts", "Day/Night Display Toggle", "Flexible RX Group List", "Intelligent Audio On/Off", "Job Tickets", "Keypad Lock", "Manual Dial For Private", "Manual Site Roam", "Message", "Mic AGC On/Off", "Notifications", "One Touch Access 1", "One Touch Access 2", "One Touch Access 3", "One Touch Access 4", "One Touch Access 5", "One Touch Access 6", "Option Board", "Permanent Monitor", "Phone Call", "Phone Manual Dial", "Privacy On/Off", "Radio Check", "Radio Disable", "Radio Enable", "Radio Name", "Remote Monitor", "Repeater/Talkaround", "Response Inhibit", "Ring Alert Type", "Scan On/Off", "Site Alias", "Site Lock On/Off", "TX Interrupt Remote Dekey", "Telemetry Button 1", "Telemetry Button 2", "Telemetry Button 3", "VOX On/Off", "Voice Announcement On/Off", "Zone Selection".

Notes

- The choices are such as *Flexible RX Group List, Telemetry Button 1, Telemetry Button 2, and Telemetry Button 3.*
- *Flexible RX Group List* is hidden when Capacity Plus - Single Site and Capacity Plus - Multi Site are disabled.
- This feature is applicable to SL Series radios.

Text Messages

Adding Text Messages 

Description

This feature allows for text messages to be predefined. These messages (also known as Quick Text messages) are common messages that are sent repeatedly and stored in the radio. This helps the user avoid retyping content whenever they want to send a text message. Depending on the radio models, a maximum of 10 or 50 messages may be added to the Quick Text message list. For a Display model radio, the user can send access the Text Message feature via the Text Messages menu or a short or long programmable button press assigned to *Text Message*. For a Non-Display or Numeric Display model radio, the user can only send a Quick Text message by pressing a short or long programmable button assigned to *One-Touch Access.* It does not have a menu to receive or display incoming text messages or to select Quick Text messages.

To add a text message:

1. Click the **Add** button OR right-click a row header and select **Add** from the drop-down list.
2. A new row will be inserted at the end of the table. Type a text message in the new row.

Note

- This feature is supported in Digital mode only.

See Also

- Deleting Text Messages.

Deleting Text Messages

Description

Text Messages may be deleted if they are no longer needed.

To delete a text message:

1. Click the row header to select the text message to be deleted.
2. Click the **Delete** button. The highlighted row will be removed from the table.

Note

- This feature is supported in Digital mode only.

See Also

- Adding Text Messages.
- Deleting Items, for more ways of deleting Text Messages.

Entering Text Messages

Description

A user may enter up to a certain amount of characters, i.e. 140 or 280 depending on the radio models. Valid characters are alphanumerics, spaces and special characters. The user can send the text message by assigning a short or long programmable button press (*Text Message*) or access the Text Messages feature via the Text Messages Menu feature.

Note

- The user can copy and paste text from any other rows. The user can also copy and paste rows. If the selected rows to be copied exceed the rows to be pasted, the CPS automatically inserts additional rows at the end of the table.
- This feature is supported in Digital mode only.

See Also

- Adding Text Messages.
- Deleting Text Messages.
- Copying and Pasting Items, for ways of copying and pasting text messages.

TX Max Message Length

Description

Allows the user to determine the length of the text messages that can be sent from the radio. The available options are "Short" and "Long".

Notes

- When the text message length is set to short, the user can enter up to 138 characters.
- When the text message length is set to long, the user can enter up to 278 characters.
- This field is hidden when the Extended Text Messages feature is disabled.

TMS Max Send 280

Description

Increase the text messaging length on the subscriber from 140-2 (138) to 280-2 (278) characters.

Notes

- This field is hidden when the Extended Text Messages feature is disabled.

Telemetry

Configuring Telemetry Messages

Description

Allows the user to control the Accessories General Programmable Input Output (GPIO) pins of their own radio or another radio. If the external hardware is attached to the radio or another radio, the user is capable of controlling and monitoring the external hardware from their own radio. The rows in the Telemetry table are created to support a maximum of 3 virtual Telemetry programmable buttons. It also supports up to 3 Telemetry Virtual Input Output (VIO) entries for Portables and 5 entries for Mobiles. The user can send Telemetry Commands by assigning the virtual Telemetry Button to a short or long programmable button press (*Button Feature - Telemetry Button*) or assigning and asserting a GPIO pin (*GPIO Feature - Telemetry VIO*) to its active level. When multiple Input GPIOs are assigned to a single VIO, a voltage change on any of the input GPIO's will trigger the VIO. This is a radio-wide feature.

The telemetry features should be configured before making assignments to physical Buttons or GPIO lines. To configure the features:

1. Click the desired row.
2. Enter a description in the **Description** column (optional).
3. Select a command in the **Action** column. Note that the subsequent columns will be enabled according to the Command chosen.

4. Make appropriate choices for the remaining enabled columns. Check the Help Pane for additional information on each column.

Notes

- When multiple output GPIOs are assigned to a single VIO, only the first mapped GPIO will perform the command.
- For more information about telemetry, refer to the MOTOTRBO Telemetry Application Developers Kit (ADK) Guide. To access the ADKs, please visit the MOTODEV Application Developers website at http://developer.motorola.com.

Feature (Telemetry)

Description

Telemetry functions can be triggered by physical button presses, GPIO lines going active or by receiving Telemetry Commands from other radios. The Feature column identifies which virtual Telemetry Button or VIO is mapped to a particular Telemetry Command. After setting up a Telemetry Feature, it is important to map any virtual Telemetry Buttons to physical Buttons under the Button folder or any Telemetry VIO to physical GPIO lines under the Accessories folder.

Note

- Telemetry VIO 4 and 5 are applicable for Mobiles only.

Description (Telemetry)

Description

Allows the user to enter a short, 16 character description to help remember the purpose of the particular Telemetry function.

Note

- This feature is applicable to MOTOTRBO Conventional radios only.

Action (Telemetry)

Description

Telemetry functions can either 'send' Commands to other radios or perform functions 'on' receipt of Commands from other radios.

Option	Functionality
Send Status	This is an Output Command that sends the status of the radio's triggered VIO line (which is the status of the device connected to it) to another radio. The receiving radio will receive the status of triggered VIO line and pass the binary information to the device connected to it. The status will only be sent when the VIO line changes from inactive to

	active.
Send Status w/ Text	This is an Output Command that is similar to *Send Status*. In addition, it sends a Text Message which will appear on the receiving radio's screen (applicable to Telemetry VIO only).
None	No output or input function is assigned.
Send Pulse Command	This is an Output Command that sends a Pulse instruction to another radio. It is up to the receiving radio to trap this message and generate the actual Pulse.
On Pulse Command	This is an Input Command, which on receipt of a Pulse instruction from another radio will create a Pulse of the width specified in the Pulse Time column on the specified Telemetry VIO (applicable to Telemetry VIO only).
Send Query Status Command	This is an Output Command that is sent out to request for the status of the VIO lines of another radio (applicable to Telemetry Button only).
Send Toggle Voltage Command	This is an Output Command that sends a Toggle instruction to another radio. It is up to the receiving radio to trap this command and to Toggle the line.
On Toggle Voltage Command	This is an Input Command, which on receipt of an On Toggle Voltage instruction will toggle the pin's voltage control (applicable to Telemetry VIO only).
Send Voltage High Command	This is an Output Command. The radio sends a Voltage High instruction to another radio. It is up to the receiving radio to trap and set the line high.
Send Voltage Low Command	This is an Output Command. The radio sends a Voltage Low instruction to another radio. It is up to the receiving radio to trap and set the line low.
On Voltage High/Low Command	This is an Input Command that traps a Voltage Low or Voltage High instruction from another radio and sets the line to the active state (applicable to Telemetry VIO only).

Note

- This feature is applicable to MOTOTRBO Conventional radios only.

Pulse Time (ms)

Description

Defines the duration of a pulse on the Virtual Input Output (VIO) pin. If an *On Pulse* command is received, the radio generates a pulse of the duration specified.

Range	
Maximum	50000 ms
Minimum	200 ms
Increment	200 ms

Note

- This feature is enabled when the **Action** is set to *On Pulse Command*.

Mode (Telemetry)

Description

Allows the user to select a call mode for the call member selected in the Call column.

Note

- The Call and Text Message features are disabled if this feature is set to *None*. The Channel feature is disabled also if this feature is set to *None*.
- This feature is supported in Digital mode only.

Channel (Telemetry)

Description

Configures a revert channel for One Touch Telemetry. The choices are Selected and all available Digital channels. If *Selected* is configured, the telemetry data messages are sent on the home channel (Digital mode) or voice channel (Capacity Plus - Single Site mode). Otherwise, the telemetry data messages are sent on the revert channel configured. It is recommended that this revert channel should be a channel from the channel pool instead of a zone.

Note

- The configured channel must not be an **Option Board Trunking** enabled channel.
- This feature is disabled when the Mode feature is set to *None*.
- This feature does not list a channel with **RX Only** enabled.
- This feature is disabled on the Telemetry VIO feature, only applicable to the Telemetry Button feature.
- This feature is supported in Digital mode only.

Call (Telemetry)

Description

Allows the user to select only PC, Group and Private calls from the Digital or Capacity Plus - Single Site contacts to send the telemetry command. The *None* option may also be selected if no call to another radio is required.

Note

- This feature is disabled when the **Action** is set to *None* or in addition for Telemetry VIO pin, when *On Pulse Command*, *On Toggle Voltage Command* or *On Voltage High/Low Command* is selected.
- When **Action** is set to *Send Query Status Command*, only Private Call from the Digital contact list can be selected as a Digital Call.
- This feature is supported in Digital mode only.

Target VIO (Telemetry)

Description

Defines the Virtual Input Output (VIO) of the target radio for each Command. On the target radio, the VIO is paired with a physical GPIO pin. The purpose of having this virtual layer is to isolate any dependencies between the initiating radio and target radio so that at any time when the GPIO pins on the target radio are changed, e.g. rewired to a different device, the initiating radio does not have to reprogram its Telemetry configuration to reflect the change. Additionally, the initiating radio will not know what the Target VIO is mapped to on the target radio. Any VIOs may be chosen for each Command. The initiating radio will only control one VIO of each target radio at a time. The *None* option may also be selected if no target VIO is required.

Note

- This feature is disabled when the **Action** is set to *None* or for the case of Telemetry VIO pins, when **Action** is set to *Send Status*, *Send Status w/ Text, On Pulse Command*, *On Toggle Voltage Command* or *On Voltage High/Low Command* or for the case of Telemetry Buttons, when **Action** is set to *Send Query Status Command*.

Text Message (Telemetry)

Description

Allows the user to attach a Quick Text message to the Telemetry *Send Status w/ Text* command.

Note

- This feature is enabled when the **Action** is set to *Send Status w/ Text*.
- The text message will appear if there is at least one Quick Text message in the Text Message table.
- *Send Status w/ Text* is capable of sending 127 characters in one Text Message. Any Quick Text message used with this feature that is longer than 127 characters will be truncated.
- This feature is supported in Digital mode only.

Menu

Menu Hang Time (sec)

Description

Sets the amount of time that the radio remains in the menu mode, after which the radio reverts back to the Home screen. If the duration is set to 0, radio remains infinitely in this mode until the user exits the menu manually by pressing the back or home button. This is a radio-wide feature.

Range	
Maximum	30 sec
Minimum	0 sec
Increment	1 sec

Note

- The scan operation is stopped when the radio is in a menu screen.
- This feature is available when the radio is a Display model.

Menu Hang Time (sec)

Description

Sets the amount of time that the radio remains in the menu mode, after which the radio reverts back to the Home screen. If the duration is set to 0, radio remains infinitely in this mode until the user exits the menu manually by pressing the back or home button. This is a radio-wide feature.

Range	
Maximum	30 sec
Minimum	0 sec
Increment	1 sec

Note

- The scan operation is stopped when the radio is in a menu screen.
- This feature is available when the radio is a Display model.

Menu Hang Time (sec)

Description

Sets the amount of time that the radio remains in the menu mode, after which the radio reverts back to the Home screen. The available choices are 5, 10, 15, 20, 25, 30, 60, 120 sec, and Infinite. If the duration is set to Infinite, the radio remains infinitely in this mode until the user exits the menu manually by pressing the back or home button. This is a radio-wide feature.

Note

- The scan operation is stopped when the radio is in a menu screen.
- This feature is supported in MOTOTRBO 2 radios.
- This feature is available when the radio is a Display model.

Job Tickets Main Name

Description

Sets the title to appear in the job ticket menu in the Portable. This name will also appear in the radio prompt message when the user long presses the programmable front buttons for the Job Ticket feature. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

Note

- This feature is supported in Digital mode only.

Job Tickets Short Name

Description

Sets a short alias to appear in the programmable front buttons for the Job Ticket feature. The user may enter up to a maximum of five characters. Valid characters are alphanumerics, spaces and special characters.

Note

- This feature is supported in Digital mode only.

Text Message (Menu)

Description

Allows the user to access the Text Message feature via the menu. The user has the ability to check the Inbox, edit messages, send messages or Quick Text.

Note

- This feature is available when the radio is a Display model.
- This feature is supported in Digital mode only.

Message (Menu)

Description

Allows the user to access the Message feature via the menu. Using this menu, the user can view the inbox, sent items, or drafts and send a custom or Quick Text message in Digital mode. In Analog mode, the user can send the Quick Text using the items configured in the MDC Message List and view sent items.

Note

- This feature is available when the radio is a Display model.

Privacy (Menu)

Description

This feature allows the user to toggle the Privacy feature between on and off for the current channel via the menu.

This feature is not available on certain radio models.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode for Display model only.

See Also

- **Privacy**.

Manual Site Roam (Menu)

Description

This feature allows the user to manually roam to the next available site via the menu. When this feature is used, the radio is triggered to look for the nearest available site by waking up each repeater in the roam list until an available site is found. The Site Search Timer is triggered each time the nearest available site is found. This feature can also be triggered via a short or long programmable button press (*Manual Site Roam).* The next available site is not necessarily the site with the strongest RSSI value among the members of the Roam List. This is a radio-wide feature.

Notes

- For 1.5a+ releases, this feature is hidden when the IP Site Connect and Capacity Plus - Multi Site features are disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode for Display model only.

Scrambling

Description

Allows the user to enable or disable the Scrambling sub menu.

Mic Distortion Control(Menu)

Description

Allows the user to enable or disable the Mic Distortion Control feature via the menu.

Note

- This feature is applicable in Digital mode only.

AF Suppressor (Menu)

Description

Allows the user to enable or disable the AF Suppressor feature via the menu.

Note

- This feature is applicable in Digital mode only.
- Refer to the Feature Demo Video to view the feature.

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Flexible RX Group List (Menu)

Description

Allows the user to enable or disable the capability of configuring the Flexible RX Group List through menu.

Note

- This field is hidden when the Capacity Plus - Single Site and Capacity Plus - Multi Site features are disabled.

Wi-Fi (Menu)

Description

This checkbox allows the user to enable or disable the Wi-Fi sub menu.

Note

- This feature is hidden when the Wi-Fi feature is disabled.

Indoor Location (Menu)

Description

Allows the user to enable or disable the Indoor Location feature via the menu. This feature allows the user to detect the location of the radio by communicating with Beacon

Job Ticket Delete (Menu)

Description

Enable this check box to allow the user to delete or cancel job tickets that has job ticket IDs.
When the user deletes the tickets, the radio is not required to sync the ticket state to the server. The canceled tickets are moved to a folder through the Job Ticket Modify Service.

Contacts

Call Alert (Menu)

Description

Allows the user to initiate Call Alert via the menu. Call Alert allows the user to alert another user, requesting that they call back the user (call initiator) when they (recipient) become available. Call Alert can only be received when the channel is free.

This paragraph is applicable to MOTOTRBO Conventional radios. In Digital Mode, the user can only initiate a Call Alert to an individual radio. In Analog mode, the destination ID can be a Private, Group or All Call ID.

Note

- For MOTOTRBO Conventional radios, the Contacts consists of all MDC and Quik-Call II call entries when it is accessed in Analog mode and digital Private Call entries when it is accessed in Digital mode.
- This feature is available when the radio is a Display model.

Edit (Menu)

Description

Allows the user to edit the alphanumeric characters on the edit screen. The user has the ability to add a new entry to the Contacts list or edit an entry within the Contacts list.

Note

- This feature is available when the radio is a Display model.

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only and 3600 Trunking capable radios only.

Ring Style (Menu)

Description

Allows the user to enable or disable the Ring Style sub menu in the radio. The Ring Style feature allow the user to change the ring tone for a received Private Call, Dispatch Call, or PC Call.

Note

- This feature is supported in Digital mode only.

Text Message Alert (Menu)

Description

Allows the user to enable or disable the Text Message Alert sub menu in the radio. The Text Message Alert feature allows the user to configure the type of alert tone to be sounded when a text message is received from a specific contact in the Contacts list.

Note

- This feature is supported in Digital mode only.

Manual Dial (Menu)

Description

Allows the user to access the Manual Dial capability of the radio via the menu. Manual Dial allows the user to initiate a call (e.g. Private Call, Call Alert) or request (e.g. Remote Monitor, Radio Check, Radio Disable, Radio Enable) or send Text Messages by keying in the destination ID using the keypad, even if the destination ID is not listed in the Contacts.

Note

- This feature is available when the radio is a Display model.
- This feature is supported in Digital mode only.

Radio Check (Menu)

Description

Allows the user to initiate a Radio Check request from the menu. Radio check allows a user/console operator to determine if a radio is active in a system without showing any indication to the radio's user.

Note

- Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Check command.
- This feature is applicable for Display models only.

Remote Monitor (Menu)

Description

Allows the user to initiate a Remote Monitor request to the target radio via the menu. Upon a successful request, the target radio's microphone and transmitter will be activated to be remotely monitored.

Note

- The destination radio must have Remote Monitor Encode/Decode or Remote Monitor Encode/Decode (MDC System) enabled in the signaling systems folder.
- Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Remote Monitor command.
- This feature is available for Display models only.

Radio Enable (Menu)

Description

Allows the user to initiate the Radio Enable command to the target radio via the menu. Radio Enable is used to enable a target radio that is disabled (inhibited).

Notes

- Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Enable command.
- This feature is available for Display models only.
- Encode feature is available in Digital mode only.

Radio Disable (Menu)

Description

Allows the user to initiate a Radio Disable command to the target radio via the menu. Upon a successful request, the target radio will disable all its user interfaces (e.g. all LED indicators including Backlight, alert tones, user inputs including PTT except for Volume/On/Off knob on Portable and Power On/Off button on Mobile), ignore Emergency alarms and received data to radio or external devices, mute received voice to radio or external device and disallow transmission of data or command from the radio or external device. This disables the radio if it is lost or stolen. However, the radio continues to monitor the air interface to enable it to receive the **Radio Enable** command.

Notes

- The target radio must have Radio Disable Encode/Decode enabled in the signaling systems folder.
- Disabling this feature prevents user initiation of this feature from the radio's user interface. It does not prevent the radio from responding to a Radio Disable command.
- This feature is available for Display models only.
- Encode feature is available in Digital mode only.

Program Key (Menu)

Description

Allows the user to enable or disable the Program Key menu in the radio. The Program Key feature allows the user to associate a call to the number buttons on the radio keypad (1-9 and 0). When the user long presses these buttons in the home screen, the associated call entry will be prompted. The supported call types are Group, Private, or All Call calls in Digital or Capacity Plus - Single Site mode. This is a radio-wide feature.

Note

- This feature is supported in Digital mode only.
- This feature is applicable to Display model only.

Phone Manual Dial (Menu)

Description

Allows the user to enable or disable the capability of manually dialing a phone number via the radio menu.

Note

- This feature is supported in Digital mode only.

Scan

Scan (Menu)

Description

Allows the user to toggle Scan on or off via the menu for the current conventional channel/trunking personality. Scan allows the radio to search the scan list that is attached to the current channel/personality for an eligible channel/personaliity to receive or unmute.

Note

- During radio operation, if no Scan List is attached to the current channel/personality, the user will not be able to enter the Scan menu.
- This feature is available when the radio is a Display model.

See Also

- Adding Scan Lists.

Edit List (Menu)

Description

Allows the user to edit the Scan List via the menu. The Edit List allows the user to perform certain actions on the scan list, e.g. view the scan list, change the scan member's priority level, add new scan members to the scan list or delete members from the scan list. Creating a new or deleting an existing scan list is not allowed on the radio.

Note

- This feature is available when the radio is a Display model.

Select New List (Menu)

Description

Allows the user to change Scan List or disable the current Scan List via the menu.

Status

Manual Dial (Menu)

Description

Allows the user to access the Manual Dial capability of the radio via the menu when in the 5 Tone Status list. The user can initiate a 5 Tone call (e.g. Private Call, Call Alert) or request (e.g. Remote Monitor, Radio Check, Radio Disable, Radio Enable) or send Text Messages by keying in the destination ID using the keypad, even if the destination ID is not listed in the Status list.

Note

- This feature is supported in Analog mode for Display model only.

Edit (Menu)

Description

Allows the user to edit the status number and entry alias of a 5 Tone Status list entry via the menu.

Note

- This feature is supported in Analog mode for Display model only.

TMS

Status (Menu)

Description

Allows the user to enable or disable the capability to access Status List in the Trunking system via the menu. When enabled, the radio displays the last acknowledged status. However, if there were no statuses that had been acknowledged, the radio displays the first status on the list. The user can select a status update to send to the dispatcher indicating the current activity of the user, e.g. En Route, At Site or In Repair.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Message (Menu)(3600 Trunking capable radios)

Description

Allows the user to enable or disable the capability to access Message List in the Trunking system via the menu. When enabled, the radio displays the last acknowledged message. However, if there were no messages that had been acknowledged, the radio displays the first message on the list.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Call Log

Missed (Menu)

Description

Allows the user to track the last ten incoming private calls that the user missed or failed to respond. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

Note

- This feature is applicable to Display model only.
- This feature is supported in Digital mode only.

Answered (Menu)

Description

Allows the user to track the last ten incoming private calls that the user answered. The user accesses the call log via the menu. This log also provides a quick way for user to initiate a private call.

Note

- This feature is applicable to Display model only.
- This feature is supported in Digital mode only.

Outgoing Radio (Menu)

Description

This paragraph is applicable to MOTOTRBO Conventional radios. This feature allows the user to track the last private call and call alert numbers that the user initiated and provides easy redial access. The maximum stored number is ten for both type of calls combined. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

This paragraph is applicable to 3600 Trunking capable radios. This feature allows the user to track the last 10 private call numbers that the user initiated and provides easy redial access. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios for Display model only.

Incoming Radio (Menu)

Description

Allows the user to track the last received private call and call alert numbers. The maximum stored number is ten for both type of calls combined. The user accesses the call log via the menu.

Note

- There is no log for received phone call numbers as the phone ID is not known to the radio.
- This feature is applicable to 3600 Trunking capable radios for Display model only.

Outgoing Phone (Menu)

Description

Allows the user to track the last ten phone call numbers that the user initiated and provides easy redial access. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a phone call.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Utilities

Talkaround (Menu)

Description

Allows the user to set the radio in Talkaround mode via the menu. Talkaround mode is required in the absence of a repeater.

Note

- This feature is available when the radio is a Display model.

Tone/Alerts (Menu)

Description

Allows the user to toggle all the tones and alerts on or off via the menu.

Note

- This feature is available when the radio is a Display model.

See Also

- **Disable All.**

Horn/Lights (Menu)

Description

Allows the user to toggle the horn and lights on or off via the menu.

Note

- This feature is available when the radio is a Display model.

See Also

- **Alarm (Horn & Lights).**

Power (Menu)

Description

Allows the user to adjust the radio's transmission power level via the menu.

Note

- This feature is available when the radio is a Display model.

Backlight (Menu)

Description

Allows the user to change the Backlight setting via the menu.

Note

- This feature is available when the radio is a Display model.

Backlight Timer (Menu)

Description

This checkbox allows you to enable or disable the Backlight Timer menu. When you enable this checkbox, you can set the timer for the Timeout Timer feature in the radio via the menu.

Trill Enhance (Menu)

Description

This checkbox allows you to enable or disable the Trill Enhancement sub menu. The Trill Enhancement filter provides improved encoding of the Alveolar Trill found in some foreign languages.

Notes

- Refer to the Feature Demo Video to view the feature.

Intro Screen (Menu)

Description

Allows the user to enable or disable the Introduction Screen upon radio power up via the menu. When enabled via the menu, the **Radio Name** shows as the welcome text when the radio powers up.

Note

- This feature is available when the radio is a Display model.

Keypad Lock (Menu)

Description

Allows the user to toggle the keypad lock on or off via the menu.

Note

- This feature is available when the radio is a Display model.

TX Inhibit (Menu)

Description

Allows the user to enable or disable the TX Inhibit feature via the menu. When enabled via the menu, the radio will not be able to transmit, for instance, while in a hazardous environment. An environment is considered hazardous when the power emitted by the radio Power Amplifier (PA) could be sufficient to initiate an explosion or other dangerous reactions.

Note

- This feature is applicable to 3600 Trunking capable radios for Display model only.

Site Lock (Menu)

Description

This paragraph is applicable to MOTOTRBO Conventional radios. This feature allows the user to toggle the Site Lock between on and off via the menu. When enabled via the menu, this feature "locks" to the current channel and stops auto-roaming. When disabled, the radio continuously auto-roams to the site with the strongest RSSI value among the members of the Roam List. This is a radio-wide feature.

This paragraph is applicable to 3600 Trunking capable radios. This feature allows the user to toggle the Site Lock/Unlock feature between lock and unlock mode in SmartZone operation. This is a radio-wide feature.

Note

- This feature is available when the radio is a Display model.
- For 1.5a+ releases, this feature is hidden when the IP Site Connect and Capacity Plus - Multi Site features are disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only and 3600 Trunking capable radios only.

Password and Lock (Menu)

Description

Allows the user to enable or disable the Password Lock menu in the radio. When this feature is enabled, the user has the ability to toggle the Password and Lock feature between on and off, or update the Password through the radio menu. This is a radio-wide feature.

Note

- This feature is available when the radio is a Display model only.

Call Forward (Menu)

Description

Allows the user to enable or disable the Call Forward feature via the menu. The Call Forward feature allows calls to be forwarded to another radio. When enabled, the call forwarding telegram will be sent for the matched decoder. This feature is used more on mobile radios and it allows the user to leave the vehicle. If the vehicle receives an individual call, it will transmit a telegram to the forwarding radio. This radio will open and assuming both radios have the same PL the call will take place. A radio can also call forward to a pager and alert the user to the call.

Note

- This feature is supported in Analog mode only.

Mic Gain (Menu)

Description

Allows the user to access the various radio mic gains to change their settings via the menu. Mic gain defines the amplification of the radio microphone.

Edit 5 Tone SUID (Menu)

Description

Allows the user to edit the 5 Tone Radio ID via the menu.

Note

- This feature is supported in Analog mode only.

Signaling System (Menu)

Description

Allows the user to modify certain signaling system parameters like Sel Call Encode, Sel Call Decode and PTT ID Type via the menu.

Note

- This feature is supported in Analog mode only.

Edit Zone (Menu)

Description

Allows the user to create new zones via the menu.

Edit Channel (Menu)

Description

Allows the user to modify certain channel/personality parameters and create new channels via the menu.

Radio Button (Menu)

Description

Allows the user to change the assignment of button options to radio buttons via the menu.

Accessory Button (Menu)

Description

Allows the user to change the assignment of button options to accessory buttons via the menu.

Home Channel (Menu)

Description

This check box allows you to enable or disable the Home Channel Menu.

Note

- This feature is applicable for MOTOTRBO 2.0 radios only.

LED Indicator (Menu)

Description

Allows the user to toggle the radio's LED indicator on or off via the menu.

Note

- This feature is available when the radio is a Display model.

Squelch (Menu)

Description

Allows the user to access the Squelch feature to select between Normal or Tight Squelch via the menu.

Note

- This feature is available when the radio is a Display model.
- This feature is supported in Analog mode only.

Cable Type (Menu)

Description

Allows the user to access the Cable Type feature if they need to select between different connection modes via the menu.

Note

- The options listed in CPS for **Cable Type** may differ slightly from those listed in the radio due to screen ergonomics.
- This feature is applicable to MOTOTRBO Conventional radios for Display model.

VOX (Menu)

Description

Allows the user to toggle the VOX (Voice Activated Transmit) feature between on and off for the current channel via the menu. VOX enables the radio to automatically transmit whenever its microphone on the VOX-capable accessory detects voice. This is a channel-wide feature.

Note

- It is recommended to disable the **Talk Permit** tone.
- This feature is applicable to MOTOTRBO Conventional radios for Display model.

GNSS (Menu)

Description

Allows the user to enable or disable the GNSS feature via the menu.

Note

- This feature is disabled if the **GNSS** feature is disabled.
- This feature is applicable in Digital mode only.

Network

Radio IP

Description

The Internet Protocol (IP) is a data-oriented protocol used to communicate data across a packet-switched network. IP enables communication between devices (in this case, MOTOTRBO radios and PC) via a unique global address. The **Radio IP** is the IP address used by the radio to communicate with a PC (i.e. mobile client), and the address provided to the PC as the default gateway on a wired network. The MOTOTRBO radio acts like a Dynamic Host Configuration Protocol (DHCP) server providing the PC with an IP (**Accessory IP**) and setting its own IP as the default gateway. The format and range for the address are (001-223).(000-255).(000-255).(001-253). The user is able to use any address except 127.x.x.x within the range of 1.x.x.x to 223.x.x.x. It is recommended that the default value of 192.168.10.1 is used (in the above gateway configuration), unless there are conflicts with other network interfaces on the PC; the IP should then be changed.

Note

- For MOTOTRBO Conventional radios, when programming multiple radios connected to the PC, one of the first 3 octets of the Radio IP for each radio must be unique.
- For 3600 Trunking capable radios, when programming multiple radios connected to the PC, if the radio IP address is within the range of 0.0.0.0 and 127.255.255.255, the first octet of the Radio IP for each radio must be unique; If the radio IP address is within the range of 128.0.0.0 and 191.255.255.255, one of the first two octets of the Radio IP for each radio must be unique; And if the radio IP address is within the range of 192.0.0.0 and 223.255.255.255, one of the first three octets of the Radio IP for each radio must be unique.
- The range for the third octet is 0 to 254 when the Bluetooth feature is enabled in the radio.
- When multiple control stations are connected to an applications server, each control station will need a unique Radio IP address (i.e. the default value cannot be shared by the control stations of a given applications server). Users are recommended to assign the **Radio IP**s of radios acting as control stations to be 192.168.11.1, 192.168.12.1, 192.168.13.1 and 192.168.14.1. Refer to the MOTOTRBO system planner for details.
- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.

Accessory IP

Description

The Accessory IP refers to the IP address that is given to the PC by the radio that is connected to it on a wired network. The Accessory IP value is not editable. It is derived based on the Radio IP. The first 3 octets of the network bits follow the first 3 octets of the **Radio IP**. The last octet will be the **Radio IP**'s last octet value + 1. For example, if the Radio IP is 192.168.5.7, the Accessory IP will be updated to 192.168.5.8. It is recommended that the default value of 192.168.10.2 is used.

Note

- For radios acting as control stations, when the recommended **Radio IP**s of 192.168.11.1, 192.168.12.1, 192.168.13.1 and 192.168.14.1 are used, the Accessory IP values will be automatically set to 192.168.11.2, 192.168.12.2, 192.168.13.2 and 192.168.14.2. Refer to the MOTOTRBO system planner for details.
- To preserve the current value of this feature in the radio and ignore the archive identity feature value during cloning, go to **Edit** -> **Preferences...** at the menu bar and uncheck the Clone Radio Identity setting.

Netmask

Description

Typical network configuration parameters include the subnet mask (netmask) in addition to the IP address. Subnetting an IP network allows a single large network to be broken down into several logical smaller ones by allocating bits from the host portion as the network portion. The subnet mask tells how many bits identify the subnetwork, and how many bits provide room for the host addresses. The Netmask value is not editable.

Note

- For MOTOTRBO Conventional radios, this feature value is fixed at 255.255.255.0 irregardless of the **Radio IP** address configuration.
- For 3600 Trunking capable radios, this feature is calculated based on the **Radio IP** address configuration: For Class A (IP Address Range: 0.0.0.0 to 127.255.255.255) NetMask used is 255.0.0.0; For Class B (IP Address Range: 128.0.0.0 to 191.255.255.255) NetMask used is 255.255.0.0; For Class C (IP Address Range: 192.0.0.0 to 223.255.255.255) NetMask used is 255.255.255.0.

Bluetooth IP

Description

The **Bluetooth IP** is the IP address of the Bluetooth capable device used for communication with a PC on a Bluetooth network (i.e. connection type is set to Bluetooth). The IP value is not editable. It is derived from the **Radio IP**. The value in the third octet of this IP is always one value greater than the value of the third octet of **Radio IP**. For example, if the **Radio IP** is 192.168.1.1, the **Bluetooth IP** is derived to be 192.168.2.1.

Note

- This feature is supported in Digital mode only.

Bluetooth Accessory IP

Description

The **Bluetooth Accessory IP** is the IP address of the Bluetooth capable accessory used for communication with a PC on a Bluetooth network (i.e. connection type is set to Bluetooth). The IP value is not editable. It is derived from the **Radio IP**. The value in the third and fourth octet of this IP is always one value greater than the value of the third and fourth octet of **Radio IP**. For example, if the **Radio IP** is 192.168.1.1, the **Bluetooth Accessory IP** is derived to be 192.168.2.2.

Note

- This feature is supported in Digital mode only.

Forward to PC

Description

If enabled, all text messages the target radio receives are passed to the connected PC. This feature should be enabled for radios that are configured as control stations attached to application servers, which resides in PC, or to mobile PC clients.

Note

- When this feature is enabled, a radio will not display any received text messages on its own but will always forward them to the PC.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Forward to PC

Description

Allows the user to configure the PC Forward feature. When enabled, all text messages the target radio receives are passed to the connected PC. This feature should be enabled for radios that are configured as control stations attached to application servers, which resides in PC, or to mobile PC clients.

Option	Functionality
Disabled	The standard IP routing is used. Packets targeted to unconnected networks will be dropped.
Via USB	The Forward to PC routing rules to the USB connection is used.
Via Bluetooth	The Forward to PC routing rules to the Bluetooth connection is used. Only available only when the Bluetooth feature is enabled in the radio.
Via Non-IP Peripheral	The Forward to PC routing rules to the non-IP Peripheral connection is used.

Notes

- When this feature is enabled, a radio will not display any received text messages on its own but will always forward them to the PC.
- This feature is supported in MOTOTRBO 2 radios.
- This feature is supported in Digital mode only.

USB DNS-SD Interval

Description

This field allows the user to enable and disable DNS-SD for the USB interface of the radio. When DNS-SD is disabled, Radio Management cannot discover the radio and therefore no jobs will be completed. Valid choices include "*Disabled*" and "*90 sec*".

Notes

- This field is hidden when the Wi-Fi feature is disabled.

Radio Network

CAI Group Network

Description

The Common Air Interface (CAI) standard specifies the type and content of signals transmitted by compliant radios. A radio based on the CAI standard should be able to communicate with any other CAI radio, regardless of the manufacturer. The CAI Group Network is a value that is combined with the Group ID to produce the group's air interface network IP address. The CAI Group Network ID forms the first or most significant byte of each group's network IP address. All radios must use the same CAI Group Network ID to be able to exchange data. For example, with a Group ID of 2 and a CAI Group Network of 225, the group's air interface network IP address is derived as 225.0.0.2. This feature is primarily used to send data to a group of radios connected to a PC on a wired network. All text messages received by the radios will be passed to the PC if **Forward to PC** is enabled. The Group Network uniquely identifies the group. Therefore, this IP must match the Group Network IP address of the group that the user intends to communicate with.

Range	
Maximum	239
Minimum	225
Increment	1

Note

- This feature is supported in Digital mode only.

CAI Network

Description

The Common Air Interface (CAI) standard specifies the type and content of signals transmitted by compliant radios. A radio based on the CAI standard should be able to communicate with any other CAI radio, regardless of the manufacturer. The CAI Network is a value that is combined with the Radio ID to produce the individual radio's air interface network IP address. The CAI Network ID forms the first or most significant byte of each radio's network IP address. All radios must use the same CAI Network ID to be able to exchange data. It is recommended that the default value of 12 is used. For example, with the recommended Radio ID of 16448250 for a control station and a CAI Network of 12, the control station's radio network IP address is derived as 12.250.250.250 (refer to the MOTOTRBO system planner for details on how the radio network IP address is constructed). This IP must match the IP of the target radio that is connected to a PC that the user intends to communicate with. All text messages received by the target radio will be passed to the PC if **Forward to PC** is enabled. The CAI network address is set as Class A as the radio ID can be 3 bytes long.

Range	
Maximum	126
Minimum	1
Increment	1

Note

- A PC connected to a radio will automatically have a radio network IP address of the radio's first byte +1. Continuing with the control station's example, with the radio's network IP address set as 12.250.250.250, the PC connected to it will have an address of 13.250.250.250. If the maximum number has been reached, the number will automatically wrap around.
- This feature is supported in Digital mode only.

Max TX PDU Size (bytes)

Description

Allows the user to control the size of packet data units (PDU) sent over-the-air (OTA). Generally, the user would like a message sent with the least possible data packets, as there is overhead associated with any packet. However, if the data packet is too long and there is interference that causes too many retries that it bogs down the system, the user can try to decrease the packet size. The predefined packet sizes are *300*, *500*, *750* and *1500* bytes. However, it is recommended that the default value is used.

Note

- The size value should be set greater than the data application's packet size. This is required when the radio is in Capacity Plus - Single Site mode.
- Same size value needs to be set for all radios in the system.
- This feature is supported in Digital mode only.

Telemetry UDP Port

Description

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices. UDP enables communication between these devices via a unique port number. The Telemetry UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to support the Telemetry service. The internal radio Telemetry receive UDP port is always 4008.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital mode only.

Network Setting

Link Speed

Description

This droplist allows the user to configure the Ethernet Speed. The choices are *10 Mbps Full Duplex*, *100 Mbps Full Duplex*, and *Auto Negotiation*.

DHCP

Description

Dynamic Host Configuration Protocol (DHCP) allows you to select if the IP address for the multisite repeater is static or dynamic. This is a radio-wide feature.

Note

- This feature is disabled (unchecked) when **Link Type** is set to *Master*.
- The **Ethernet IP**, Gateway IP, and Gateway Netmask features are disabled if this feature is enabled (checked).
- The value of this feature is not preserved during cloning and is disabled (unchecked) after any clone operation.
- The feature is hidden when the IP Site Connect and the Capacity Plus - Single Site features are disabled or when the IP Site Connect and the Capacity Plus - Multi Site features are disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Ethernet IP

Description

This feature assigns an Ethernet IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). When DHCP is disabled for the Master, the Master's Ethernet IP is set as the Peer's Master IP in the Link Establishment system. This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway IP

Description

This feature assigns a Gateway IP Address for a repeater using Link Establishment. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Gateway Netmask

Description

This feature assigns a Gateway Netmask Address for a repeater using Link Establishment. This is a radio-wide feature.

Note

- This feature is disabled when Link Type is set to *None*.
- This feature is disabled when DHCP is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Primary DNS Server IP

Description

This IP Address allows the user to specify the IP address of primary DNS Server for the repeater Ethernet Port 1. Primary DNS Server IP is the IP address used for by the repeater over the ip network.

Note

- The field is disabled if DHCP is checked.

Secondary DNS Server IP

Description

This IP Address allows the user to specify the IP address of secondary DNS Server for the repeater Ethernet Port 1. Secondary DNS Server IP is the IP address used for by the repeater over the ip network.

Note

- The field is disabled if DHCP is checked.

NTP Server IP

Description

This IP address allows the user to configure the NTP Server statical IP address for the repeater Ethernet Port 1, which is used by the repeater over the IP network.

Note

- The field is enabled if NTP is checked.

IP Repeater Programming

Enable (IP Repeater Programming)

Description

Allows the user to enable or disable the IP Repeater Programming feature on a Repeater.

See Also

- Introduction to CPS \ Exploring the CPS \ Radio Programming \ IP Repeater Programming.

Time Zone

Daylight Saving Time

Description

This field indicates whether or not the Daylight Savings Time is enabled. If set to a *1,* then DST is enabled and an additional hour must be added to the timezone offset. This is to be used by the Capacity Max system web server when displaying timestamps.

Offset

Description

If the value is *1,* then the hours and fractional hour offset must be subtracted from the base UTC time. If the value is *0*, then the offset shall be added to UTC. This is to be used by the Capacity Max system web server when displaying timestamps.

Hour Offset

Description

This field represents the number of hours that can be offset from UTC. This field is used by the Capacity Max system web server when displaying timestamps.

Minute Offset

Description

The value can 1, 2, or 3 which equates to 15, 30, or 45 minutes that the user must add or subtract from UTC for calculate the local time. This is to be used by the Capacity Max system web server when displaying timestamps.

NTP Settings

DHCP

Description

Dynamic Host Configuration Protocol (DHCP) allows you to select if the IP address for the multisite repeater is static or dynamic. This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *Peer* or *Master*.
- This feature is disabled (unchecked) when **Link Type** is set to *Master*.
- The **Ethernet IP**, Gateway IP, and Gateway Netmask features are disabled if this feature is enabled (checked).
- The value of this feature is not preserved during cloning and is disabled (unchecked) after any clone operation.
- The feature is hidden when the IP Site Connect and the Capacity Plus - Single Site features are disabled or when the IP Site Connect and the Capacity Plus - Multi-Site features are disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

DNS

Description

This checkbox allows user to configure the NTP Server IP and NTP DNS Address. This checkbox greyed out when the DHCP field is enabled..

NTP DNS Address

Description

The field is enabled if NTP is checked.

NTP Server IP

Description

This IP address allows the user to configure the NTP Server statical IP address for the repeater Ethernet Port 1, which is used by the repeater over the IP network.

Note

- The field is enabled if NTP is checked.

RTC Refresh Interval (hr)

Description

The field specifies in 10 min interval step, how often the real-time clock (RTC) should be synced with the specified NTP Server or the GNSS Timing reference for the first Ethernet port. The default should 60 minutes or 6 steps of 10 minutes.

DNS Addresses

Add (DNS Address)

Description

This button allows the user to add a hostname in the grid DNS Address.

Note

- This feature is applicable to Next Generation Repeater only.

Delete (DNS Address)

Description

This button allows the user to delete a hostname in the grid DNS Address.

Note

- This feature is applicable to Next Generation Repeater only.

DNS Address Grid

Description

This is the container control that displays Position and Hostname column fields.

Note

- This feature is applicable to Next Generation Repeater only.

Hostname (DNS Address)

Description

This edit box allows the user to configure the DNS hostname. The valid inputting characters includes a through z, A through Z, digits 0 through 9, and the hyphen.

Notes

- If the user enters an invalid DNS Hostname, the value will change to the last valid DNS Hostname.
- This column is not editable.

Services

ARS Radio ID

Description

The Automatic Registration Service (ARS or also known as Presence Notifier) Radio ID is the ID of the radio that is connected to the ARS server that the user intends to communicate with for data services. When the radio powers up, it announces its presence by communicating with the ARS server. The server then checks if the radio user is valid and grants access accordingly.

Note

- Users are recommended to assign the **ARS Radio ID**s of radios acting as control stations to be 16448250 with a Common Air Interface (CAI) Network setting of 12. This allows the air interface network IP of the ARS server to be derived as 13.250.250.250.
- This feature is supported in Digital mode only.

See Also

- ARS IP.
- **ARS UDP Port**.
- **ARS**.

ARS IP

Description

The Automatic Registration Service (ARS) IP (also known as Presence Notifier IP) is the air interface network IP address of the registration server, that the user intends to communicate with for data services. When a radio powers up, it announces its presence by communicating with the ARS server. The server will then check if the radio user is valid and grants access accordingly. The ARS IP value is not editable. It is derived from the ARS Radio ID and CAI Network.

Note

- This feature value is set to 0.0.0.0 when the value of **ARS Radio ID** is blank.
- This feature is supported in Digital mode only.

ARS UDP Port

Description

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices. UDP enables communication between these devices via a unique port number. The Automatic Registration Service (ARS) UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to enable communication between the ARS client and ARS server. It is used to support the radio's automated registration service with the server. The internal radio ARS UDP receive port is always 4005. The configurable ARS UDP port is for destination server receive port only.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital mode only.

See Also

- **ARS IP**.
- **ARS**.

TMS Radio ID

Description

The Text Messaging Service (TMS) Radio ID is the ID of the radio that is connected to the TMS server. It is recommended that the TMS server application be installed on the same server as the Automatic Registration Service (ARS) server application.

Note

- Users are recommended to assign the **TMS Radio ID**s of radios acting as control stations to be 16448250 with a Common Air Interface (CAI) Network setting of 12. This allows the air interface network IP of the TMS server to be derived as 13.250.250.250. The TMS IP value of any radio that has to communicate with that particular TMS server should then be set to 13.250.250.250.
- This feature is supported in Digital mode only.

See Also

- **TMS IP**.
- T**MS UDP Port**.

TMS IP

Description

The Text Messaging Service (TMS) IP refers to the air interface network IP address of the TMS server. It is recommended that the TMS server application be installed on the same server as the Automatic Registration Service (ARS) server application. The TMS IP value is not editable. It is derived from the TMS Radio ID and CAI Network.

Note

- This feature value is set to 0.0.0.0 when the value of **TMS Radio ID** is blank.
- This feature is supported in Digital mode only.

See Also

- **TMS Radio ID**.
- T**MS UDP Port**.

TMS UDP Port

Description

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices. UDP enables communication between these devices via a unique port

number. The TMS UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to support the text messaging service (TMS). The internal radio TMS receive UDP port is always 4007.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital mode only.

See Also

- **TMS IP**.

User Defined UDP Port 1

Description

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio. Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all **User Defined UDP 1** uses the same port number and accessed by the same application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 2 and User Defined UDP 3. This is a radio-wide feature.

Range	
Maximum	65535, Disabled
Minimum	1
Increment	1

Notes

- It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).
- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is disabled if the *Disabled* option is selected.
- This feature is supported in Digital mode only.

User Defined UDP Port 2

Description

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio. Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all **User Defined UDP 2** uses the same port number and accessed by the same application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 1 and User Defined UDP 3. This is a radio-wide feature.

Range	
Maximum	65535, Disabled
Minimum	1
Increment	1

Notes

- It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).
- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is disabled if the *Disabled* option is selected.
- This feature is supported in Digital mode only.

User Defined UDP Port 3

Description

This allows the specification of three user-defined UDP ports for use of applications (other than the standard internal applications) that transmit data through the radio. Radios that have Compressed UDP Data Header enabled can compress the 28 byte UDP/IP header down to 4 bytes if the port number and applications are configured to match among the radios in the system (i.e. all **User Defined UDP 3** uses the same port number and accessed by the same application) to improve data transfer throughput. It is recommended to keep the value of this field unique from User Defined UDP 1 and User Defined UDP 2. This is a radio-wide feature.

Range	
Maximum	65535, Disabled
Minimum	1
Increment	1

Notes

- It is not recommended to use the port numbers reserved for internal applications (4001, 4004, 4005, 4007, 4008, 4061, 4062, 4063, 4066, 4067, 4068, 4069).
- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is disabled if the *Disabled* option is selected.
- This feature is supported in Digital mode only.

XCMP Server ID

Description

This feature allows user to configure the XCMP server ID. This is a radio-wide feature.

Notes

- Blank value is a valid choice for this control.
- This feature is supported in Digital, Capacity Plus - Single Site and Capacity Plus - Multi Site mode.

XCMP Server IP

Description

This feature allows user to view the IP address of the XCMP server. The XCMP server IP Address refers to the air interface network IP address of the XCMP server. This feature is not editable. It is derived from the XCMP Radio ID and CAI Network. This field defines the XCMP Raw Data destined Server IP Address. This is a radio-wide feature.

Notes

- The default value for this feature is set to 0.0.0.0 when the value of XCMP Server ID is blank.
- The value in the first octet is always 1+ the value in CAI Network.
- The value in the last three octets correspond to the value in XCMP Server ID.
- This feature is supported in Digital, Capacity Plus - Single Site and Capacity Plus - Multi Site mode.

Battery Management Server ID

Description

This configuration allows the user to set the Battery Management server ID.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- Blank value is a valid choice for this spin edit.

Battery Management Server IP

Description

This edit box allows the user to see the IP address of the Battery Management server.

Note

- This feature is not editable.
- The value in this feature must be 0.0.0.0 when the value of Battery Management Server ID is blank.
- The value in the first octet shall always be 1 + the value in CAI Network.
- The value in the last three octets correspond to the value in Battery Management Server ID.

Control Station

Control Station

Description

The field contains the control station fields.

Fixed Installation

Description

Allows the user to increase the power of the control station beyond the normal limits for subscriber radios. Fixed Installation should be checked if the mobile is deployed as part of a 'Fixed Installation' in an R&TTE country.

Note

- This feature is only applicable to certain MOTOTRBO mobile models and in countries that require R&TTE certification.

Voice Only

Description

The Voice Only feature, when selected, disables data calls in the radio. The radio will no longer be able to receive or send Location, Text, Telemetry, etc. The user must NOT select this feature in a radio that is not used as a control station. Even when the radio is used as a control station, the applicability of the feature is limited to certain use case relating to migration of data applications from control station to the MNIS data gateway. For more information on the usage of this feature, refer to the System Planner.

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Data Modem Window Size

Description

The feature allows user to choose the window size for the data modem. The choices are *2, 5, 6, 7, 8, 9,* and *10.* This is a radio-wide feature.

Notes

- This feature is greyed-out if Data Modem System Type is set to *None*.
- This feature is supported in IP Site Connect, Digital, Capacity Plus - Single Site and Capacity Plus - Multi Site mode.

Data Modem System Type

Description

The feature allow the user to Enable/Disable Data Modem as it defines which system the Data Modem is. There are three available options: *None, Digital,* and *Capacity Plus - Single Site.* When *None* is enabled, the radio is not a data modem. If data revert is expected. set this field to *None.* When *Capacity Plus - Single Site* is enabled, the radio is a Data Revert Control Station working at Capacity Plus - Single Site mode, when *Digital* is enabled, the radio is a conventional Control Station. This is a radio-wide feature.

Notes

- Field radio cannot enable data modem.
- If this field is set to *Digital* for subscriber, the radio functions as a control station. To avoid this instance, set this field to *None*.
- The *Capacity Plus - Single Site* option is only applicable if the Capacity Plus - Single Site or Capacity Plus - Multi Site features are enabled.
- This feature is supported in IP Site Connect, Digital, Capacity Plus - Single Site and Capacity Plus - Multi Site mode.

Repeater Latitude (Degree)

Description

This feature defines the latitude of local repeater or control station (direct mode). Positive means north. Negative means south. This is a radio-wide configuration.

Range	
Maximum	90 degrees
Minimum	-90 degrees
Increment	0.01 degrees

Notes

- If the Data Modem System Type is set to *None*, this field is not editable.
- This feature allows blank as a valid value. Therefore, user can leave these values as blanks if the user does not want to use the feature.

Repeater Longitude (Degree)

Description

This field defines the longitude of local repeater or control station (direct mode). Positive means east. Negative means west. This is a radio-wide configuration.

Range	
Maximum	180 degrees
Minimum	-180 degrees
Increment	0.01 degrees

Notes

- If the Data Modem System Type is set to *None*, this field is not editable.
- This feature allows blank as a valid value. Therefore, user can leave these values as blanks if the user does not want to use the feature.

ARS Monitoring ID

Description

The Automatic Registration Service (ARS) Monitoring ID is the ID of the radio that is connected to the ARS server. The control station and MOTOTRBO Network Interface Service (MNIS) associated with the RM are programmed with an ARS Monitor ID that matches the radio ID of the third-party data application's control station when using a passive presence configuration. Additionally, the DDMS used by RM is configured with a "Passive" option.

A control station or MNIS with an ARS Monitoring ID monitors the selected channel for ARS messages targeted towards the specified radio ID. When an ARS message is received, the message is forwarded, but is not acknowledged over-the-air. This ensures there are no over-the air collisions with the acknowledgements sent by the third-party data application's control stations.

Control stations and MNISs with an ARS Monitoring ID continue to transmit and receive normally on their own programmed radio ID and application ID. The radio IDs of the control stations or the application ID of the MNIS used by the RM must be different than the third-party data application's control stations.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- Blank value is a valid choice for this feature when not using OTAP in conjunction with ARS.

ARS Monitoring IP

Description

The Automatic Registration Service (ARS) IP (also known as Presence Notifier IP) is the air interface network IP address of the registration server, that the user intends to communicate with for Over-the-Air Programming (OTAP) services. When a radio powers up, it announces its presence by communicating with the ARS server. The server will then check if the radio user is valid and grants access accordingly. This value is not editable. It is derived from the **ARS Monitoring ID** and CAI Network.

Note

- The value in the first octet is always 1+ the value in **CAI Network**.
- The value in the last three octets is set based on the value in **ARS Monitoring ID**.
- This feature value is set to 0.0.0.0 when the value of **ARS Monitoring ID** is blank.

Location Server UDP Port

Description

This feature allows user to configure the User Datagram Protocol (UDP) port of the location server. When the location packet data decompressed from location CSBK and forward to the PC via USB, the destination UDP port will be set. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital, IP Site Connect, and Capacity Plus - Single Site modes.

XCMP Server UDP Port

Description

This feature allows user to configure the XCMP Server User Datagram Protocol (UDP) port. When the XCMP raw data is decompressed from the XCMP device to server CSBK and forwarded to the PC via USB, the destination UDP port will be set.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, that is. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital, Capacity Plus - Single Site , IP Site Connect, and Capacity Plus - Multi Site mode.

Battery Management Server UDP Port

Description

This configuration allows user to set the UDP port of the Battery Management

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.

Bluetooth

Country Code Channel

Description

Configures different frequency hopping channel support for different country. The choices are 79 Channels and 23 Channels. 23 Channels setting is only used in France and Spain.

Reconnect TOT (min)

Description

Sets the duration that the radio waits while attempting to reconnect to the same device, e.g. Bluetooth Headset or a serial Bluetooth device after the device is disconnected perhaps due to out or range or power off from the radio. The Mobile may want to use a longer time out because it does not have any battery life concern.

Range	
Maximum	30 (Portable), 30 and ∞ (Mobile) min
Minimum	0 min
Increment	1 min

Note

- This feature automatically sets the value to infinity (∞) or *Disabled* (for Portable) if the user input is greater than 30.
- This feature automatically sets the value to *Disabled* if the user input is less than 1.

Device Database Erase on Power Up

Description

Allows user to enable and disable the Device Database Erase On Power Up.

Notes

- This feature is supported in Digital mode only.
- This feature is greyed-out when Permanent Discoverable is enabled.

Off-Hook

Description

Defines the Mobile audio routing when the Bluetooth microphone is off the hook.

Option	Functionality
Disconnect Bluetooth Audio	Regardless of whether the Bluetooth Headset is connected to the radio or not, and whether the Bluetooth or internal radio audio path is active or not if the Bluetooth Headset is connected to the radio, the radio utilizes the internal radio audio path.
None	When the Bluetooth Headset is not connected to the radio, the radio utilizes the internal radio audio path. When the Bluetooth Headset is connected to the radio, the radio utilizes the Bluetooth audio path if the Bluetooth audio path is active and utilizes the internal radio audio path if the internal radio audio path is active. This path can be switched via the programmable button press (*Buttons - Bluetooth Headset Audio Switch*).

Rear PTT Audio Routing

Description

Defines the Mobile rear PTT audio routing for Bluetooth transmission. It is possible to meet Hands-Free operation regulation, by configuring the rear PTT as Foot-Switch for Bluetooth Mic transmission. Also, the user may use the rear PTT for data transmission or preconfigured microphone audio (i.e. Visor Mic)).

Option	Functionality
Headset Mic Audio Follows Rear PTT	If the rear PTT is pressed, then the transmission audio is taken from the Bluetooth Headset microphone.
Rear Mic Audio Follows Rear PTT	If the rear PTT is pressed, then the transmission audio is taken from the radio rear microphone.

Remote HSP Address

Description

Configures a remote Bluetooth Headset (HSP) device hardware address for pairing in a Non-Display or Numeric Display model radios. The range is "00:00:00:00:00:00:00" to "FF:FF:FF:FF:FF:FF". Example of an address is "00:21:3c:2d:1F:5c".

Remote SPP Address

Description

Configures a remote Bluetooth data (SPP) device hardware address for pairing in a Non-Display or Numeric Display model radios. The range is "00:00:00:00:00:00:00" to "FF:FF:FF:FF:FF:FF". Example of an address is "00:21:3c:2d:1F:5c".

POD PTT Device Address

Description

This preprogrammed address is used to connect to the PTT pod device on a preprogrammed button. The format and range for the address are (00-FF):(00-FF):(00-FF):(00-FF):(00-FF):(00-FF).

Note

- This feature is applicable to Non Display models only.

HSP Fixed Pin

Description

Configures a fixed pin for the Bluetooth Headset pairing authentication. During the pairing process, if pin authentication is requested by the remote device, the radio which is also the Bluetooth Host will use this pin to authenticate. The user can enter a maximum of six numeric digits. For example, "000" and "00000". They are different pins.

Range	
Maximum	999999
Minimum	0
Increment	1

Notes

- For the 3- and 4- button radio models, pairing password pin must be configured via CPS.
- This feature value cannot be empty.

SPP Fixed Pin

Description

Configures a fixed pin for the Bluetooth data device (i.e. Scanner) pairing authentication. During the pairing process, if pin authentication is requested by the remote device, the radio which is also the Bluetooth Host will use this pin to authenticate. The user can enter a maximum of six numeric digits. For example, "000" and "00000". They are different pins.

Range	
Maximum	999999
Minimum	0
Increment	1

Notes

- For the 3- and 4- button radio models, pairing password pin must be configured via CPS.
- This feature value cannot be empty.

Permanent Discoverable 

Description

This check box allows user to enable or disable Bluetooth Permanent Discoverable.

This feature is supported only on portable with bluetooth feature available.
This feature is hidden when the Bluetooth Permanent Discoverable feature is not purchased.

Notes

- This feature is supported only on portable with Bluetooth feature enabled.
- This feature is hidden when the Bluetooth Permanent Discoverable feature is not purchased.

Enable 

Description

This check box allows you to enable or disable the Bluetooth feature.

Bluetooth Serial Port Profile Data Routing

Destination (Bluetooth) 

Description

Configures the destination for data routing in a Bluetooth connection. Only one destination route is configured at any given time.

Option	Functionality
None	No Bluetooth data routing.
IP	Data is routed from the Bluetooth device to a server IP address (applicable to Digital mode only).
Option Board	Data is routed from the Bluetooth device to the option board.
Data Accessory	Data is routed from the Bluetooth device to the data accessory device.

Note

- The feature is greyed-out when Permanent Discoverable is enabled.

Destination Network Type (Bluetooth)

Description

Configures the network type used for data routing in a Bluetooth connection. The available choices are CAI, PC Bluetooth or PC USB.

Option	Functionality
Channel Select 1	This is an input line that allows an external device to select a channel. When the pin is assigned to this option, the pin can be triggered individually or combined with other pins assigned to this option to select a channel. See Configuration of Pins for Channel Select.
Channel Select 2	Refer to *Channel Select 1* functionality.
Channel Select 3	Refer to *Channel Select 1* functionality.
Channel Select 4	Refer to *Channel Select 1* functionality.

Notes

- This feature is greyed-out if **Destination (Bluetooth)** is set to a value other than *IP*.
- The feature is greyed-out when Permanent Discoverable is enabled.
- This feature is supported in Digital mode only.

Destination Radio ID (Bluetooth)

Description

Configures the radio ID for sending generic Bluetooth Serial Port Profile (SPP) data (e.g. Bluetooth Scanner data) to the remote radio via the network as specified in **Destination Network Type**. This ID and the **Destination Network Type** value are used to derive the **Destination IP** for the remote radio.

Range	
Maximum	16776415
Minimum	1
Increment	1

Notes

- This feature is greyed-out if **Destination (Bluetooth)** is set to a value other than *IP*.
- The feature is greyed-out when Permanent Discoverable is enabled.
- This feature is supported in Digital mode only.

Destination IP (Bluetooth)

Description

This is the IP Address used for data routing in a Bluetooth connection. The format and range for the address are
(000-255).(000-255).(000-255).(000-255).

Note

- This feature is non-editable.
- The first octet of this feature is set to the same value of CAI Network when Destination Network Type is set to *CAI*.
- The first octet of this feature is set to the value of of CAI Network when Destination Network Type is set to *PC USB*.
- The first octet of this feature is set to the value of of CAI Network when Destination Network Type is set to *PC Bluetooth*.
- The value in the last three octets correspond to the value in Destination Radio ID.
- This feature is supported in Digital mode only.

Destination UDP Port (Bluetooth)

Description

Configures the UDP Port used for routing the Serial Port Profile (SPP) data to the remote radio's IP application.

Range	
Maximum	65535
Minimum	0
Increment	1

Notes

- This feature is greyed-out if **Destination (Bluetooth)** is set to a value other than *IP*.
- The feature is greyed-out when Permanent Discoverable is enabled.
- This feature is supported in Digital mode only.

USB HID Data Routing

Destination (USB)

Description

Configure the destination for data routing in a Universal Serial Bus (USB) connection. Only one destination route is configured at any given time.

Option	Functionality
None	No USB data routing.
IP	Data is routed from the USB device to a server IP address (applicable to Digital mode only).
Option Board	Data is routed from the USB device to the option board.

Destination Network Type (USB)

Description

Configure the network type used for data routing in a Universal Serial Bus (USB) connection. The available choices are CAI, PC Bluetooth or PC USB.

Note

- This feature is enabled if Destination (USB) is set to *IP*.
- This feature is supported in Digital mode only.

Destination Radio ID (USB)

Description

Configures the radio ID for sending generic Universal Serial Bus (USB) Human Input Device (HID) data (e.g. Scanner data) to the remote radio via the network as specified in **Destination Network Type**. This ID and the **Destination Network Type** value are used to derive the **Destination IP** for the remote radio.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- This feature is enabled if Destination (USB**)** is set to *IP*.
- This feature is supported in Digital mode only.

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Destination IP (USB)

Description

This is the IP Address used for data routing in a Universal Serial Bus (USB) connection. The format and range for the address are (000-255).(000-255).(000-255).(000-255).

Note

- This feature is enabled if the Destination (USB) feature is set to *IP*.
- This feature is supported in Digital mode only.

Destination UDP Port (USB)

Description

Configures the UDP Port used for data routing in a Universal Serial Bus (USB) connection.

Range	
Maximum	65535
Minimum	0
Increment	1

Note

- This feature is enabled if the Destination (USB) feature is set to *IP*.
- This feature is supported in Digital mode only.

IP Repeater Programming

Enable (IP Repeater Programming)

Description

Allows the user to enable or disable the IP Repeater Programming feature on a Repeater.

See Also

- Introduction to CPS \ Exploring the CPS \ Radio Programming \ IP Repeater Programming.

Wi-Fi

Enable

Description

This check box allows the user to enable or disable Wi-Fi connection on the radio.

Notes

- User must enable this feature to use the share the location of the radio through WAVE feature.
- This field is hidden when the Wi-Fi feature is disabled.

802.11D

Description

This check box allows the user to enable or disable 802.11D support. 802.11D is a standard that automatically sets the available Wi-Fi channels based on information provided by the Wi-Fi access point.

Notes

- This field is hidden when the Wi-Fi feature is disabled.

Regulatory Region

Description

This field allows the user to choose the regulatory region for the radio. The regulatory region indicates the area where this radio is used and allows the radio to restrict the Wi-Fi channels only to those which are permitted by the appropriate regulations. Valid choices include "*FCC*", "*IC*", "*ETSI*", "*Japan*", and "*China*".

Notes

- This field is hidden when the Wi-Fi feature is disabled.

DHCP

Description

This check box allows the user to select between static or dynamic Wi-Fi IP address.

Notes

- This field is hidden when the Wi-Fi feature is disabled

IP Address

Description

This field allows the user to specify the Wi-Fi IP Address.

Notes

- This field is hidden when the DHCP check box is checked.
- This field is hidden when the Wi-Fi feature is disabled.

Gateway IP

Description

This field allows the user to configure the Gateway IP Address for Wi-Fi.

Notes

- This field is hidden when the DHCP check box is checked.
- This field is hidden when the Wi-Fi feature is disabled.

Gateway Netmask

Description

This field allows the user to configure the Gateway Netmask for Wi-Fi.

Notes

- This field is hidden when the DHCP check box is checked.
- This field is hidden when the Wi-Fi feature is disabled.

Primary DNS Server IP

Description

This field allows the user to specify the IP address of the primary DNS Server for Wi-Fi.

Notes

- This field is hidden when the DHCP check box is checked.
- This field is hidden when the Wi-Fi feature is disabled.

Secondary DNS Server IP

Description

This field allows the user to specify the IP address of the secondary DNS Server for Wi-Fi.

Notes

- This field is hidden when the DHCP check box is checked.
- This field is hidden when the Wi-Fi feature is disabled.

DNS-SD Interval

Description

This drop list allows the user to enable and disable DNS-SD for the Bluetooth interface of the radio. Valid choices include "*Disabled*" and "*90 sec*" .

Wi-Fi

Description

This field allows the user to configure the Wi-Fi access points. This is the container control which displays Network SSID, Security Type, and Encrypted Network Password fields in a table format. The user is allowed to add or delete a row.

Notes

- This field is hidden when the Wi-Fi feature is disabled.

Network SSID

Description

This field allows the user to specify the SSID to be used for the Wi-Fi access point.

Notes

- This field is hidden when the Wi-Fi feature is disabled.
- If the user enters a value that is more than 32 bytes when encoded in UTF-8 format, the value will rest to the previous value.
- Duplicated SSID is not allowed. When a duplicated SSID is entered, the value is automatically updated to the previous value and a message displays.
- If the user enters a blank value and leaves this field, the value changes to the previous value.

Security Type

Description

This field allows the user to specify the security type to use for the Wi-Fi access point. The valid choices are "None", "WEP", and "WPA-Personal/WPA2-Personal".

Notes

- This field is hidden when the Wi-Fi feature is disabled.
- If the user sets the value to a choice other than "None", the user must reset the Encrypted Network Password values according to the new security type value.

Encrypted Network Password

Description

This field allows the user to specify the password to use for the Wi-Fi access point.

Notes

- This field is hidden when the Wi-Fi feature is disabled.
- The characters entered in this field are not visible.
- If Security Type is set to "None", this field will be greyed out.
- If Security Type is set to "WEP", the value in this field must be one of the following: 10 hexadecimal digits, 26 hexadecimal digits, 5 printable ASCII characters, or 13 printable ASCII characters.
- If the user enters an invalid value which is not specified in note 3 and 4, the value will reset to the default value. If this field is left blank, the value will not reset.

Add

Description

This field allows the user to add a Wi-Fi access point configuration.

Notes

- This field is hidden when the Wi-Fi feature is disabled.

Delete

Description

This field allows the user to delete a Wi-Fi access point configuration.

Notes

- This field is hidden when the Wi-Fi feature is disabled.

Wi-Fi On

Description

This field allows the user to configure voice announcement for the Wi-Fi On button option. The options are "None" and all available Voice Announcement files.

Notes

- This field cannot be edited when "None" is the only option.
- This field is hidden when the Wi-Fi feature is disabled.

Wi-Fi Off

Description

This field allows the user to configure voice announcement for the Wi-Fi Off button option. The options are "None" and all available Voice Announcement files.

Notes

- This field cannot be edited when "None" is the only option.
- This field is hidden when the Wi-Fi feature is disabled.

Wi-Fi Enabled

Description

Allows the user to configure voice announcement for the Wi-Fi "Enabled" button option. The options are "None" and all available Voice Announcement files.

Notes

- This field cannot be edited when "None" is the only option.
- This field is hidden when the Wi-Fi feature is disabled.

Wi-Fi Disabled

Description

Allows the user to configure voice announcement for the Wi-Fi "Disabled" button option. The options are "None" and all available Voice Announcement files.

Notes

- This field cannot be edited when "None" is the only option.
- This field is hidden when the Wi-Fi feature is disabled.

Wi-Fi Connected

Description

Allows the user to configure voice announcement for the Wi-Fi "Connected" button option. The options are "None" and all available Voice Announcement files.

Notes

- This field cannot be edited when "None" is the only option.
- This field is hidden when the Wi-Fi feature is disabled.

WAVE

WAVE Server Type

Description

This read-only field displays the WAVE™ Server type as Enterprise WAVE Server for all connected radios.

Server Name

Description

This field box allows the user to enter the WAVE™ server name. This is a radio-wide feature.

Share Location

Description

This field allows the user to share the location of the radio. This is a radio-wide feature. When enabled and if GNSS is fixed, the radio sends the location to the WAVE™ server every 7.5 seconds. This allows smartphones with WAVE application to view the radio's position.

Notes

- Users can only share the location when in Wi-Fi mode.

WAVE User Name

Description

This field allows the user to enter the WAVE™ user ID. This is a radio-wide feature.

WAVE Password

Description

This field allows the user to enter the WAVE™ password. This is a radio-wide feature.

Link Establishment

Link Type

Description

This feature configures the repeater type.

Option	Functionality
None	The repeater performs in Local Mode and does not support any of the Link Establishment system functionality.
Master	The master functions as the central point for a Repeater/RDAC-IP PC to find other Repeaters/RDAC-IP PCs in the same Link Establishment system.
Peer	The peer is a repeater, or a PC running the RDAC application, that is connected to and able to perform as part of a Link Establishment system.

Notes

- The feature is only applicable for MOTOTRBO 1.4+ releases.
- This feature is hidden when the IP Site Connect and the Capacity Plus - Single Site features are disabled or when the IP Site Connect and the Capacity Plus - Multi Site features are disabled. (Not applicable for 32 MB repeater starting in MOTOTRBO 1.7+ releases).
- This feature is available under Link Establishment in MOTOTRBO 1.7+ releases.
- This available choices are *None, Master,* and *Peer* in MOTOTRBO releases prior to 1.7+.
- Notwithstanding Note 4 and Note 5, when Voting Mode is set to *Digital Satellite Receiver,* this feature is greyed-out and set to Peer.
- This available choices are *Single Site, IP Site Master,* and *IP Site Peer* in MOTOTRBO 1.7+ releases.
- The **Authentication Key**, **DHCP**, **Ethernet IP**, **Peer Firewall Open Timer (sec)**, **Gateway IP**, **Gateway Netmask**, **UDP Port**, **IP Site Connect**, IP Site Connect, Messaging Delay, **Beacon Duration (ms)** and **Beacon Interval (sec)** features are disabled if this feature is set to *None*.
- The **Master Archive File** and **Master UDP Port** features are disabled if this feature is set to *None* or *Master*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Authentication Key

Description

This feature allows the user to specify the private key value in a repeater using Link Establishment. All repeaters within the same Link Establishment system must share the same Authentication Key. The user may enter up to a maximum of 40 characters. Valid characters are 0-9 and A-F. Setting this value to blank indicates that the Authentication is disabled. Setting this key value as forty "F", or Ø indicates that the current value on the targeted repeater is to be preserved during write/clone operations.

For security reasons, if the codeplug is read from a radio or opened from archive, its Authentication Key value is shown as blank.

This is a radio-wide feature.

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Link Type** is set *Peer* and **Master Archive File** is specified.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Master IP

Description

This feature specifies the IP Address of the Master within the Link Establishment system. The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Notes

- This feature is enabled when Link Type is set to *Peer.*
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Master UDP Port

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Master within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- This feature is enabled when **Link Type** is set *Peer* and **Master Archive File** is left blank.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

UDP Port

Description

This feature specifies the User Datagram Protocol (UDP) port number of the Peer within the Link Establishment system. UDP is a protocol used for peer-to-peer services within the Link Establishment system. The Master's UDP is set as the Peer's Master UDP Port in the Link Establishment system. This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Note

- This feature is disabled when **Link Type** is set to *None*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Peer Firewall Open Timer (sec)

Description

This feature displays and allows the user to select a firewall open message timer for Peer to Peer Protocol (P2P) messages. This timer is used to keep the connection alive between the application and its peer by having a periodic message sent between them at an interval as defined here. This timer is only applicable to Peers. This is a radio-wide feature.

Range	
Maximum	60 sec
Minimum	5 sec
Increment	1 sec

Notes

- This feature is disabled when **Link Type** is set to *None*.
- This feature is disabled when **Master Archive File** is specified.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Master Archive File

Description

This feature allows the user to specify the master archive file for the CPS to automatically update the Link Establishment system settings. To browse for the file, click the ... button. An error message appears if the file cannot be opened or if the file is not a valid master archive file. Once this field has been set with a valid archive, if that archive is opened and values are modified, the modified values shall not be reflected in this archive. If the file chosen for this field is in use, an error message will be shown. If the file chosen for this field does not exist or is invalid, an error message is thrown and this field is left blank. To retrieve the updated master settings from the master archive, re-program the peer or open the peer archive again.

The Master IP will not be retrieved from the specified archive. This is because when the DHCP is enabled Master's Ethernet IP is no longer the Master IP address for the peer. The Master IP is always enabled for Peer regardless if there is a Master Archive File specified.

This field may also be left blank if there is not existing master file to be associated with the peer. This is a radio-wide feature.

Notes

- This feature is only applicable for 1.4+ release.
- The application should validate the chosen archive file for this feature and if the archive is valid, the application disables the **Authentication Key** and **Peer Firewall Open Timer (sec)** and inherits the values of these features from the chosen archive file in this feature.
- This feature is enabled when **Link Type** is set to *Peer*.

- This feature is hidden when the IP Site Connect and the Capacity Plus - Single Site feature are disabled.
- For CPS version 1.7+ releases, this feature is in Link Establishment.
- This feature is set to a blank value when **Link Type** is set to *None* or *Master*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Browsing for the Master Archive File

Description

Click the **...** button to browse for the Master Archive File. A standard Windows Open dialogue box appears. The master archive file is needed for the CPS to automatically update the Link Establishment system settings.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

DNS

Description

This checkbox allows the user to configure if the Master DNS Host server is used or not.

Notes

- This feature is disabled when **Link Type** is set to *None*.

Master Hostname

Description

This droplist allows the user to configure Master DNS Host server name for repeater, the available choices are all the codeplug DNS Server Hosts.

Notes

- This feature is disabled when **Link Type** is set to *None* or Master DNS is unchecked.

IP Site Connect

Beacon Duration (ms)

Description

This feature configures the length of the beacon signal. This is a radio-wide feature.

Range	
Maximum	18000 ms
Minimum	480 ms
Increment	120 ms

Notes

- This feature is disabled when **Link Type** is set to *None*.
- For 1.5a+ and MOTOTRBO SLR Series repeaters, this feature is hidden when the IP Site Connect and the Satellite Receiver features are disabled.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Beacon Interval (sec)

Description

This feature configures how often the repeater will send the beacon signal. This is a radio-wide feature.

Range	
Maximum	600 sec
Minimum	10 sec
Increment	10 sec

Notes

- The **Beacon Duration (ms)** feature is disabled for repeaters when this feature is set to *0*.
- This feature is disabled when **Link Type** is set to *None*.
- For 1.5a+ and MOTOTRBO SLR Series repeaters, this feature is hidden when the IP Site Connect and the Satellite Receiver features are disabled.
- This feature is the Network Node for subscriber and Link Establishment node for repeater.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Capacity Plus

Site ID (Repeater)

Description

Enters the ID of the site that the Repeater is on.

Range	
Maximum	20
Minimum	1
Increment	1

Note

- All the Repeaters on the same site must have the same ID.
- The Site ID of the subscriber radio connecting to the Repeater of this site must have the same ID as this feature.
- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- his feature is disabled when Link Type is set to *None*.
- This feature is supported in Digital mode only.

Site Alias (Repeater)

Description

Configures a name for the site that the Repeater is on.

Notes

- This feature is displayed when the Capacity Plus - Multi Site or Satellite Receiver features are enabled.
- This feature is disabled when Link Type is set to *None*.
- This feature is supported in Digital mode only.

Capacity Plus Beacon Duration (ms)

Description
This feature configures the length of the Beacon Duration for Capacity Plus - Single Site. The minimum recommended Beacon Duration for 2, 4, 6, or 8 channels is 180 ms. The minimum recommended Beacon Duration for 10 or 12 channels is 240 ms. This is a radio-wide feature.

Range	
Maximum	600 ms
Minimum	180 ms

Increment	60 ms

Notes

- This feature is displayed when the Capacity Plus - Single Site, Capacity Plus - Multi Site, or Satellite Receiver feature is enabled.
- This feature is disabled when Link Type is set to *None.* This dependency is only applicable for MOTOTRBO SLR Series repeaters.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Capacity Plus Beacon Interval (ms)

Description

This feature specifies how often the radio sends out the beacon signal for Capacity Plus - Single Site. In a Capacity Plus - Single Site system, this feature value should be higher in the subscriber than the repeater. In a Capacity Plus - Multi Site system, this feature value should be the same in both the subscriber and repeater. This is a radio-wide feature.

Range	
Maximum	4800 ms
Minimum	960 ms
Increment	480 ms

Notes

- This feature is displayed when the Capacity Plus - Single Site, Capacity Plus - Multi Site, or Satellite Receiver feature is enabled.
- his feature is disabled when Link Type is set to *None.* This dependency is only applicable for MOTOTRBO SLR Series repeaters.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Rest Channel/Site IP

Description

The Rest Channel IP Address is a virtual IP address that is required for correct intra-site and inter-site operation of a Capacity Plus - Single Site or Capacity Plus - Multi Site system. As the Rest Channel rotates through the channel pool of a site, this virtual IP address is associated with a different physical repeater only for the duration for which one of its slots is the Rest Channel. This IP address MUST be the same for all repeaters residing at the same site.

The format and range for the address are (000-255).(000-255).(000-255).(000-255). This is a radio-wide feature.

Notes

- This feature is disabled when **Link Type** is set to *None*.
- This feature is displayed when the Capacity Plus - Single Site, Capacity Plus - Multi Site, or Satellite Receiver feature is enabled.

- This IP cannot be the same as the Ethernet IP if DHCP is disabled.
- This feature is applicable in Digital mode only.

Rest Channel/Site UDP Port

Description

In a Capacity Plus - Single Site system, this feature allows the user to configure the UDP port of the Repeater rest channel for communication with third party applications connected within a Capacity Plus - Single Site system.

In a Capacity Plus - Multi Site system, this feature allows the user to configure the UDP port of site for communication with other sites connected within a Capacity Plus - Multi Site system.

This is a radio-wide feature.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- This feature is disabled when **Link Type** is set to *None*.
- This feature is displayed when the Capacity Plus, Linked Capacity Plus, or Satellite Receiver feature is enabled.
- This port cannot be the same as the UDP Port.
- This feature is applicable in Digital mode only.

Rest Channel Time-Out-Timer

Description

The Rest Channel Time-out-Timer controls how long a repeater keeps its rest channel role in the absence of a new call activity before moving the role to another repeater in multi channel Capacity Plus - Single Site and Capacity Plus - Multi Site System. The Rest Channel Time-out-Timer starts as soon as a repeater assumes the rest channel role. In most call scenarios, the rest channel will move to another channel before the Rest Channel TOT expires. However, during a low call volume scenario (e.g. during off hours and holidays) the Rest Channel TOT will time out more often and it will normally keep rotating the rest channel from one channel to another.

The Rest Channel TOT will be most effective during idle or low call volume condition. For a site where the repeaters have different channel preference level, it is suggested to use larger Rest Channel TOT value (10 minutes), so that high-preference channels are more frequently utilized even during low call volume conditions. Note that the Rest Channel TOT mechanism steers the rest channel through all preference level repeaters in round-robin manner, whereas the incoming calls mechanism selects higher preference channels more often than lower preference channels.

Shorter Rest Channel TOT (2 minutes) will lead to faster Rest Channel rotation and better resilience to failure and interference, however may have minor impact to battery life, because radios will receive new rest channel assignment information more often.

The Rest channel rotation may cause minor delay in call access time during force rest channel switching period. The Faster the rotation, the more frequent will be such access time delays. Note the impact of such delays should be unnoticeable to radio users.

If necessary, the Adaptive Rest Channel Rotation functionality can also be disabled completely by disabling Rest Channel TOT value.

This droplist allows you to configure the Time Out Timer of the rest channel for the trunked Capacity Plus - Single Site repeater. Whenever the rest channel is not in use, the repeater switches to a different rest channel after the time is specified by this field. The purpose of this function is to increase the system's resilience to RF interference. The valid choices available are *Disabled*, *2*, *4*, *6*, *8*, and *10*.

Notes

- This feature is disabled when Link Type is set to None.
- This feature is displayed when the Capacity Plus - Single Site or Capacity Plus - Multi Site feature is enabled.
- This feature is applicable in Digital mode only.
- This feature is not applicable for Satellite Receivers.

Talkgroups

All Wide Area Talkgroups

Description

Allows the user to enable or disable all the wide area calls listed in the Wide Area Talkgroups table. When enabled, all the Group Calls listed in the table will be wide area on all the sites.

Note

- This feature is enabled only when Link Type is set to *Master*.
- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- This feature is supported in Digital mode only.

Add Wide Area Talkgroups

Description

Adds the Group Call for which the call will be wide area on the selected site. The user can then configure the list of sites into the Master by checking or unchecking the Site checkbox.

Notes

- This feature is enabled only when Link Type is set to *Master* and All Wide Area Talkgroups is unchecked.
- For MOTOTRBO SLR Series repeaters, this feature is enabled when All Wide Area Talkgroups is unchecked.

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- The number of editable columns depends on the value of **Max Number of Sites**. For example, when the value of **Max Number of Sites** is set to *5,* all the columns of this grid are editable from Call ID, Site 1 through Site 5.
- This feature is supported in Digital mode only.

Delete Wide Area Talkgroups

Description

Removes the highlighted row if no longer in use.

Notes

- This feature is enabled only when Link Type is set to *Master* and All Wide Area Talkgroups is unchecked.
- For MOTOTRBO SLR Series repeaters, this feature is enabled when All Wide Area Talkgroups is unchecked.
- This feature is hidden when the Capacity Plus - Multi Site or Satellite Receiver feature is enabled.
- This feature is supported in Digital mode only.

Wide Area Talkgroup Grid

Description

This grid allows the user to configure the Talkgroups.

Notes

- This grid is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- The grid is disabled when All Wide Area Talkgroups is checked.
- The grid is enabled only when Link Type is set to *Master*. This dependency is not available for MOTOTRBO SLR Series repeaters.
- When the value of Max Number of Sites is set to *3,* the columns of this grid are limited to *Call ID*, *Site 1, Site 2,* and *Site 3*.
- For MOTOTRBO SLR Series repeaters, all the columns of this grid displays *Call ID*, *Site 1* through *Site 15.*

Call ID (Wide Area Talkgroups)

Description

Enters the ID of the Group Call to be configured as wide area call for the selected site(s). Only Wide Area Talkgroups should be configured in this Talkgroups table.

Notes

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This ID must match the respective subscriber radio **Group ID**.
- You do not need to configure the Local Area Talkgroups. The system assumes that all talkgroups that are not configured in the Talkgroups table, will be Local Area Talkgroups.
- The Local Area Talkgroup ID can be re-used at different sites of the system, since they will not be transmitted across sites.
- This feature is supported in Digital mode only.

Site

Description

Selects or deselects a site to receive Group Call originating from the **Call ID** of another site.

Note

- This feature is enabled only when Link Type is set to *Master*.
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 1

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.* This dependency is not available for Next Generation Repeaters.
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 2

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*

- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 3

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 4

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 5

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 6

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 7

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 8

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 9

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 10

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 11

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 12

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 13

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 14

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.* This dependency is not available for Next Generation Repeaters.
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 15

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.* This dependency is not available for Next Generation Repeaters.
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 16

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus Extend feature is disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 17

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus Extend feature is disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 18

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus Extend feature is disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 19

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus Extend feature is disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Site 20

Description

Configures this Site to be associated with the **Call ID**.

Note

- This feature is hidden when the Linked Capacity Plus Extend feature is disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is disabled when **All Wide Area Talkgroups** is enabled.
- This feature is supported in Digital mode only.

Sites

Max Number of Sites

Description

Selects the maximum number of sites.

Notes

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver feature are disabled.
- For MOTOTRBO SLR Series repeaters models, this feature is hidden and the only value and choice is *15*.
- This feature is supported in Digital mode only.

Max Number of Repeaters per Site

Description

Displays the maximum number of repeaters per site. This feature is not editable.

Notes

- This feature is hidden when the Capacity Plus - Multi Site feature is disabled.
- This feature must be set to *6* when the value for Max Number of Sites is set to *3.*
- For MOTOTRBO SLR Series repeater models, this feature is hidden and the value is *8*.
- This feature is supported in Digital mode only.

Add Neighboring Sites

Description

Adds a site. The user can then configure the list of neighboring sites associated with the site into the Master for use when roaming.

Note

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is supported in Digital mode only.

Delete Neighboring Sites

Description

Removes the highlighted row if no longer in use.

Note

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- This feature is enabled when the row selected is the last row in the Neighboring Sites Grid.
- This feature is supported in Digital mode only.

Site ID (Neighboring Site)

Description

Enters the ID of the site to associate it with neighbor sites.

Note

- This feature is enabled only when Link Type is set to *Master*.
- This ID must match the respective Repeater **Site ID (Repeater)**.

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver feature are enabled.
- This feature is supported in Digital mode only.

Reserved Wide Area Channels

Description

Configures the number of channels in a Repeater provisioned for wide area transmissions for the site.

Notes

- This feature is hidden when the Capacity Plus - Multi Site and Satellite Receiver features are disabled.
- For MOTOTRBO SLR Series repeater models, this feature has a range from *0* to *16*.
- This feature is supported in Digital mode only.

Neighbor

Description

Selects or deselects a neighbor to the selected site.

Note

- This feature is enabled only when Link Type is set to *Master*.
- This feature range depends on the value of Max Number of Sites.
- This feature is supported in Digital mode only.

Neighbor 1

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Neighbor 2

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Neighbor 3

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Neighbor 4

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Neighbor 5

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Neighbor 6

Description

Selects this Neighbor from the list of Site ID's.

Notes

- This feature is hidden when the Linked Capacity Plus and Satellite Receiver features are disabled.
- This feature is enabled only when Link Type is set to *Master.*
- The value of this feature must be in the range of *1* and the maximum of all of Site ID fields in all rows.
- This feature must not be set as the value of Site ID in current row.
- This feature is supported in Digital mode only.

Announcement

Announcement Type

Description

This droplist allows you to configure the Announcement Type. The options are *None*, *Voice Announcement Files*, and *Text to Speech*.

Option	Functionality
None	Select this option if you do not want any announcement types in your configuration.
Voice Announcement Files	Select this option if you want to use Voice Announcement Files as your announcement type. When enabled, the you can map Motorola pre-recorded voice file to operation items (e.g. zone, channel, zone list and programmable button), configure the voice announcement parameters, and load the voice file from CPS into the radio. The recorded content is available in multiple languages and played when the user triggers the associated operation item or certain operation occurs such as channel announcement during the radio power up. The voice file settings can be custom configured at the Manage Voice Announcement menu. See Button Features for the description of each feature functionality.
Text to Speech	Select this option if you want to use Voice Text to Speech as your announcement type. This option is hidden if the Text to Speech feature is disabled

Priority

Description

Configures the priority of voice announcement over voice call.

Option	Functionality
High	Voice announcement has a higher priority than voice call. For example, if the user joins an ongoing call, the user waits until the channel announcement is completed before hearing the call.
Low	Voice call has a higher priority than voice announcement. For example, if the user joins an ongoing call, the channel announcement is truncated to allow the audio from the call to be heard first.

Voice Announcement File Selection

Set Voice Files

Description

Automatically configures a voice file to each parameter under File Selection that is set to *None,* if the filename of the voice file matches the parameter name. The -, _, and white space characters are ignored during the case-insensitive matching process.

Note

- This button is disabled if there is no voice file available.

Clear Voice Files

Description

Automatically sets each parameter under File Selection to *None.*

Note

- This button is disabled if there is no voice file available.

Voice Announcement File Selection

Description

Associates a voice announcement file to a programmable button. Voice announcement is played when the associated programmable button is triggered on the radio or accessory. The choices are *None* and all available voice announcement files.

Note

- This feature is disabled if *None* is the only choice.
- This field and all of its children is greyed out when Announcement Type is set to a value other than *Voice Announcement*.
- All the *Option Board Feature* of the Voice Announcement configuration depend on the Option Board Capable Feature.
- The *Option Board Feature 7-15* and *Non-Home Channel* are configurable Voice Announcement options but not configurable button choices.

See Also

- Button Features for the description of each feature functionality.

Select and All

Description

Associates a voice announcement file to a programmable button. Voice announcement is played when the associated programmable button is triggered on the radio or accessory. The choices are *None* and all available voice announcement files.

Note

- This feature is disabled if *None* is the only choice.
- This field and all of its children is greyed out when Announcement Type is set to a value other than *Voice Announcement*.
- All the *Option Board Feature* of the Voice Announcement configuration depend on the Option Board Capable Feature.
- The *Option Board Feature 7-15* and *Non-Home Channel* are configurable Voice Announcement options but not configurable button choices.

Trill Enhancement On

Description

This droplist allows you to configure voice announcement for Trill Enhancement On button choice. The choices are *None* and all available Voice Announcement files.

Note

- This feature is disabled if *None* is the only choice.
- Refer to the Feature Demo Video to view the feature.

Trill Enhancement Off

Description

This droplist allows you to configure voice announcement for Trill Enhancement Off button choice. The choices are "None" and all available Voice Announcement files.

Note

- This feature is disabled if *None* is the only choice.
- Refer to the Feature Demo Video to view the feature.

Home Channel Reminder Silenced

Description

This drop list allows you to configure the voice announcement for the *Silence Home Channel Reminder* button option. The options are *None* and all available Voice Announcement files.

Note

- This feature is non-editable if *None* is the only option.

New Home Channel

Description

This drop list allows you to configure voice announcement for *Reset Home Channel* button option. The options are *None* and all available Voice Announcement files.

Note

- This feature is non-editable if *None* is the only option.

Non-Home Channel

Description

This drop list allows you to configure voice announcement when a Home Channel Reminder occurs. The options are *None* and all available Voice Announcement files.

Note

- This feature is non-editable if *None* is the only option.

WAVE Channel List

Description

This list allows the user to configure the voice announcement for WAVE Channel List. The choices are "None" and all available Voice Announcement files.

Note

- This feature is disabled if *None* is the only choice.

Text To Speech

Text to Speech

Description

This is the topic for the Text to Speech configuration. Text To Speech is a feature that pronounces written text on portables and mobiles. This feature provides a hearing aid for you to identify the triggered features and your zone or channel.

The radio reads out the Text Message, Telemetry Status with Text, and Job Tickets when you receive it. The radio is able to announce Channel alias, Zone alias, and the features that you enable with the programmable buttons.

Note

- This feature is non-editable.
- This feature and all of its children are greyed out when Announcement Type is set to a value other than *Text to Speech*.
- This feature and all of its children are hidden when the Text to Speech feature is disabled.

Channel (Text to Speech)

Description

This checkbox allows you to enable or disable the reading of channel names using Text to Speech.

Note

- This feature is disabled if *None* is the only choice.

Zones (Text to Speech)

Description

This checkbox allows you to enable or disable the reading of zone names using Text to Speech.

Buttons (Text to Speech)

Description

This checkbox allows you to enable or disable the reading of button names using Text to Speech.

Text Messages (Text to Speech)

Description

This checkbox allows you to enable or disable the reading of text messages using Text to Speech.

Job Tickets (Text to Speech)

Description

This checkbox allows you to enable or disable the reading of job tickets using Text to Speech.

Note

- This feature depends on the Text to Speech feature.

Ruleset

Description

The grid allows you to configure a set of Text to Speech pronunciation rules. Each rule contains a key or value pair consisting of a Dictionary Entry and the corresponding Pronunciation.

Note
SS

- On read, this grid is populated with the values from the compressed Nuance-ruleset file in the codeplug.
- On write or clone, the values in this grid is converted to a Nuance-ruleset file, compressed, and then stored in the codeplug. Rows that have a blank value for Dictionary Entry is discarded during the conversion.
- This feature depends on the Text to Speech feature.

Voice Pack

Description

This droplist allows you to choose the voice pack to use for **Text to Speech.** The choices are *None*, *Do Not Change*, and all voice packs that are installed on this computer.

Note

- This droplist shows each voice pack in the following format; Language (Locale): Speaker Name [Gender]. For example, English (United States): Allison [Female].
- When you open a .ctb file or read a radio, if the current value is a voice pack that is not installed on this computer, you must change the value in the .ctb file to *Do Not Change.* You must not change the underlying value in the .ctb file or radio. The option *Do Not Change* is not applicable in any other case. This dependency is not applicable for Radio Management.
- The option *None* is only applicable when you load a no-voice pack into the radio or when Announcement Type is not set to *Text to Speech*.
- This field is greyed out and set to *None* when Announcement Type is not set to *Text to Speech*. The previous value of this field (if any) is preserved until you save the .ctb file.
- The option *Do Not Change* is only applicable when you load a voice pack into the radio.
- This feature depends on the Text to Speech feature.

Speech Rate

Description

This droplist allows the user to set the speed of the Text to Speech engine. This determines how fast phrases are spoken.

Dictionary Entry

Description

This edit box allows you to type a word or phrase to modify the default Text to Speech pronunciation.

Note

- If the value of this field is the same as another Dictionary Entry field, this edit box resets this field to the previous value. This dependency does not apply if the value of this field is blank.
- You are allowed to type a maximum of 40 characters for the value of this field.

Pronunciation

Description

This edit box allows you to specify a custom pronunciation for a particular word or phrase.

Note

- You are allowed to type a maximum of 100 characters for the value of this field.

Add

Description

This button allows you to add one Text to Speech dictionary entry.

Delete

Description

This button allows you to delete the selected Text to Speech dictionary entry.

Indoor Location

Indoor Location

Description

This feature allows the user to detect the location of the radio by communicating with Beacon.

Scan Interval on Time (ms)

Description

This feature sets the scanning on duration of the iBeacon device.

Range	
Maximum	10000 ms
Minimum	0 ms (Disabled)
Increment	200 ms

Scan Interval off Time (ms)

Description

This feature sets the scanning off duration for iBeacon device.

Range	
Maximum	10000 ms
Minimum	0 ms (Disabled)
Increment	200 ms

Beacon Alias

Add Indoor Location Anchor

Description

This feature allows the user to add a new anchor for Indoor Location.

Delete Indoor Location Anchor

Description

This feature allows the user to delete the anchor for Indoor Location.

Beacon Alias

Description

This feature allows the user to enter a 16 character name that identifies the Beacon in the Indoor Location List Items.

Beacon UUID

Description

The field is a 16-byte hex character string (32 alphanumeric characters) that is used as the Universally Unique IDentifier (UUID) for the Beacon..

Radio Mandown

Allow User Control

Description

Allows the user to enable or disable the Radio Mandown feature. If enabled, the Radio Mandown feature can be toggled via the radio menu or programmable buttons in the radio.

Note

- This field is hidden when the Radio Mandown feature is disabled.

Profile

Alias

Description

Configures a name for the Radio Mandown Profile that a conventional personality can be connected to.

Type

Description

Configures the type of radio behavior to trigger the Radio Mandown feature.

Option	Functionality
Angle	The radio is placed in an angle lower than the Activation Angle (degree) for the duration of **Angle Pre-Alarm Duration (sec)**.
Movement	The radio is in a constant motion for the duration of **Movement Pre-Alarm Duration (sec)**.
No-Movement	The radio is in a stationary position for the duration of **No-Movement Pre-Alarm Duration (sec)**.
Angle or No-Movement	The radio is either in the *Angle* or *No-Movement* Mandown scenario.

Sensor Sensitivity 

Description

Configures the sensor sensitivity for the alarm trigger of the Radio Mandown feature.

Option	Functionality
Minimum	Requires four seconds to detect angle change and start the **Angle Pre-Alarm Duration (sec)** for Angle alarm, or a gravitational force of 1.8g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.
Medium	Requires two seconds to detect angle change and start the **Angle Pre-Alarm Duration (sec)** for Angle alarm, or a gravitational force of 1.2g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.
Maximum	Requires one second to detect angle change and start the **Angle Pre-Alarm Duration (sec)** for Angle alarm, or a gravitational force of 0.7g onwards to start the Movement Pre-Alarm Duration (sec)/No-Movement Pre-Alarm Duration (sec) for Movement/No-Movement alarm.

Volume (dB) 

Description

Configures the Radio Mandown volume to use when the Radio Mandown feature is triggered. When the Radio Mandown feature is turned off, the radio uses back the current radio knob volume.

Range	
Maximum	10 dB
Minimum	1 dB
Increment	1 dB

Note

- This feature value changes to *Auto* if 0 is entered.

Alert Repeat Period (sec)

Description

Configures the interval at which the alert tone is sounded when the Mandown feature is triggered.

Range	
Maximum	10 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature value changes to *Disabled* if 0 is entered. A value of 0 results in the radio playing the tone only once, i.e. when the Radio Mandown feature is triggered.

Disabled Alert Repeat Period (sec)

Description

Configures the interval at which the alert tone is sounded when the Radio Mandown feature is turned off.

Range	
Maximum	600 sec
Minimum	10 sec
Increment	1 sec

Note

- This feature value changes to *Disabled* if 0 is entered. A value of 0 means that the disable notification will not be repeated at the specified interval.

Angle

Activation Angle (degree)

Description

Configures the threshold angle to activate the Radio Mandown feature. When the radio is detected to tilt below this threshold angle, the radio is monitored for the duration of Angle Pre-Alarm Duration (sec) before the Radio Mandown feature is triggered. The available choices are "30", "45", and "60".

Angle Pre-Alarm Duration (sec)

Description

Sets the duration to wait before triggering the Radio Mandown feature.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

Angle Alarm Duration (sec)

Description

Sets the duration that the Radio Mandown alert tone will sound after the **Angle Pre-Alarm Duration (sec)** has expired. After this duration, the radio enters into the emergency mode.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

No-Movement

No-Movement Pre-Alarm Duration (sec)

Description

Sets the duration to wait before triggering the Radio Mandown feature.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

No-Movement Alarm Duration (sec)

Description

Sets the duration that the Radio Mandown alarm will sound after the **No-Movement Pre-Alarm Duration (sec)** has expired. After this duration, the radio enters into the emergency mode.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

Movement

Movement Alert Tone

Description

If enabled, alert tone will be sounded for the Movement alarm following the value as set in **Alert Repeat Period (sec)**. If disabled, the radio will ignore the **Alert Repeat Period** setting.

Movement Pre-Alarm Duration (sec)

Description

Sets the duration to wait before triggering the Radio Mandown feature.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

Movement Alarm Duration (sec)

Description

Sets the duration that the Radio Mandown alert tone will sound after the **Movement Pre-Alarm Duration (sec)** has expired. After this duration, the radio enters into the emergency mode.

Range	
Maximum	3600 sec
Minimum	1 sec
Increment	1 sec

Job Tickets

Job Ticket Server ID

Description

This feature allows user to configure the Job Ticket server ID. The range is 0 to 16776415. This is a radio-wide feature.

Notes

- Blank value is a valid choice for this control.
- This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode.

Job Ticket Server IP

Description

This feature is read-only and allows user to view the IP address of the Job Ticket server. The Job Ticket server IP Address refers to the air interface network IP address of the Job Ticket server. This feature is not editable. It is derived from the Job Ticket Radio ID and CAI Network. This field defines the Job Ticket Raw Data destined Server IP Address. This is a radio-wide feature.

Notes

- The default value for this feature is set to 0.0.0.0 when the value of Job Ticket Server ID is blank.
- The value in the first octet is always 1+ the value in CAI Network.
- The value in the last three octets correspond to the value in XCMP Server ID.
- This feature is supported in Digital, Capacity Plus–Single-Site and Capacity Plus–Multi-Site mode .

Job Ticket Server UDP Port

Description

The User Datagram Protocol (UDP) is one of the core Internet protocol for sending short messages (datagram) between devices. UDP enables communication between these devices via a unique port number. The Job Ticket Server UDP Port specifies a dedicated port number for the target destination (e.g. computer or radio) to support the job ticket services. The internal radio job ticket server receive UDP port is always 4013.

Range	
Maximum	65535
Minimum	1024
Increment	1

Notes

- The port numbers for the Network Services, e.g. ARS, TMS, Telemetry, etc., must always be different to avoid conflict.
- This feature is supported in Digital mode only.

Enable Enhanced Job Ticket

Description

This feature allows the user to use either the legacy Job Ticket or the enhanced job ticket feature for radios that are not in Capacity Max mode. When enabled, the radio that is not in Capacity Max mode can behave and function similarly as in Capacity Max mode. For example, the radio can share the same inbox and template. The radio hides the legacy Job Ticket feature and does not support any legacy job ticket upgrades. Tickets received in Capacity Max mode will be displayed in Non-Capacity Max mode. Some user actions are blocked. The user can reuse the User Sign in/out status in non-Capacity Max mode. The sign in/out status for Non-Capacity Max and Capacity Max modes are not shared. However, if the user signs in with the same user ID between these two modes, the user can access the same ticket.

Notes

- When renaming, the value must be unique within the tree node.
- If the user tries to set this field to blank, this feature resets to the previous value..
- This feature is supported in Digital mode only.

Add (Job Tickets)

Description

Based on the MOTOTRBO Text Message feature, a work flow management system such as HotSOS can be set up between the controller and the subscriber units. The radio users are able to access the job tickets assigned to them via the radio menu or a short/long programmable button press (Job Tickets).

A maximum of 12 job ticket status folders can be configured in the CPS, thus the radio users can reply up to 12 statuses. To create a new entry in the job ticket status list, click the **Add** button in the Configuration View. A new row is inserted at the end of the table.

Notes

- When the radio write operation is in progress, the radio ignores any tickets received.
- This feature is supported in Digital mode only.

Delete (Job Tickets)

Description

Job ticket status folders may be deleted if they are no longer in use. Click the row to be deleted in the Configuration View. Click the **Delete** button.

Notes

- The radio removes any job ticket statuses that are deleted via the CPS.
- This feature is supported in Digital mode only.

Index (Job Tickets)

Description

Displays the number of the job ticket status folder.

Note

- When renaming, the value must be unique within the tree node.
- If the user tries to set this field to blank, this feature resets to the previous value.
- This feature is supported in Digital mode only.

Action/Response

Description

Specifies a text for an action or a response of a job ticket, such as Start or Complete. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

Note

- This feature is supported in Digital mode only.

Status Folder

Description

Configures a name for the status folder. The status folder provides information on the type and state of the action/response of a job ticket. The user may enter up to a maximum of 16 characters. Valid characters are alphanumerics, spaces and special characters.

Note

- This feature is supported in Digital mode only.

Last State Flag

Description

Marks an entry to have the highest priority be removed from the job ticket list in the radio when the list is full.

Note

- This feature is supported in Digital mode only.

Options

Options (Job Tickets)

Description

Displays the Option title.

Notes

- This feature is not editable.
- This feature is supported in Digital mode only.

Option List (Individual)

Description

Displays the title of the individual option list. User can add up to 40 lists. To add an option list, hover to the Option List tree node, right click, and select Add.

The application also allows the user to configure an Alias consisting of 1 to 16 characters. To rename an option list, hover to the desired list, right click, and select Rename.

Notes

- This feature is non-editable.
- This feature is supported in Digital mode only.

Add (Option List)

Description

This button allows user to add one option.

Note

- This feature is supported in Digital mode only.

Delete (Option List)

Description

This button allows user to delete the currently selected option.

Note

- This feature is supported in Digital mode only.

Option List Item

Option List Item

Description

This is the container that has all the applicable fields for options. Displays all the options in a table format.

Notes

- User is allowed to add or delete a row.
- There is at least one row at a minimum.
- This feature is supported in Digital mode only.

Position (Option List Item)

Description

This edit box displays the position numbers of the Job Ticket Options in the radio. This is the first column in the grid control for Job Ticket Option List.

Notes

- Order of the position is in ascending order, starting from position 1 to maximum number of Job Ticket Options available.
- This feature is not editable.
- This feature is supported in Digital mode only.

Index (Option List)

Description

This edit box allows user to set the option index. For each Job Ticket Option List Option, the application allows user to configure an Index consisting of 1 to 5 characters.

Notes

- When renaming, this value of this field is unique within the tree node.
- This feature is supported in Digital mode only.

Name (Option List Item)

Description

This edit box allows user to set the option name. For each option name, the application allows user to configure a Name consisting of 1 to 16 characters.

Note

- When renaming, this value of this field is unique within the tree node.
- This feature is supported in Digital mode only.

Templates

Templates (Job Tickets)

Description

Displays the Template title.

Notes

- This feature is not editable.
- This feature is supported in Digital mode only.

Template (Individual)

Description

Displays the title of the individual template. User can add up to 5 templates. To add a Job Ticket template, hover to the Template tree node, right click and select Add.

The application also allows the user to configure an alias consisting of 1 to 32 characters. To rename a Job Ticket template, hover to the desired Template list, right click, and select Rename.

Notes

- This feature is supported in Digital mode only.

Tag

Description

This edit box allows the user to set the template tag. The application allows the user to configure a Tag consisting of 1-3 characters.

Notes

- If the user tries to set this field to blank, this field is reset to the default value.
- This feature is supported in Digital mode only.

Add (Templates)

Description

This button allows user to add one template item. The application allows user to configure up to 8 Job Ticket Template Items.

Note

- This feature is supported in Digital mode only.

Delete (Templates)

Description

This button allows user to delete the currently selected template item.

Note

- This feature is supported in Digital mode only.

Template Item

Template Item

Description

This is the container that has all the applicable fields for template items. Displays all the template items in a table format.

Notes

- User is allowed to add or delete a row.
- There is one row at a minimum.
- This feature is supported in Digital mode only.

Position (Template Item)

Description

This edit box displays the position numbers of the Job Ticket Template Items in the radio. This is the first column in the grid control for Job Ticket Template.

Notes

- Order of the position is in ascending order, starting from position 1 to maximum number of Job Ticket Template Items available.
- This feature is not editable.
- This feature is supported in Digital mode only.

Name

Description

This edit box allows the user to set the template item name. The application allows user to configure a name consisting of 1 to 16 characters.

Notes

- When renaming, the value is unique within the tree node.
- This feature is supported in Digital mode only.

Tag

Description

This edit box allows the user to set the template item tag. The application allows the user to configure a Tag consisting of 1 to 3 characters.

Notes

- If the user tries to set this field to blank, this field is reset to the default value.
- This feature is supported in Digital mode only.

Type

Description

This droplist allows the user to select the input type for this template item. Available choices are *Text, Numeric,* or *Option List*.

Notes

- The choice *Option List* is only shown when there is at least one Option List under Options.
- This feature is supported in Digital mode only.

Option List

Description

This droplist allows the user to configure each of the Job Ticket Template Item to be connected to a specific Option List.

Notes

- This feature is greyed out when Type is set to *Text* or *Numeric*.
- The choice *None* is only shown when there are no Option Lists under Options.
- When the choice *None* is not shown, the default value is the first Option List under Options.
- This feature is supported in Digital mode only.

Signaling Systems

Deleting Signaling Systems

Description

Signaling systems may be deleted if they are no longer in use.

To delete a signaling system:

1. Right-click an individual signaling system of the Tree View.
2. Select **Delete**.

See Also

- Adding MDC Systems.
- Adding Digital Emergency Systems.
- Adding Capacity Plus - Single Site Emergency Systems.
- Adding Quik-Call II Systems.
- Adding Phone Systems (3600 Trunking capable radios).
- Adding Trunking Systems (3600 Trunking capable radios).
- Deleting Items, for more ways of deleting signaling systems.

5 Tone Call Answer Timer (sec)

Description

Specifies the duration that the radio waits for the call to be answered. If the timer expires without radio user operation, the incoming radio address will be stored in the missed call list.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

5 Tone Authorization Request Monitor Time (sec)

Description

Specifies the duration that the radio waits after sending an authorization request. An authorization request is initiated from a radio with receive only capabilities to request the controller for permission to transmit on a channel. The request is initiated by pressing the 5 Tone Authorization Request Button Function that is configured with this option telegram. If the correct telegram is received, the channel transmit capabilities are enabled. The default value is 0.

Range	
Maximum	32 sec
Minimum	0 sec
Increment	1 sec

Note

- If the value is set to 0, the squelch rule will not be changed after the authorization sending.
- This feature is supported in Analog mode only.

5 Tone Authorization Request Button Function

Description

Authorization prevents users from monitoring or talking on the channel until the radio is authorized by the infrastructure. To enable users to request authorization, the radio must be programmed to send an authorization request telegram using the designated authorization request call button. For Display model, the choices are 5 Tone Call 1, 5 Tone Call 2, 5 Tone Call 3, 5 Tone Call 4, 5 Tone Call 5, 5 Tone Call 6, PTT, and Address Send. For Non-Display model, the choices are 5 Tone Call 1, 5 Tone Call 2, 5 Tone Call 3, 5 Tone Call 4, 5 Tone Call 5, 5 Tone Call 6, and PTT.

Note

- This feature is supported in Analog mode only.

5 Tone Emergency Alarm Type

Description

An alarm is a non-voice signal that triggers an alert indication to another radio. This feature specifies the behavior of the radio's alarm when the emergency button is pressed for 5 Tone channels.

Option	Functionality
Disabled	The radio is unable to transmit an alarm signal.

Regular	The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.
Silent	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
Silent w/ Voice	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Note

- This feature is supported in Analog mode only.

Emergency On/Off Switch

Description

Allows the user to enable or disable the radio power on/off switch during an emergency operation. If disabled, the radio power on/off switch is non-operational during the emergency operation. If the switch is non-operational, then the radio battery needs to be physically removed from the radio.

5 Tone Emergency Revert Channel

Description

This is the channel used for 5 Tone emergency alarm or voice. Any 5 Tone channel, except if the channel is set as RX Only, may be set as the revert channel, including the channel indicated by the radio's channel selector.

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Analog mode only.

5 Tone Emergency Cycles

Description

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode.

Range	
Maximum	255
Minimum	1
Increment	1

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if set to 0.
- This feature is supported in Analog mode only.

5 Tone Emergency TX Tone

Description

Allows the user to enable or disable the 5 Tone Emergency TX Tone. When enabled, a low-level pulsating tone is transmitted whenever the radio transmits while in the Emergency mode. This 2800 Hz tone is on for 100 ms, off for 200 ms and is 10 dB below nominal 5 Tone deviation. This tone is low enough in volume that it would not interfere with any other audio received while serving to let other users on the channel know that an emergency is in progress and refrain from transmitting on the channel until the emergency is canceled.

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Analog mode only.

5 Tone Emergency TX Cycle Time (sec)

Description

Specifies the duration that the radio remains in the transmit mode within one emergency cycle.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the 5 Tone Emergency Cycles feature is set to 0.
- This feature is supported in Analog mode only.

5 Tone Emergency RX Cycle Time (sec)

Description

Specifies the duration that the radio remains in the receive mode within one emergency cycle.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the 5 Tone Emergency Cycles feature is set to 0.
- This feature is supported in Analog mode only.

5 Tone Emergency Encoder Telegram

Description

Specifies a telegram to be automatically encoded/sent when the radio transmits in an Emergency mode. The choices are None and all available 5 Tone Telegrams.

Note

- The **5 Tone Emergency Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Analog mode only.

Digital

Radio Disable Encode/Decode

Description

Allows the radio to receive and process a Radio Disable command sent from another radio to remotely disable it. This feature helps to block usage of stolen or lost radios. This is a radio-wide feature.

Notes

- Encode feature is available for Display models in Digital mode only.
- Decode feature is available for Display and Non-Display models in both Analog and Digital modes only.

Remote Monitor Encode/Decode

Description

Allows the radio to receive and process Remote Monitor command sent from another radio. This command instructs the receiving radio to activate its microphone and transmitter for the duration specified in **Remote Monitor Duration**. A call is silently set up on this radio and its transmission controlled remotely without any indication given to the receiving radio user. This is a radio-wide feature.

Notes

- Encode feature is available for Display models.
- Decode feature is available for Display and Non-Display models.
- This feature is supported in Digital mode only.

Emergency Remote Monitor Decode

Description

After an emergency alarm is initiated, this feature allows the radio to receive and process Remote Monitor commands sent from another radio for the duration specified in Remote Monitor Duration. This is an exceptional case of **Remote Monitor Decode** whereby the radio is able to decode Remote Monitor command even if the **Remote Monitor Decode** feature is disabled but only for the duration as specified in **Remote Monitor Duration**. This is a radio-wide feature.

Note

- This feature is supported in Digital mode only.

Remote Monitor Duration (sec)

Description

Sets the duration that the target radio can be remotely monitored. This is a radio-wide feature.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Note

- This feature is supported in Digital mode only.

See Also

- **Remote Monitor Decode**.

TX Sync Wakeup Time Out Timer (ms)

Description

This feature adjusts the value of the timer that begins immediately after a message is sent to wake up the repeater. The timer is stopped when the radio receives a repeater sync signal. If the timer expires before receiving a repeater sync signal, the radio sends another message to wake up the repeater. The number of messages is determined by the TX Wakeup Message Limit, after which the repeater is assumed to be out of range. This is a radio-wide feature.

Range	
Maximum	375
Minimum	125
Increment	25

Note

- This feature is supported in Digital mode only.

Tx Wakeup Message Limit

Description

This feature sets the number of messages sent to wake up the repeater. Setting a higher number improves the success rate of waking up the repeater. This is a radio-wide feature.

Range	
Maximum	4
Minimum	1
Increment	1

Note

- This feature is supported in Digital mode only.

Authenticated Radio Inhibit/Uninhibit

Description

This field allows the user to enable or disable the Authenticated Radio Inhibit/Uninhibit feature. The valid choices are "Disabled", "Device Authentication" and "User Authentication".

Notes

- This field is hidden when the Authenticated Radio Disable feature is disabled.
- This field is greyed out when the Radio Disable Decode checkbox is checked.

Authenticated Passphrase

Description

This field allows the user to choose the passphrase to use for the Authenticated Radio Inhibit/Uninhibit or the Authenticated Remote Monitor. feature.

Notes

- The characters that are typed into this field are not visible to the user.
- This field is hidden when the Authenticated Radio Disable Decode feature is disabled.
- This field is greyed out when the Radio Disable Decode check box is checked.
- This field is greyed out when the Authenticated Radio Inhibit/Uninhibit or the Authenticated Remote Monitor feature is set to "User Authentication".
- If the user enters a value that is less than six characters and leaves this field, the value will change to the default value.

Authenticated Remote Monitor

Description

This field allows the user to select whether or not to allow Remote Monitor to be authenticated against unauthorized monitoring, similar to the Authenticated Radio Inhibit feature. The valid choices are "Disabled", "Device Authentication" and "User Authentication".

Authenticated Radio Monitor permits supervisory radio users to send an authenticated (but not encrypted) radio remote monitor command to a radio. In response to receiving a remote monitor request, a target radio sends an Authentication Challenge message to the initiating supervisory radio. The Authentication Challenge Response calculation is sent to the target radio for verification.

Option	
Disabled	This feature is disabled.
Device Authentication	Authenticated Remote Monitor” is not initiated by either the KMF or Console. Only initiated by a “supervisory” radio.

User Authentication	An Authentication Passphrase is provisioned into every radio that may need to be remotely monitored. The initiating-radio user supplies an Authentication Passphrase which is incorporated into an Authentication Challenge Response calculation. Authenticated Passphrase is enabled.

Notes

- This field is greyed out when the Remote Monitor Decode checkbox is checked.

Analog

Call Alert Encode

Description

This feature enables the radio to be programmed to perform a **Call Alert** using the configured signaling system. This is a radio-wide feature.

Note

- This feature is supported in Analog mode only.

See Also

- **Call Alert**.

Sel Call Encode

Description

This feature enables the radio to initiate a Selective Call. The Selective Call reduces the number of calls not of interest from being heard. Typically, the Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group of radio users, where other users would not be interested in the call. This is a radio-wide feature.

Note

- The Sel Call Hang Time (ms) and Sel Call Tone features are disabled when this feature is disabled (unchecked).
- This feature is supported in Analog mode only.

Sel Call Tone

Description

Defines when the Radio ID, in association with the Push-to-Talk (PTT) button press, is sent.

Option	Functionality
Always	Radio will repeatedly transmits the Radio ID during a Selective Call.
Pre	Radio transmits the Radio ID at the start of every Selective Call.

Note

- This feature is disabled when the Sel Call Encode feature is disabled (unchecked).
- This feature is set to *Always* when the **Sel Call Hang Time (ms)** feature is set to *0 ms*.
- This feature is supported in Analog mode only.

Sel Call Tone/ID

Description

Defines when the Radio ID, in association with the Push-to-Talk (PTT) button press, is sent.

Option	Functionality
Always	Radio will repeatedly transmits the Radio ID during a Selective Call.
Pre	Radio transmits the Radio ID at the start of every Selective Call.

Note

- This feature is disabled when the Sel Call Encode feature is disabled (unchecked).
- This feature is set to *Always* when the **Sel Call Hang Time (ms)** feature is set to *0 ms*.
- This feature is supported in Analog mode only

Sel Call Hang Time (ms)

Description

This sets the duration that the radio reserves the channel after a Push-to-Talk (PTT) button is released for a Selective Call. During this time, only the individuals involved in the Selective Call that the channel is reserved for can transmit. This is a radio-wide feature.

Range	
Maximum	7000 ms
Minimum	0 ms
Increment	500 ms

Note

- This feature is disabled when the Sel Call Encode feature is disabled (unchecked).
- This feature is supported in Analog mode only.

See Also

- Sel Call Tone.

Auto Reset Timer (sec)

Description

Sets the duration that the radio waits before the radio requires the Signaling Squelch Unmuting Rules to be met again in order to unmute to a call.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

See Also

- **Auto Reset Timer Type**.

MDC Status List

Position (MDC Status List)

Description

Displays the index of a MDC status. This value corresponds to the Status/Message Index.

Note

- This feature is supported in Analog mode only.

Name (MDC Status List)

Description

Configures the name for each MDC status list.

Note

- This feature is supported in Analog mode only.

System (MDC Status List)

Description

Allows the user to select one MDC system per MDC status list.

Note

- This feature is supported in Analog mode only.

Revert Channel (MDC Status List)

Description

Allows the user to select one revert channel per MDC status list. The available choices are Selected and all available analog channels.

Note

- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Strip TPL/DPL (MDC Status List)

Description

Allows the user to enable/disable strip PL per MDC status list.

Note

- This feature is supported in Analog mode only.

MDC Message List

Position (MDC Message List)

Description

Displays the index of a MDC message. This value corresponds to the Status/Message Index.

Note

- This feature is supported in Analog mode only.

Name (MDC Message List)

Description

Configures the name for each MDC message list.

Note

- This feature is supported in Analog mode only.

System (MDC Message List)

Description

Allows the user to select one MDC system per MDC message list.

Note

- This feature is supported in Analog mode only.

Revert Channel (MDC Message List)

Description

Allows the user to select one revert channel per MDC message list. The available choices are Selected and all available analog channels.

Note

- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Strip TPL/DPL (MDC Message List)

Description

Allows the user to enable/disable strip PL per MDC message list.

Note

- This feature is supported in Analog mode only.

MDC

Adding MDC Systems

Description

The Motorola Data Communication (MDC) is a Motorola proprietary signaling system protocol. MDC is used by two-way radios to communicate data when in Analog Mode. A maximum of 32 MDC systems can be created.

To add a MDC system:

1. Right-click the **MDC** folder of the Tree View.
2. Select **Add->System**. A new system is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the MDC Systems.
- Renaming Items, for more ways of renaming MDC Systems.

System

System Name (MDC System)

Description

This displays the name of the system.

Primary ID (Hex)

Description

This is the ID used to identify Motorola Data Communication (MDC) messages transmitted to a radio. It is sent out to the target radio during Call Alert or emergency. A user may enter up to a maximum of 4 hexadecimal digits in the text box.

Range	
Maximum	DEEE

Minimum	0001
Increment	1 (Hex)

Note

- The character F(Hex) is not allowed for any of the digits.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

PTT ID Type

Description

Defines when the radio's ID (**Primary ID**), in association with the Push-to-Talk (PTT) button press, will be sent.

Option	Functionality
None	When the user presses the PTT, no **Primary ID** is sent.
Pre Only	When the user presses the PTT, the radio transmits the **Primary ID** at the start of every voice transmission.
Post Only	After the voice transmission is over, the radio keeps the channel keyed and transmits the **Primary ID**.
Pre and Post	The **Primary ID** is transmitted once at the beginning of the voice transmission and again after the voice transmission.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

PTT Sidetone

Description

Selects the type of tone played from the time the Push-to-Talk (PTT) button is pressed until the time the Motorola Data Communication (MDC) Signaling System data packet is transmitted. The purpose of this tone is to let the user know when voice may be initiated.

Option	Functionality
Long	Causes the radio to sound a continuous alert tone for the duration the Signaling System data packet is transmitted.
None	No tone is transmitted when the PTT button is pressed.
Short	Causes the radio to sound a short alert tone immediately after the Signaling System data

	packet is transmitted.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.
- Disabling this feature does not disable other tones, i.e. **Talk Permit** will still be heard by the user.

Group ID 

Description

This is the ID used to identify Motorola Data Communication (MDC) messages transmitted to a group of radios. It is sent out to the target group during Call Alert. A user may enter up to a maximum of 3 hexadecimal digits in the text box.

Range	
Maximum	EEE
Minimum	000
Increment	1 (Hex)

Note

- The character F(Hex) is not allowed for any of the digits.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Pretime (ms) (MDC System) 

Description

Sets the duration that the radio waits, after a Push-to-Talk (PTT) button press, before it starts transmitting the Motorola Data Communication (MDC) signaling system data packet (e.g. preamble bit sync) and data. When communicating via a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of MDC data.

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Preamble Bit Sync

Description

Selects the number of synchronizing packet sent for the transmitting and receiving radios to synchronize prior to MDC signaling data transmission.

Range	
Maximum	96
Minimum	0
Increment	1

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Call Alert Type (MDC System)

Description

Selects the type of call that can be received on the current MDC Signaling System.

Option	Functionality
Call Alert	Allows a transmitting radio to notify another user, requesting that they call back the user (call initiator) when they (recipient) become available. There is no voice communication involved.
Call Alert w/Voice	Combination of Call Alert and Selective Call. This allows the receiving radio to receive voice calls besides Call Alert.
None	Neither of the listed options can be performed on the current system.

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Radio Check Encode/Decode

Description

Allows the user/console operator to determine if a radio is active in a system without showing any indication to the radio's user.

Notes

- Encode feature is available for Display models only.
- Decode feature is available for both Display and Non-Display models.

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Sel Call Decode

Description

This feature enables the radio to receive and decode a MDC Selective Call. The MDC Selective Call reduces the number of calls not of interest from being heard. Typically, the Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group of radio users, where other users would not be interested in the call.

Note

- This feature is supported in Analog mode only.

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Auto Reset Timer Type (MDC System)

Description

Configures the Auto Reset Timer Type to determine how the Auto Reset Timer (sec) is used during a MDC call. The radio requires the Signaling Squelch Unmuting Rules to be met before it unmutes to a call and begins the timer. Note that while the timer is running, the radio is in the Release Squelch State.

Option	Functionality
None	The radio enters the Release Squelch State until the radio is muted. Timer is not used.
Manual	Radio user manually ends the Release Squelch State.
Auto-Reset w/ Carrier Overide	The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press and at each time the radio is muted. If the radio is muted when the timer expires, the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call. If the radio is unmuted when the timer expires, the radio remains unmuted for the remainder of the call.
Auto-Reset w/o Carrier Overide	The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press. When the timer expires, the radio is muted, the Release Squelch State is ended, and the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call.

Remote Monitor Encode/Decode (MDC System)

Description

Allows the radio to receive and process Remote Monitor command sent from another radio. This command instructs the receiving radio to activate its microphone and transmitter for the duration specified in **Remote Monitor Duration**. A call is silently set up on this radio and its transmission controlled remotely without any indication given to the receiving radio user.

Notes

- Encode feature is available for Display models.
- Decode feature is available for Display and Non-Display models.
- This feature is supported in Analog mode only.

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Emergency Remote Monitor Decode (MDC System)

Description

After an emergency alarm is initiated, this feature allows the radio to receive and process Remote Monitor commands sent from another radio for the duration specified in Emergency Remote Monitor Duration.

Note

- This feature is disabled if the **Remote Monitor Decode** feature is enabled.
- This feature is supported in Analog mode only.

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Remote Monitor Duration (sec) (MDC System)

Description

Sets the duration that the target radio can be remotely monitored.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Note

- This feature is supported in Analog mode only.

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Emergency Remote Monitor Duration (sec) (MDC System)

Description

Sets the duration that the target radio can be remotely monitored during an emergency.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Note

- This feature is supported in Analog mode only.

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Repeater Access Type

Description

Allows the user to configure the MDC repeater access type from the following choices.

Option	Functionality
None	The radio does not transmit the MDC Repeater Access ID prior to any other voice or data transmission.
Auto	The radio transmits the MDC Repeater Access ID prior to any other voice or data transmission.

Note

- The Repeater Access Pretime is enabled if this feature is set to *Auto*.
- This feature is supported in Analog mode only.

Repeater Access Pretime (ms)

Description

Sets the duration that the radio waits, after a Push-to-Talk (PTT) button press, before it starts transmitting the Motorola Data Communication (MDC) signaling system data packet (e.g. preamble bit sync) and data. When communicating via a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of MDC data. This pretime is used while transmitting the MDC Repeater Access ID, instead of the general MDC Pretime.

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is enabled if Repeater Access Type is set to *Auto*.
- This feature is supported in Analog mode only.

DOS

Criteria Type

Description

Selects the frequency type used to determine Data Operated Squelch (DOS) activation. The choices are *1200 Hz or 1800 Hz* or *1200 Hz and 1800 Hz*.

Note

- The option *1200Hz or 1800Hz* is required for backward compatibility with earlier radios, and is therefore rarely used. The *1200 Hz and 1800 Hz* is the commonly used value.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Coast Duration (ms)

Description

If the carrier signal is lost after Motorola Data Communication (MDC) signaling data is detected, the radio stays muted for the duration of this timer or until the carrier signal is redetected. Once the carrier signal is redetected, this timer is stopped, and the Data Operated Squelch (DOS) Auto Mute Duration timer begins again. This feature helps to prevent temporary loss of DOS in areas of poor signal strength or signal distortions.

Range	
Maximum	500 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Auto Mute Duration (ms)

Description

Sets the duration that the radio remains muted when the radio is receiving Motorola Data Communication (MDC) signaling data to reduce noise from the data reception. The user has to know the size of the data to select a suitable duration. If the duration is too short then some unwanted noise will still be heard, and if the duration is too long, it might clip some voice audio. This is normally used on radios that support both voice and data on the same channel.

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Fixed Retry Wait Time (sec)

Description

Sets the duration that the radio waits before attempting another polite or impolite transmission to transmit signaling data. Configuring the radios with different wait durations increases the probability of accessing the system and reduces the chances of data lost due to collisions.

Range	
Maximum	17 sec
Minimum	0 sec
Increment	0.1 sec

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Emergency

Alarm Type (MDC Emergency System)

Description

An alarm is a non-voice signal that triggers an alert indication to another radio. This feature specifies the behavior of the initiating radio's alarm when the emergency button is pressed.

Option	Functionality
Disabled	The radio is unable to transmit an alarm signal.
Regular	The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.
Silent	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
Silent w/ Voice	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Note

- At least one analog channel must have its TX Signaling System feature set to the current MDC System in order for this feature to be enabled.
- To send an MDC Emergency in TalkAround mode, the analog channel must have its RX Signaling System feature set to an MDC System.
- The **Mode**, **Revert Channel**, **Impolite Retries** and **Polite Retries** features are disabled if this feature is set to *Disabled*.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Mode (MDC Emergency System)

Description

Defines the radio’s behavior when the radio's emergency button is pressed.

Option	Functionality
Emergency Alarm	The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.
Emergency Alarm w/ Call	An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.
Emergency Alarm w/ Voice to Follow	This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, i.e. Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button.

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Revert Channel (MDC Emergency System)

Description

This is the channel used for MDC emergency alarm or voice. Any analog channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- The *Selected* option is a valid choice when every analog channel has its TX Signaling System feature set to an MDC System.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Impolite Retries (MDC Emergency System)

Description

An impolite transmission is a transmission that occurs even when there is activity on the current channel. The radio tries a number of impolite transmissions to get an acknowledgement and then goes on to try a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm impolitely.

Range	
Maximum	15
Minimum	1
Increment	1

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Polite Retries (MDC Emergency System)

Description

A polite transmission is a transmission that occurs only when the current channel is free of activity. The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Range	
Maximum	∞
Minimum	0
Increment	1

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- The radio will attempt to transmit indefinitely if the Infinity option is selected.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Cycles (MDC Emergency System)

Description

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the MDC emergency system.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow*.
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Analog mode only.

TX Cycle Time (sec) (MDC Emergency System)

Description

Specifies the duration that the radio remains in the transmit mode within one cycle in the MDC emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow.*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Analog mode only.

RX Cycle Time (sec) (MDC Emergency System)

Description

Specifies the duration that the radio remains in the receive mode within one cycle in the MDC emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow.*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Analog mode only.

PTT Sidetone (MDC Emergency System)

Description

This feature sounds an alert tone from the time the Push-to-Talk (PTT) button is pressed until the time the Motorola Data Communication (MDC) Signaling System data packet is transmitted during an emergency. This feature alerts the radio user that the channel is available for him/her to respond producing a smoother flow of conversation. This is a radio-wide feature.

Note

- The **Disable All** feature must be disabled.

Sticky Revert

Description

Causes the radio to remain permanently on the emergency revert channel after the emergency transmission has been sent and acknowledged. The radio must be powered off for it to return to the radio selected channel.

Note

- This feature is disabled if **Alarm Type** is set to *Disabled*.
- This feature is disabled if Revert Channel is set to *None*.
- This feature is supported in Analog mode only.

Sticky Revert Alert

Description

Sounds the emergency sticky revert talk permit tone when the user presses the PTT while the radio is on the emergency sticky revert channel. If disabled, the talk permit tone is sounded instead.

Note

- This feature is disabled if **Alarm Type** is set to *Disabled* or **Disable All Tones** is enabled.
- This feature is enabled if **Sticky Revert** is enabled.
- This feature is supported in Analog mode only.

Digital Emergency

Adding Digital Emergency Systems

Description

A Digital Emergency system is a signaling protocol used by the radio for communication during emergency when the radio is in Digital Mode. A maximum of 32 Digital Emergency systems can be created.

To add a Digital Emergency system:

1. Right-click the **Digital Emergency** folder of the Tree View.
2. Select **Add->System**. A new system is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the Digital Emergency Systems.
- Renaming Items, for more ways of renaming Digital Emergency Systems.

System

System Name (Digital Emergency System)

Description

This displays the name of the system.

Note

- This feature is supported in Digital mode only.

Alarm Type (Digital Emergency System)

Description

An alarm is a non-voice signal that triggers an alert indication on another radio. This feature specifies the behavior of the initiating radio's alarm when the emergency button is pressed.

Option	Functionality
Disabled	The radio is unable to transmit an alarm signal.
Regular	The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.
Silent	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
Silent w/ Voice	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Note

- The **Mode**, **Hot Mic Duration**, Revert Channel, **Impolite Retries**, **Polite Retries**, **TX Interrupt** and **Contact** features are disabled if this feature is set to *Disabled*.
- This feature enables Revert Channel only after you set Call Member in digital channel to *Group Call*.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

Mode (Digital Emergency System)

Description

Defines the radio's behavior when the radio's emergency button is pressed.

Option	Functionality
Emergency Alarm	The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.
Emergency Alarm w/ Call	An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.
Emergency Alarm w/ Voice to Follow	This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, i.e. Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button.

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

Revert Channel (Digital Emergency System)

Description

This is the channel used for digital emergency alarm or voice. Any single site digital channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- At least one channel must have a **Group Call** as its **Contact Name**.
- The *Selected* option is a valid choice when MOTOTRBO codeplug versions 08.00XX and for models other than MOTOTRBO has a **Group Call** as its **Contact Name**.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.
- This feature does not list digital channels with Option Board Trunking-enabled as an option.
- This feature is set to default when you select a digital channel with RX Only-enabled and Option Board Trunking-enabled.
- This feature is hidden when you disable Digital Emergency.

Contact (Digital Emergency System)

Description

This drop list allows you to select the contact that receives the emergency alarm for this system. The valid options are None and all the digital group calls. Emergency alarms and emergency voice is addressed to a talkgroup. The selection of which talkgroup makes a big difference in the overall operation of emergency. The "contact" field decides the emergency talkgroup as : .

Option	Functionality
Tactical	Tactical emergency is the act of sending an emergency on the currently selected talkgroup. It allows everyone in the currently-selected talkgroup to monitor the emergency situation. Each talkgroup may have a dedicated dispatcher that handles emergency situations, or the entire group may need to be notified that someone in the talkgroup is in emergency. In a system with many talkgroups, a tactical configuration requires the dispatcher to monitor every talkgroup for emergencies, that could become cumbersome. In addition the remaining members of the talkgroup must yield use of the talkgroup to the individual in emergency. For tactical emergency operation select "None" option.
Reverting	Requires Reverting emergency is the act of sending an emergency on a predetermined talkgroup. It allows user to leave their currently-selected talkgroup and communicate to the dispatcher on a dedicated emergency talkgroup. This allows a dispatcher to monitor the dedicated emergency talkgroup and all other users revert to him in case of emergency. This minimizes the possibility of supervisors missing emergencies on one talkgroup, while monitoring other talkgroups. It also allows a clear channel of communication for the user on emergency and the dispatcher. The other radio users may not be aware of the emergency talkgroup. For reverting emergency, select a dedicated talkgroup from the available contacts.

Note

- This feature is hidden when you disable either the Digital or Digital Emergency feature.
- This feature is applicable to MOTOTRBO 2.0 radios only.

Ack Required (Digital Emergency System)

Description

When enabled, the radio stops transmitting Emergency Alarms after receiving an Acknowledgement (Ack) from a receiving radio or radios that the Alarm has been received. When disabled, the radio ignores Ack to Emergency Alarms and continues to sent Emergency Alarms until the configured number of attempts have been exhausted.

Notes

- This feature is applicable for Digital mode only in Direct Mode, Single Site, and IPSC systems (including Scan).
- This feature is also applicable in other emergency modes such as Emergency Alarm and Emergency Alarm w/ Call.

Impolite Retries (Digital Emergency System)

Description

An impolite transmission is a transmission that occurs even when there is activity on the current channel. The radio tries a number of impolite transmissions to get an acknowledgement and then goes on to try a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm impolitely.

Range	
Maximum	15
Minimum	1
Increment	1

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

Polite Retries (Digital Emergency System)

Description

A polite transmission is a transmission that occurs only when the current channel is free of activity. The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Range	
Maximum	∞
Minimum	0
Increment	1

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- The **Mode** option must not be set to *Emergency Alarm with Voice to Follow*.
- The radio will attempt to transmit indefinitely if the Infinity option is selected.
- This feature is supported in Digital mode only.

Cycles (Digital Emergency System)

Description

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the Digital emergency system.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow*.
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

TX Cycle Time (sec) (Digital Emergency System)

Description

Specifies the duration that the radio remains in the transmit mode within one cycle in the Digital emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow.*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

RX Cycle Time (sec) (Digital Emergency System)

Description

Specifies the duration that the radio remains in the receive mode within one cycle in the Digital emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow.*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

Hot Mic Duration (sec) (Digital Emergency System)

Description

If the **Mode** is selected as *Emergency Alarm with Voice to Follow*, after the radio transmits an emergency alarm, the Hot Mic feature is activated whereby the radio automatically begins transmitting voice for the duration indicated by the Hot Mic Duration. There is no need to press the Push-To-Talk (PTT) button during this time in order to transmit voice. Once this duration expires, the radio automatically dekeys. The call made during this duration is an emergency call.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only.

See Also

- Hot Mic Source.

TX Interrupt (Digital Emergency System)

Description

This feature enables the radio to remotely dekey any other radio that is currently transmitting a voice call, in order to place it's own emergency alarm transmission or emergency voice transmission. The interruption automatically occurs upon a Push-to-Talk (PTT) button press during emergency mode, or an emergency button press.

Note

- This feature is supported in Digital mode only and requires that each radio has a unique radio ID.

Preamble (Digital Emergency System)

Description

This feature allows the user to configure the Preamble feature for Emergency. The available choices are *Default* (Existing) and *Always*. When the user select *Always*, the emergency alarm will always use preamble configured in Tx Preamble Duration for every emergency transmission. This allows the scanning radio to land on Emergency on first attempt.
his is a radio-wide and system-wide feature.

Notes

- This feature is available in Digital mode only in Direct Mode, Single Site and IPSC system (including Scan).
- This feature is also available in other emergency modes such as Emergency Alarm, Emergency Alarm with Call, and Emergency Alarm with Voice to Follow.

Capacity Plus Emergency

Adding Capacity Plus Emergency Systems

Description

A Capacity Plus - Single Site Emergency system is used by the radio for communication during emergency when the radio is in Capacity Plus - Single Site. A maximum of 32 Digital Emergency systems can be created.

To add a Capacity Plus - Single Site Emergency system:

1. Right-click the **Capacity Plus - Single Site Emergency** folder of the Tree View.
2. Select **Add->System**. A new system is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the Capacity Plus - Single Site Emergency Systems.
- Renaming Items, for more ways of renaming Capacity Plus - Single Site Emergency Systems.

Alarm Type

Description

An alarm is a non-voice signal that triggers an alert indication on another radio. This feature specifies the behavior of the initiating radio's alarm when the emergency button is pressed.

Option	Functionality
Disabled	The radio is unable to transmit an alarm signal.
Regular	The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.
Silent	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
Silent w/ Voice	The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Note

- The **Mode**, **Hot Mic Duration**, **Contact** and **Number of Retries** features are disabled if this feature is set to *Disabled*.
- The **TX Interrupt** feature is disabled if this feature is set to *Disabled*.
- This feature is supported in Digital mode only.

Mode

Description

Defines the radio’s behavior when the radio's emergency button is pressed.

Option	Functionality
Emergency Alarm	The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.
Emergency Alarm w/ Call	An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.
Emergency Alarm w/ Voice to	This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, i.e. Hot Mic Duration. An emergency alarm is sent

Follow	and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button.

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only.

Contact

Description

Determines which Group receives the emergency alarm. It is recommended that only a single radio on a Group be programmed to acknowledge emergency alarms.

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- This feature is supported in Digital mode only.

Number of Retries

Description

A polite transmission is a transmission that occurs only when the current channel is free of activity. The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Range	
Maximum	∞
Minimum	0
Increment	1

Note

- The **Alarm Type** feature must not be set to *Disabled.*
- The **Mode** option must not be set to *Emergency Alarm with Voice to Follow*.
- The radio will attempt to transmit indefinitely if the Infinity option is selected.
- This feature is supported Digital mode only.

Cycles

Description

Defines and displays the number of times the radio cycles between transmitting and receiving before going permanently into the receiving mode in the Capacity Plus - Single Site Plus emergency system.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow*.
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only.

TX Cycle Time (sec)

Description

Specifies the duration that the radio remains in the transmit mode within one cycle in the Capacity Plus - Single Site emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow.*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Digital mode only.

RX Cycle Time (sec)

Description

Specifies the duration that the radio remains in the receive mode within one cycle in the Capacity Plus - Single Site emergency system.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Notes

- This feature is disabled if the Mode feature is set to other than *Emergency Alarm w/ Voice To Follow*
- For *Emergency Alarm w/ Voice To Follow*, the **TX Cycle Time**, RX Cycle Time, and Cycles parameters should be set so as not to exceed 50% transmit time.
- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is disabled if the Cycles feature is set to 0.
- This feature is supported in Digital mode only.

System Name

Description

This displays the name of the system.

Note

- This feature is supported in Digital mode only.

Hot Mic Duration (sec)

Description

If the **Mode** is selected as *Emergency Alarm with Voice to Follow*, after the radio transmits an emergency alarm, the Hot Mic feature is activated whereby the radio automatically begins transmitting voice for the duration indicated by the Hot Mic Duration. There is no need to press the Push-To-Talk (PTT) button during this time in order to transmit voice. Once this duration expires, the radio automatically dekeys. The call made during this duration is an emergency call.

Range	
Maximum	120 sec

Minimum	10 sec
Increment	10 sec

Note

- The **Alarm Type** feature must not be set to *Disabled*.
- This feature is supported in Digital mode only.

See Also

- Hot Mic Source.

TX Interrupt 

Description

This feature enables the radio to remotely dekey any other radio that is currently transmitting a voice call, in order to place it's own emergency alarm transmission or emergency voice transmission on a Capacity Plus - Single Site system. The interruption automatically occurs upon a Push-to-Talk (PTT) button press during emergency mode, or an emergency button press.

Note

- This feature is supported in Digital mode only.

Quik-Call II

Adding Quik-Call II Systems 

Description

Quik-Call II is a type of analog mode signaling which encodes either a single tone or a sequence of two tones. A maximum of 32 Quik-Call II systems can be created.

To add a Quik-Call II system:

1. Right-click the **Quik-Call II** folder of the Tree View.
2. Select **Add->System**.

Note

- This feature is supported in Analog mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the Quik-Call II systems.

System

System Name (Quik-Call II System)

Description

This displays the name of the system.

Note

- This feature is supported in Analog mode only.

Call Type (Quik-Call II System)

Description

Selects the type of call that can be received on the current Quik-Call II Signaling System.

Option	Functionality
Call Alert	Allows a transmitting radio to notify another user, requesting that they call back the user (call initiator) when they (recipient) become available. There is no voice communication involved.
Call Alert w/Voice	Combination of Call Alert and Selective Call. This allows the receiving radio to receive voice calls besides Call Alert.
None	Neither of the listed options can be performed on the current system.
Sel Call	The Quik-Call II Selective Call reduces the number of calls not of interest from being heard. Typically, the Selective Call is used when the majority of transmissions are between a dispatcher with either a single radio or a group of radio users, where other users would not be interested in the call.

Note

- The Tone A Freq (Hz), Code <Tone A>, Tone B Freq (Hz), Code <Tone B>, Tone C Freq (Hz), Code <Tone C>, Tone D Freq (Hz), and Code <Tone D> features are disabled (grayed out) when this feature is set to *None*.
- This feature is supported in Analog mode only.

- **See Also**
  - **Sel Call Encode**.
  - **Call Alert Encode**.

Call Format

Description

Selects the format the call used for the current Quik-Call II Signaling System.

Option	Functionality
A-B	Tone generated at frequency A followed by tone generated at frequency B.
A-B/A-C	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C.
A-B/C-B	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency C followed by tone generated at frequency B.
A-B/Long B	Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency B.
A-B/Long C	Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency C.
A-B/A-C/Long C	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C. Or, a long tone generated at frequency C.
A-B/Long B/Long C	Tone generated at frequency A followed by tone generated at frequency B. Or, a long tone generated at frequency B. Or, a long tone generated at frequency C.
A-B/A-C/Long B/Long C	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency C. Or, a long tone generated at frequency B. Or, a long tone generated at frequency C.
A-B/A-D/C-D	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency A followed by tone generated at frequency D. Or, tone generated at frequency C followed by tone generated at frequency D.
A-B/C-D	Tone generated at frequency A followed by tone generated at frequency B. Or, tone generated at frequency C followed by tone generated at frequency D.

Note

- This feature is supported in Analog mode only.

Tone A Freq (Hz)

Description

Selects the frequency of Tone A to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone A>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Tone B Freq (Hz)

Description

Selects the frequency of Tone B to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone B>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Tone C Freq (Hz)

Description

Selects the frequency of Tone C to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone C>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Tone D Freq (Hz)

Description

Selects the frequency of Tone D to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone D>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Auto Reset Timer Type (Quik-Call II System)

Description

Configures the Auto Reset Timer Type to determine how the Auto Reset Timer (sec) is used during a Quik-Call II call. The radio requires the Signaling Squelch Unmuting Rules to be met before it unmutes

to a call and begins the timer. Note that while the timer is running, the radio is in the Release Squelch State.

Option	Functionality
None	The radio enters the Release Squelch State until the radio is muted. Timer is not used.
Manual	Radio user manually ends the Release Squelch State.
Auto-Reset w/ Carrier Overide	The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press and at each time the radio is muted. If the radio is muted when the timer expires, the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call. If the radio is unmuted when the timer expires, the radio remains unmuted for the remainder of the call.
Auto-Reset w/o Carrier Overide	The timer begins on the receiving radio when the radio unmutes to the call and the radio is in Release Squelch State. The timer resets at each Push-to-Talk (PTT) button press. When the timer expires, the radio is muted, the Release Squelch State is ended, and the Signaling Squelch Unmuting Rules must be met again in order to unmute to a call.

Note

- This feature is supported in Analog mode only.

See Also

- **Auto Reset Timer (sec)**.

Sidetone (Quik-Call II System)

Description

Selects the type of tone played when a Selective Call or Call Alert is triggered. The purpose of this tone is to let the user know the end of the Quik-Call II data packet transmission.

Option	Functionality
Long	Causes the radio to sound a continuous alert tone for the duration the Signaling System data packet is transmitted. This is applicable to Selective Call only. No tone will be sounded for Call Alert.
None	No tone is transmitted when a Selective Call or Call Alert is triggered.
Short	Causes the radio to sound a short alert tone immediately after the Signaling System data packet is transmitted.

Note

- This feature is supported in Analog mode only.

Pretime (ms) (Quik-Call II System)

Description

Sets the duration that the radio waits in milliseconds (ms), after a Push-to-Talk (PTT) button press, before it starts transmitting the Quik-Call II signaling system data packet (e.g. preamble bit sync) and data. When communicating via a repeater system or console, this feature allows the repeater to stabilize before the radio starts transmitting the data. Additionally, this timer gives scanning radios time to land on the channel prior to the reception of Quik-Call II data.

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is supported in Analog mode only.

Long Tone Duration (sec)

Description

Selects the time amount used when transmitting (encode) a Quik-Call II Long Tone, for the current Quik-Call II Signaling System.

Range	
Maximum	33 sec
Minimum	3 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

Limited Patience Timer (sec)

Description

Sets the amount of time that the radio politely waits for the traffic on the current channel to clear before impolitely transmitting the Call Alert.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

Code <Tone A>

Description

Selects the code of Tone A to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Tone A Freq (Hz)** field, and vice versa.

Note

- This feature is supported in Analog mode only.

Code <Tone B>

Description

Selects the code of Tone B to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Tone B Freq (Hz)** field, and vice versa.

Note

- This feature is supported in Analog mode only.

Code <Tone C>

Description

Selects the code of Tone C to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the Tone C Freq (Hz) field, and vice versa.

Note

- This feature is supported in Analog mode only.

Code <Tone D>

Description

Selects the code of Tone D to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the Tone D Freq (Hz) field, and vice versa.

Note

- This feature is supported in Analog mode only.

Phone

Adding Phone Systems

Description

A Phone system allows the user to initiate a Phone call to and receive a Phone Call from a PSTN phone user on all system configurations (i.e. Conventional Single Site, IP Site Connect, and Capacity Plus - Single Site). The Phone user can select a wide area channel as the target channel of a Phone Call.

The Phone system is based on the Digital Phone Patch system. The Digital Phone Patch system is activated when phone users try to dial to target radio where the target can be radios in specific talk group (talkgroup call), the specific radio (private call) or all call if the **Enable All Call** is enabled. The system can also be setup when radio users try to dial the specific phone. In Digital Phone Patch system, phone user can trigger talkgroup or private call to radio user while radio user is allowed to trigger private call to phone user.

A maximum of 16 phone systems can be created.

To add a phone system:

1. Right-click the **Phone** folder of the Tree View.
2. Select **Add->System**. A new system is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the Phone systems.
- Renaming Items, for more ways of renaming Phone systems.

System Name (Phone System)

Description

This displays the name of the system.

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Gateway ID

Description

Configures the ID of the Repeater that the Phone Patch is connected to. This ID represents the landline phone user's identity in the subscriber radios.

Range	
Maximum	65535
Minimum	1
Increment	1

Note

- This feature is supported in Digital mode only.

Access Code

Description

This feature allows you to configure the phone system access code. This is to grant access for the radio to perform certain call type (i.e. International, Long Distance, Toll, Local, 911, etc…) per the radio access code.

For MOTOTRBO Conventional radios, the access code is made up of the access command and the multi-digit access prefix. The access command is typically the * sign, but is programmable in most phone patches. It is used to wake-up the phone patch from the radio system. The multi-digit access prefix is used to limit the radio user access. It is commonly up to four digits long. Some phone patches allow each prefix to be configurable to allow or block calls starting with 0, 1, 9, etc. This then essentially allows a group of radio users to have access to local dialing, but not long distance, or toll numbers, etc.

If provisioned, the radio will not prompt the user for it. If left empty, the radio will prompt the user after the phone number is entered. The user must enter both the multi-digit access prefix and the access command, for example (123*). The order (*123 or 123*) may be different depending on phone patch programming. It is important to note that if access restrictions are not required, the system still requires the access command be provided. Without the access command, the phone patch will not be accessible. In most cases, the access command should be preprogrammed if no access restrictions are required.

The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

For 3600 Trunking capable radios, the access code allows the user to enter DTMF digits 0-9 and the pause character "P".

Notes

- This feature have a maximum of 10 characters.
- This feature is hidden when the Digital Phone Patch feature is disabled.
- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Deaccess Code

Description

This feature allows you to configure the phone system deaccess code on the subscriber radio.

For MOTOTRBO Conventional radios, the deaccess code is sent to the phone patch when attempting to disconnect the phone call. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

For 3600 Trunking capable radios, the deaccess code allows the user to enter DTMF digits 0-9 and the pause character "P".

Notes

- This feature have a maximum of 10 characters.
- This feature is hidden when the Digital Phone Patch feature is disabled.
- For 3600 Trunking capable radios, for non-display models, this feature must not be empty. If the field is set to empty, on tabbing or moving out of this field, the value shall be set to *0* value.
- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Deaccess Code (Repeater)

Description

Sets the Phone system deaccess code on the Repeater. The Repeater sends this deaccess code to the phone patch when hang up is required. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

Notes

- This feature is hidden when the Digital or Digital Phone Patch feature is disabled.
- This feature must be set to default value upon tabbing or moving out of this feature, if the user configures it as blank.
- This feature is supported in Digital mode only.

Busy TOT (sec)

Description

Sets the duration that the Repeater waits (after a phone call is initiated) for the busy channel to become available before ending the phone call setup.

Range	
Maximum	30 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Digital mode only.

Response TOT (sec)

Description

Sets the duration that the Repeater waits for a subscriber to answer a phone call before ending the phone call setup. This applies to both the private and talkgroup phone calls (when ringing response is required).

Range	
Maximum	60 sec
Minimum	6 sec
Increment	6 sec

Note

- This feature is supported in Digital mode only.

TX Tone Duration (ms)

Description

Configures the duration of the DTMF tone digits in milliseconds (ms) for a given subscriber phone system. This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

For MOTOTRBO Conventional radios:

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

TX Tone Duration (ms) (Repeater)

Description

Configures the duration of the DTMF tone digits in milliseconds (ms) for the repeater phone system. This applies to the de-access code which is generated by the repeater as a DTMF tone.

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

Note

- This feature is supported in Digital mode only.

TX Tone Interval (ms)

Description

Configures the duration of the intervals between the DTMF tone digits in a transmission sequence in milliseconds (ms) for a given subscriber phone system. This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

For MOTOTRBO Conventional radios:

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

TX Tone Interval (ms) (Repeater)

Description

Configures the duration of the intervals between the DTMF tone digits in a transmission sequence in milliseconds (ms) for the repeater phone system. This applies to the de-access code which is generated by the repeater as a DTMF tone.

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

Note

- This feature is supported in Digital mode only.

Ring Tone Level (dB)

Description

Configures the level of tone in dB that alerts the radio user to accept a Phone Call and informs the user that the Phone Patch channel is available and the radio is being ringed.

Range	
Maximum	-3 dB
Minimum	-35 dB

Note

- This feature is supported in Digital mode only.

Busy Tone Level (dB)

Description

Configures the level of tone in dB that is sounded to the phone user to signal that the system is currently busy.

Range	
Maximum	-6 dB
Minimum	-22 dB
Increment	1 dB

Note

- This feature is supported in Digital mode only.

Pause Duration (ms)

Description

Configures the duration of the silence in milliseconds (ms) between the Access Code and the dialing digits. The pause is sometimes required after the phone system access (for a dial tone) or when automatically dialing an a phone number with an extension number through a phone switchboard. If this duration is too short, the first dialing digits will not be received by the phone system.

For MOTOTRBO Conventional radios:

Range	
Maximum	10000 ms
Minimum	500 ms
Increment	500 ms

For 3600 Trunking capable radios:

Range	
Maximum	4000 ms
Minimum	500 ms
Increment	500 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Enable All Call

Description

When enabled, the landline phone user can initiate a phone call to target radio where the target can be radios in all call group type.

Note

- This feature is supported in Digital mode only.

Response Required

Description

Allows the user to enable or disable the need for an incoming talkgroup call to require a radio response before allowing access.

Note

- This feature is supported in Digital mode only.

Length

Description

Sets the expected length of the Target ID including the call type (private, talkgroup or all call), timeslot (Slot Number) and radio/talkgroup ID entered by the Phone User when initiating a phone call. So, the Target ID Length includes the length of the radio ID/talkgroup ID plus 2 more digits (one for the timeslot and one for the call type).

Range	
Maximum	10
Minimum	3
Increment	1

Note

- This feature is supported in Digital mode only.

Entry Time (sec)

Description

Sets the duration that the Repeater waits for the Target ID validation during a landline-to-radio phone call before sending the Deaccess Code to end the call.

Range	
Maximum	60 sec
Minimum	10 sec
Increment	1 sec

Note

- This feature is supported in Digital mode only.

Validation Attempts

Description

Defines the number of invalid attempts the repeater will accept during landline-to-radio phone call initiation, after which the repeater will end the call initiation.

Range	
Maximum	3
Minimum	1
Increment	1

Note

- This feature is supported in Digital mode only.

Request Tone Level (dB)

Description

Configures the level of tone in dB that is sounded to notify the phone user to begin entering the Target ID via DTMF.

Range	
Maximum	-6 dB
Minimum	-22 dB
Increment	1 dB

Note

- This feature is supported in Digital mode only.

Pretime (ms) (Phone System)

Description

Configures the duration of silence milliseconds (ms) prior to sending the first DTMF tone of the Access Code.

For MOTOTRBO Conventional radios:

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Preconfigured Call

Enable (Preconfigured Call)

Description

This checkbox allows the user to choose whether or not to enable the preconfigured phone call capability of the repeater.

If the preconfigured phone call capability is enabled, the repeater will wait for three seconds after the target ID request tone is played for the user. If the user does not dial any DTMF digit using the phone patch within the three seconds, the repeater will automatically place a preconfigured phone call to the radio or group of radios that are set in Call Type (Preconfigured) and Call ID (Preconfigured). If the user dials an invalid call ID within the three seconds, the target ID request tone will be replayed to indicate a Retry, where the user can select to re-dial the correct call ID or not to dial any digit. If the user chooses not to re-dial, the repeater will automatically place a preconfigured phone call.

If the preconfigured phone call capability is disabled, the repeater will wait indefinitely for the phone user to enter the Call ID using the phone patch.

Note

- This feature is hidden when the Digital or Digital Phone Patch feature is disabled.

Call Type (Preconfigured Call)

Description

This droplist allows the user to choose which call type to use for the preconfigured phone call. The available choices are *Private Call*, *Group Call*, and *All Call*.

Note

- This feature is hidden when the Digital or Digital Phone Patch feature is disabled.
- This feature is only applicable when Enable (Preconfigured Call) is checked.
- The choice *All Call* is only applicable when Enable All Call is checked.

Call ID (Preconfigured Call)

Description

This configuration allows the user to choose which call ID to use for the preconfigured phone call.

Notes

- This feature is hidden when the Digital or Digital Phone Patch feature is disabled.
- This Group Call ID in a Capacity Plus - Single Site system, the maximum value is 254 or the Call ID must not allow the user to exceed 254.
- This Private Call ID in a Capacity Plus - Single Site system, the maximum value is 65535 or the Call ID must not allow the user to exceed 65535.
- This feature is only applicable when Enable (Preconfigured Call) is checked and Call Type (Preconfigured Call) is set to a value other than *All Call*.

Phone (3600 Trunking capable radios)

Adding Phone Systems (3600 Trunking capable radios)

Description

The Phone system feature allows the radio to initiate and receive a simplex telephone call. When this system is attached to a channel (Channels->Phone System), the radio will make a phone call based this system configuration.

Model	Maximum Number of Phone System
Portable Display	4
Mobile Display	4
Portable Non-Display	0
Mobile Numeric Display	0

To add a phone system:

1. Click the **Add** button in the Configuration View.
2. A new row will be inserted at the end of the table. Enter a name and configure the remaining parameters related to the system.

Note

- This feature is software system key protected.
- For Non-Display or Numeric Display model, the radio can only receive phone calls. It has a default phone system in the codeplug to receive a phone call even though CPS does not display the phone system for non-display models.
- This feature is applicable to 3600 Trunking capable radios for Display model only.

See Also

- Deleting Phone Systems.
- Adding Items, for more ways of adding phone system.

Deleting Phone Systems

Description

Phone system(s) may be deleted if they are no longer in use.

To delete a Phone system:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is software system key protected.
- This feature is applicable to 3600 Trunking capable radios for Display model only.

See Also

- Adding Phone Systems.
- Deleting Signaling Systems, for more ways of deleting Phone Systems.

Dial Type 

Description

Selects the Phone Dial Type from the choices.

Option	Functionality
Delayed/Buffered	The user enters the individual phone system access number and phone number using the keypad. Once the radio's PTT button is pressed, the phone system access number and phone number entered by the user is transmitted.
Immediate/Buffered	The user automatically connect to the phone system and the preconfigured access number will automatically transmitted. The user will enter the phone number using the keypad. Once the subscriber radio's PTT button is pressed, the phone number entered by the user is transmitted.
Immediate/Live	The user automatically connect to the phone system and the preconfigured access number is automatically transmitted. The phone number digits will automatically transmitted as the user presses the corresponding keypad buttons.

Note

- This feature is applicable to 3600 Trunking capable radios only.

Pause Duration (ms) 

Description

Configures the duration of the silence in milliseconds (ms) between the Access Code and the dialing digits. The pause is sometimes required after the phone system access (for a dial tone) or when automatically dialing an a phone number with an extension number through a phone switchboard. If this duration is too short, the first dialing digits will not be received by the phone system.

For MOTOTRBO Conventional radios:

Range	
Maximum	10000 ms
Minimum	500 ms
Increment	500 ms

For 3600 Trunking capable radios:

Range	
Maximum	4000 ms
Minimum	500 ms
Increment	500 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

TX Hang Time (ms)

Description

Sets the duration that the radio continues to transmit the carrier signal once a DTMF digit has been transmitted. This applies when the user manually dials a phone number. The additional carrier time after the DTMF digit has been transmitted helps the DTMF decode of the digit.The default value is 1000 ms.

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- This feature is applicable to 3600 Trunking capable radios only.

System

System Name (Phone System)

Description

This displays the name of the system.

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

TX Tone Duration (ms)

Description

Configures the duration of the DTMF tone digits in milliseconds (ms) for a given subscriber phone system. This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

For MOTOTRBO Conventional radios:

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Pretime (ms) (Phone System)

Description

Configures the duration of silence milliseconds (ms) prior to sending the first DTMF tone of the Access Code.

For MOTOTRBO Conventional radios:

Range	
Maximum	4500 ms
Minimum	0 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

TX Tone Interval (ms)

Description

Configures the duration of the intervals between the DTMF tone digits in a transmission sequence in milliseconds (ms) for a given subscriber phone system. This applies to the access code, de-access code, phone number and over-dial digits which are generated by the subscriber as DTMF tones.

For MOTOTRBO Conventional radios:

Range	
Maximum	6400 ms
Minimum	40 ms
Increment	20 ms

For 3600 Trunking capable radios:

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Access Code

Description

This feature allows you to configure the phone system access code. This is to grant access for the radio to perform certain call type (i.e. International, Long Distance, Toll, Local, 911, etc…) per the radio access code.

For MOTOTRBO Conventional radios, the access code is made up of the access command and the multi-digit access prefix. The access command is typically the * sign, but is programmable in most phone patches. It is used to wake-up the phone patch from the radio system. The multi-digit access prefix is used to limit the radio user access. It is commonly up to four digits long. Some phone patches allow each prefix to be configurable to allow or block calls starting with 0, 1, 9, etc. This then essentially allows a group of radio users to have access to local dialing, but not long distance, or toll numbers, etc.

If provisioned, the radio will not prompt the user for it. If left empty, the radio will prompt the user after the phone number is entered. The user must enter both the multi-digit access prefix and the access command, for example (123*). The order (*123 or 123*) may be different depending on phone patch programming. It is important to note that if access restrictions are not required, the system still requires the access command be provided. Without the access command, the phone patch will not be accessible. In most cases, the access command should be preprogrammed if no access restrictions are required.

The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

For 3600 Trunking capable radios, the access code allows the user to enter DTMF digits 0-9 and the pause character "P".

Notes

- This feature have a maximum of 10 characters.
- This feature is hidden when the Digital Phone Patch feature is disabled.
- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Deaccess Code

Description

This feature allows you to configure the phone system deaccess code on the subscriber radio.

For MOTOTRBO Conventional radios, the deaccess code is sent to the phone patch when attempting to disconnect the phone call. The user can enter up to ten characters. Valid characters are DTMF digits 0-9, *, #, and the pause character "P".

For 3600 Trunking capable radios, the deaccess code allows the user to enter DTMF digits 0-9 and the pause character "P".

Notes

- This feature have a maximum of 10 characters.
- This feature is hidden when the Digital Phone Patch feature is disabled.
- For 3600 Trunking capable radios, for non-display models, this feature must not be empty. If the field is set to empty, on tabbing or moving out of this field, the value shall be set to *0* value.
- For MOTOTRBO Conventional radios, this feature is supported in Digital mode only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios.

Trunking

Adding Trunking Systems

Description

In a Trunking system, radios are always listening to the control channel of the radio's current Trunking System for channel assignment instructions. Trunking channels can only communicate with radios operating on Trunking channels.

Model	Maximum Number of Trunking System
Portable Display	20
Mobile Display	20
Portable Non-Display	20
Mobile Numeric Display	20

To add a trunking system:

1. Right-click the **Systems**->**Trunking** folder of the Tree View.
2. Select **Add**->**System**. A new system is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is software system key protected.

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Deleting Trunking System.
- Adding Items, for more ways of adding Trunking Systems.
- Renaming Items, for more ways of renaming Trunking Systems.

Deleting Trunking Systems

Description

Trunking systems may be deleted if they are no longer in use.

To delete a trunking system:

1. Right-click a trunking system of the Tree View.
2. Select **Delete**.

Note

- This feature is software system key protected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Adding Trunking System.
- Deleting Signaling Systems, for more ways of deleting Trunking Systems.

Individual Call RX Ring Duration (sec)

Description

Determines the maximum duration that the radio generates an audio ergonomic indication upon reception of an individual call request (e.g. Phone Call) if the user does not answer the call.

Range	
Maximum	120, ∞ sec
Minimum	61sec
Increment	1 sec

Note

- This feature is disabled if the Infinity(∞) option is selected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Private Call TX Ring Duration (sec)

Description

Determines the maximum duration that the radio generates an audio ergonomic indication when initiating a private call.

Range	
Maximum	255, ∞ sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is disabled if the Infinity(∞) option is selected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Block Emergency in Failsoft

Description

When enabled, the radio does not attempt to enter emergency mode in trunking mode when the radio detects the trunking system is in failsoft operation.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Inactivity Time (sec)

Description

Specifies the duration that the radio waits after all failsoft communication has ceased before attempting to search for an available control channel.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Affiliation Holdoff Time (sec)

Description

Defines the duration that the radio waits before connecting to a new trunking site when the radio has detected a control channel failure on the current trunking site. This selected time is used by the radio as a randomized average. The purpose of this feature is to avoid all the radios on the failed site from attempting to register and affiliate at the new site at the same time. The available choices are 1, 127, 15, 255, 3, 31, 63 and 7.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Inform Site Trunking

Description

Selects the Smart Zone Inform Site from the available choices. This feature enables an ergo indication when the radio detects the current trunking site is operating in "Site Trunking" mode. Site Trunking mode means the site can no longer establish communications with the zone controller and therefore is operating in a single site operation.

Option	Functionality
No Indication	No audible or visual alert will be provided to the user when the radio detects the current trunking site is operating in "Site Trunking" mode.
Display Only	A visual indication will be provided to the user when the radio detects the current trunking site is operating in "Site Trunking" mode (applicable to Display model only).
Alert Only	An audible alert will be provided to the user when the radio detects the current trunking site is operating in "Site Trunking" mode.
Display & Alert	An audible and visual indication will be provided to the user when the radio detects the current trunking site is operating in "Site Trunking" mode (applicable to Display model only).

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Full Spectrum Scan Hang Time (sec)

Description

Defines the duration that the radio is allocated to automatically perform control channel scanning for any valid control channel activity when the radio goes out of range of all its currently programmed

controller information. Once this timer has expired, the radio returns to normal control channel operations.

Range	
Maximum	31 sec, Disabled
Minimum	5 sec
Increment	1 sec

Note

- This feature is disabled if the *Disabled* option is selected.
- This feature applies to SmartZone operation for all Trunking Systems and Trunking Personalities.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Auto Dial Wait Time (ms)

Description

Allows the user to wait for the amount of time as specified in this timer starting when the phone system voice channel access has been granted. Once the timer expires, the phone entry selected, pre-entered (speed dial), or hot keypad digits will then be transmitted.

Range	
Maximum	6375 ms
Minimum	0 ms
Increment	25 ms

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

RSSI Outbound Signal Word Counter

Description

Configures the RSSI Outbound Signal Word (OSW) Counter.The OSW counter determines the number of OSW intervals that the radio remains inactive on the control channel before a set of RSSI samples is taken.

Range	
Maximum	255
Minimum	60

Increment	1

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

RSSI Thresholds

Desense Hang Time (sec)

Description

Sets the duration the radio continues scanning the control channels at the current site after it has become desensed (unable to receive a signal on the current frequency). The radio's receiver may become "desensed" when a strong off channel signal overloads the receiver front end and thus reduces sensitivity to the weaker on channel signal.

Range	
Maximum	30 sec
Minimum	0 sec
Increment	1 sec

Note

- This feature is disabled if the value is set to 0.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Inbound Signal Word Window Adjustment

Description

Specifies the Inbound Signal Word Window (ISW) Adjustment. This feature is used to fine tune the Inbound Signal Word (ISW) window for the purpose of improving trunking system performance.

Range	
Maximum	FFFF
Minimum	0000
Increment	1 (Hex)

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Strong Signal Roaming

Description

When enabled, this feature adds three addition levels to roaming, very excellent, outstanding, and maximized. The three additional levels are not user programmable. This feature is normally used in urban areas where the signal strength for several sites is determined to be excellent.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Acceptable Threshold

Description

Specifies the Smart Zone RSSI Acceptable Threshold.

Range	
Maximum	FF
Minimum	00
Increment	1 (Hex)

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Good Threshold

Description

Specifies the Smart Zone RSSI Good Threshold.

Range	
Maximum	FF
Minimum	00
Increment	1 (Hex)

Note

- The value in this feature must be greater than the Acceptable Threshold.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Very Good Threshold

Description

Specifies the Smart Zone RSSI Very Good Threshold.

Note

- The value of this feature is in Hex and must fall between the Good Threshold and **Excellent Threshold** value. The increment is 1.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Excellent Threshold

Description

Specifies the Smart Zone RSSI Excellent Threshold.

Range	
Maximum	FF
Minimum	00
Increment	1 (Hex)

Note

- The value of this feature must be greater than the **Very Good Threshold**.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Extend TX Warm Up Time

Description

Enables a 25 ms extension on transmit before the Inbound Signal Word Window (ISW) is sent to allow for installations that have a delay in decoding.

Note

- Enabling this feature unnecessarily may result in more ISW collisions and reducing ISW bandwidth.
- This feature is applicable to 3600 Trunking capable radios only.

Filter Constants

Constant K1

Description

Specifies the Smart Zone Filter Constant K1. The value is used when the elapsed time between Received Signal Strength Indication (RSSI) samples is less than 8 seconds. In a SMARTZone system, constants are designed to reduce filter damping as time between RSSI sampling increases. The value is associated with the Filter Threshold Constant T1.

Range	
Maximum	9
Minimum	0
Increment	1

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Constant K2

Description

Specifies the Smart Zone Filter Constant K2. The value is used when the elapsed time between Received Signal Strength Indication (RSSI) samples is less than 8 seconds. In a SMARTZone system, constants are designed to reduce filter damping as time between RSSI sampling increases. The value is associated with the Filter Threshold Constant T2.

Range	
Maximum	9
Minimum	0
Increment	1

Note

- The value of this feature must be less than or equal to the value of Constant K1.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Constant K3

Description

Specifies the Smart Zone Filter Constant K3. The value is used when the elapsed time between Received Signal Strength Indication (RSSI) samples is less than 8 seconds. In a SMARTZone system, constants are designed to reduce filter damping as time between RSSI sampling increases. The value is associated with the Filter Threshold **Constant T3**.

Range	
Maximum	9
Minimum	0
Increment	1

Note

- The value of this feature must be less than or equal to the value of Constant K2.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Constant T1

Description

Specifies the Smart Zone Threshold Constant T1. The value creates a timed window that the raw Received Signal Strength (RSS) samples must fall within to be considered valid. This window is centered on the current filtered Received Signal Strength Indication (RSSI) and the size is twice the value of the threshold constant. The constant is used when the time elapsed between RSSI samples is less than 8 seconds.

Range	
Maximum	FF
Minimum	00
Increment	1

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Constant T2

Description

Specifies the Smart Zone Threshold Constant T2. The value creates a timed window that the raw Received Signal Strength (RSS) samples must fall within to be considered valid. This window is centered on the current filtered Received Signal Strength Indication (RSSI) and the size is twice the value of the threshold constant. The constant is used when the time elapsed between RSSI samples is less than 8 seconds.

Range	
Maximum	FF
Minimum	00
Increment	1

Note

- The value of this feature must be greater than or equal to the value of Constant T1.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Constant T3

Description

Specifies the Smart Zone Threshold Constant T3. The value creates a timed window that the raw Received Signal Strength (RSS) samples must fall within to be considered valid. This window is centered on the current filtered Received Signal Strength Indication (RSSI) and the size is twice the value of the threshold constant. The constant is used when the time elapsed between RSSI samples is less than 8 seconds.

Range	
Maximum	FF
Minimum	00
Increment	1

Note

- The value of this feature must be greater than or equal to the value of Constant T2.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

System

System ID

Description

Selects a System ID from the choices of the System IDs currently loaded from the software system key file. The System ID is used by the radio to determine that activity on a control channel frequency is associated with the trunking system programmed into the radio.

Note

- This feature is software system key protected.
- This feature is disabled when the corresponding software system key for the specific **System ID** setting is not available or not loaded into the application.
- This feature is disabled if the value does not match with the **System ID** setting in one of the loaded software system key files.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Channel Bandwidth (KHz) (3600 Trunking capable radios)

Description

Sets the channel bandwidth for the Trunking system Transmit and Receive frequencies. The available choices are 12.5 KHz for 800 MHz, 12.5 KHz for 900 MHz and 25.0 KHz for 800 MHz. This is a system-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Conventional mode only.

Channel Assignment Type

Description

Selects a slight variation in frequency band split (in MHz) and adjusts channel spacing bandwidth (in kHz).

Option	Functionality
Domestic	The radio must use 25 kHz channel spacing. Use this option if you are in the North America (NA) region.
International	The radio must use 12.5 kHz channel spacing. Use this option if you are outside of the NA region.

Note

- This feature is enabled when Channel Bandwidth is set to *12.5 for 800 MHz* or *25.0 for 800 MHz*.

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Repeater Offset (MHz)

Description

Sets the amount of separation between the transmitter and receiver frequencies used at the central controller repeater site. The value is 45 if the Channel Bandwidth (KHz) is 800 MHz and 39 if the **Channel Bandwidth** is 900 MHz. This is a system-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Connect Tone (Hz)

Description

Allows the user to select the Connect Tone from the available choices of 76.6, 83.72, 90.00, 97.30, 105.88, 116.13, 128.57 and 138.46. This tone is a sub-audible signal sent on the voice traffic channel by the initiating radio. Once the site controller receives the connect tone from the radio, it unmutes the voice channel and voice transmission begins.

Note

- This feature is software system key protected.
- This feature is disabled if **System ID** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Connect Tone (Hz)

Description

Selects the Failsoft Connect Tone from the available choices of Default, 76.6, 83.72, 90.00, 97.30, 105.88, 116.13, 128.57 and 138.46. This connect tone is a sub-audible signal sent on the voice traffic channel by the initiating radio when in Failsoft operation. Once the functional repeater receives the connect tone from the radio, it unmutes the voice channel and voice transmission begins. In addition, the repeater transmits an audible 900 Hz tone for 280 ms every 10 seconds to alert the radios that the system is in Failsoft operation.

Note

- When Coverage Type is set to *SmartZone,* this feature value is defaulted to 105.88 Hz but when Coverage Type is set to *SmartNet,* this feature uses the **Connect Tone** value.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

Coverage Type

Description

Selects the geographic Coverage Type of system it is operating on so that it can use the correct communication method within the trunking system.

Option	Functionality
SmartNet	Similar to a single site SmartZone.
SmartZone	Allows the radio to determine through Received Signal Strength Indication (RSSI) polling samples, the best trunking site to be used. The user can add up to twenty trunking systems if the software system key being used in the CPS matches the software system key in the archive or radio and the software system key has enabled the adding trunking systems.

Note

- This feature is software system key protected.
- This feature is disabled if **System ID** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Privacy Plus Support

Description

AWhen enabled, the radio supports the type II Privacy Plus system. This is a system-wide feature.

Note

- This feature is only enabled when the **Coverage Type** feature is set to *SmartNet*.
- The Affiliation Type feature is disabled when this feature is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Affiliation Type

Description

Allows the user to select the type of radio affiliation to the SmartNet system. This is a system-wide feature.

Option	Functionality
Auto	The radio automatically affiliates/registers to the SmartNet system.
PTT	The radio affiliates/registers to the Smartnet system only upon a PTT press.

Note

- This feature is enabled when the Privacy Plus Support feature is enabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Individual ID

Description

Configures the Individual ID. The individual ID is a unique identification number that identifies the radio for the current trunking system. This information is used by other radio's when attempting transmit private calls or pages to this radio.

Range	
Maximum	FFFE
Minimum	0001
Increment	1

Note

- This feature is software system key protected.
- This feature is disabled if **System ID** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

RFSS Response Time (ms)

Description

Configures the RFSS response time. This is the base time between retries for radio inbound signaling packets (ISP) and inbound signaling word (ISW). An additional random time is added to this base time to prevent all radios in the system from attempting a retry at the same time.

Range	
Maximum	6375 ms
Minimum	25 ms
Increment	25 ms

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Splinter Channel

Description

When enabled, the control channel frequency, Failsoft frequency and channel numbers received over-the-air are shifted down by 12.5 kHz.

Note

- This feature is software system key protected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Audio Enhancement

Description

Provides additional audio processing to reduce undesirable audio artifacts and improve audio quality. This is a system-wide feature.

Option	Functionality
Companding	The Companding algorithm reduces noise due to the channel characteristics by compressing the dynamic range of the audio at the transmitter and expanding the dynamic range of the audio at the receiver. This attenuates the low level additive channel noise since it is only expanded, not compressed.
Flutter Fighter	The Flutter-Fighter is an FM noise canceling algorithm which reduces noise due to the channel characteristics by eliminating audio pops caused by FM spikes during channel fading in high Signal to Noise ratio (S/N) conditions.
Hear Clear	Hear Clear is designed to provide the maximum level of audio quality by reducing low-level additive noise as well as the FM spikes due to channel fading. The use of this option enables both the Companding algorithm and the Flutter-Fighter algorithm. Hear Clear is most effective when used on 900 MHz channels or 800 MHz channels with 12.5 KHz channel bandwidth.
None	Additional audio processing is disabled.

Note

- Similar audio enhancement settings should be used by all radios assigned to a Talkgroup. Specifically, if *Hear Clear* is enabled on the transmitting radio, it should also be enabled on all of the receiving radios.
- *Hear Clear* can effectively inter-operate with legacy radios which only support *Companding*. On legacy radios which support multiple Companding algorithms, some trial-error may be needed to determine which legacy algorithm performs the best with Hear Clear.
- The *Flutter Fighter* option can be used when the transmitting radio has no audio enhancements enabled (i.e. when the transmitting radio has *Hear Clear* and *Companding* disabled).
- For MTR3000 base radio/repeater, the compressor function for Repeater Mic path in *Companding* cannot be supported if **Audio Type** is set to *TX Flat Only.*

- For MTR3000 base radio/repeater, the expander function for Repeater Speaker path in *Companding* cannot be supported if **Audio Type** is set to *RX Flat Only*.
- For MTR3000 base radio/repeater, *Companding* and *Hear Clear* is not supported if **Audio Type** is set to *RX and TX Flat*.
- In 800/900 MHz MTR3000 base radio/repeater, *Companding* is only for the microphone/speaker path. *Companding* will not take effect in the repeat path.
- For MOTOTRBO and 3600 Trunking capable radios in Conventional mode, *Companding* and *Hear Clear* is not supported if **Audio Type** or RX Audio Type is set to *Flat Unsquelch*.

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Selective Radio Inhibit

Description

Allows a dispatcher to deny an individual radio access to the trunked subscriber radio system via over-the-air signaling from the dispatcher. Once inhibited, the radio is unable to initiate or receive calls. A dispatcher can also un-inhibit (re-enable) the radio to restore the subscriber radio's operation.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Shuffled Band Plan

Description

Shuffled band plan is a Motorola patented feature that changes the channel assignment message in order to eliminate unauthorized radios from the systems. When this feature is enabled on the radio, the radio decodes the channel assignments from the system using the Motorola patented algorithm.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Non-adjacent Site Search

Description

Enables the radio to search its list of control channels for a site with a stronger signal. The radio will only perform this search when the current home site and the current home site's adjacent sites are all registering below the configurable RSSI level defined in RSSI Acceptable Threshold. During the search time, the radio will not be monitoring the home site's control channel and therefore may miss activity of interest.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

TX Power Level

Description

Sets the system's transmission power level.

Option	Functionality
High	Used when a stronger signal is needed to extend transmission distances.
Low	Used when communicating in close proximity, and to prevent transmissions into other geographical groups.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Phone System

Description

Associates any available Phone System to the channel for use when initiating or receiving a phone call on a trunking system. Selecting the *None* option disables the user from initiating or receiving phone calls on this system.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode for Display model only.

Announcement Talkgroup

Description

Allows the user to select the Announcement Talkgroup from the choices of all the available trunking personalities which have the current trunking system selected and personalities that have not been selected as **Dynamic Talkgroup**.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

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Dynamic Regrouping

Description

When enabled, individuals from different talkgroups to be joined together to communicate in special situations. Dynamic regrouping is performed by the dispatcher. The radio user can also request the dispatcher to dynamically regroup their radio and to exit dynamic regrouping when it is no longer needed via the reprogram request button.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

DynamicTalkgroup

Description

Allows the user to select the Dynamic Talkgroup from the choices of all the available trunking personalities which have the current trunking system selected and personalities that have not been selected as **Announcement Talkgroup**.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Status Update

Name (Status Update)

Description

Configures the status alias in the Unicode format for each entry in the Status Updates list to identify the status.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Value (Status Update)

Description

Displays the index of each Status. This value corresponds to the Status/Message Index.

Note

- The value of this feature must be predefined before loading.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Message Updates

Name (Message Updates)

Description

Configures the message alias in the Unicode format for each entry in the Message Updates list to identify the message.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Value (Message Updates)

Description

Displays the index of each Message. This value corresponds to the Status/Message Index.

Note

- The value of this feature must be predefined before loading.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Site

Adding Sites

Description

This feature allows the user to add a new site.

To add a site:

1. Click the **Add** button.
2. A new row will be inserted at the end of the table. Enter a name and a value for the Site. The value ranges from 1 to 64 with an increment of 1.

Note

- This feature is software system key protected.
- This feature is disabled if the **Coverage Type** is set to *PrivacyPlus/SmartNet* or the **System ID** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Deleting Sites.

Deleting Sites

Description

Site(s) may be deleted if they are no longer in use.

To delete a Site:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is software system key protected.
- This feature is disabled if the **Coverage Type** is set to *SmartNet* or the **System ID** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Adding Sites.

Name (Site)

Description

Configures the site alias in the Unicode format for each entry in the Site list to identify the Site.

Note

- This feature is software system key protected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Value (Site)

Description

Displays the site Value.

Note

- This feature is software system key protected.
- The value of this feature must be generated when a new entry is added.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Control Channels

Adding Control Channels

Description

This feature allows the user to add multiple control channel under a trunking system.

To add a control channel:

1. Click the **Add** button.
2. A new row will be inserted at the end of the table. Enter the TX and RX frequency of the control channel.

Note

- This feature is software system key protected.
- To configure the control channel, the software system key being used in the CPS must match the software system key in the archive or radio and the software system key has enabled the control channel to be configured.
- This feature is disabled if the **System ID** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Deleting Control Channels.

Deleting Control Channels

Description

Control Channel(s) may be deleted if they are no longer in use.

To delete a Control Channel:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is software system key protected.
- This feature is disabled if the **System ID** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Adding Control Channels.

RX Frequency (MHz)

Description

Allows the user to enter a receive (RX) frequency for the control channels in a trunking system.

Note

- This feature is software system key protected.
- Up to 8 control channels can be configured when the Coverage Type is set to *SmartNet* and up to 128 control channels can be configured when the **Coverage Type** is set to *SmartZone*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

TX frequency (MHz)

Description

Allows the user to enter a transmit (TX) frequency for the control channels in a trunking system

Note

- This feature is software system key protected.
- Up to 8 control channels can be configured when the Coverage Type is set to *SmartNet* and up to 128 control channels can be configured when the **Coverage Type** is set to *SmartZone*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

5 Tone

Adding 5 Tone Systems

Description

In the 5 Tone Signaling Systems, each radio has a unique numeric identity (e.g. 12345). To signal the number 12345, a sequence of 5 tones is sent. Sequences of audible tones of a very short duration are sent between radios. Most 5 tone sequences take less than half a second to send.

The user is able to use the 5 Tone Signaling System to:

- Initiate a Selective Call, i.e. a call is specifically directed to a targeted radio (In this private call, targeted radio is assigned an individual number) or specifically to a groups of radios (In this group call, all the radios share the same group number).
- Launch an Emergency
- Send a status information.

When receiver that is set to respond to the transmitted tone sequences receive the correct 5 tone sequence, it sounds alert beeps and lights LEDs to indicate to the user that they have been called. The squelch opens (radio unmutes) so that activity on the channel can be heard. Others will remain muted.

The 5 Tone Signaling System provides the following benefits:

- Easier and faster communications.
- Users only receive calls specifically for them.
- Alert beeps notify users when a call is received for them.
- Users do not need to continuously listen to channel resulting in less user fatigue.

A maximum of eight 5 Tone systems can be created.

To add a 5 Tone system:

1. Right-click the **5 Tone** folder of the Tree View.
2. Select **Add->System**. A new system is added at the end of the node in the Tree View and in the table in the Configuration View. Proceed to configure the parameters of the newly created system.

Note

- This feature is supported in Analog mode only.

See Also

- Deleting Signaling Systems.
- Adding Items, for more ways of adding the 5 Tone systems.

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System Name (5 Tone System)

Description

Displays the name of the system.

Note

- This feature is supported in Analog mode only.

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Signaling System

Description

The radio supports the following predefined 5 Tone signaling standards: ZVEI1, ZVEI2, ZVEI3, CCIR 20ms, CCIR 70ms, CCIR 100ms and EEA. The radio also supports two user-defined signaling standards: User Defined 1 and User Defined 2. The user-defined signaling standards can be configured under Signaling Systems->User Defined 5 Tone. The default selection is ZVEI1.

A 5 Tone signaling standard defines 16 tones, namely 0-9 and A-F (refer to 5 Tone Predefined Signaling Standards for the specification of the predefined standard and 5 Tone User-Defined Signaling Standards for the specification of the user-defined standard) as well as two single tones, namely Single Tone 1 and Single Tone 2. The frequency and duration of the single tones are specified by the user under 5 Tone->Encoder Single Tone and 5 Tone->Decoder Single Tone.

Note

- This feature is supported in Analog mode only.

Group Tone

Description

Specifies a Group Tone from the choices of 0-9 or A-F for a particular 5 Tone Signaling System. The default value is A.

Note

- This feature resets to the original value if the user tries to set it to the same value as the Repeat Tone feature.
- This feature is supported in Analog mode only.

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Repeat Tone

Description

Specifies a Repeat Tone from the choices of 0-9 or A-F for a particular 5 Tone Signaling System. The default value is E.

Note

- This feature resets to the original value if the user tries to set it to the same value as the Group Tone feature.
- This feature is supported in Analog mode only.

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Encoder Single Tone

Single Tone 1 Frequency (Hz) (Encoder)

Description

Specifies the frequency to encode Single Tone 1. The default value is 885 Hz.

Range	
Maximum	3000 Hz
Minimum	300 Hz
Increment	1 Hz

Note

- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

See Also

- 5 Tone Frequencies and Durations

Single Tone 1 Duration (ms)

Description

Specifies the duration to encode Single Tone 1. The default value is 500 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- This feature is supported in Analog mode only.

See Also

- 5 Tone Frequencies and Durations

Single Tone 2 Frequency (Hz)(Encoder)

Description

Specifies the frequency to encode Single Tone 2. The default value is 885 Hz.

Range	
Maximum	3000 Hz
Minimum	300 Hz
Increment	1 Hz

Note

- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

See Also

- 5 Tone Frequencies and Durations

Single Tone 2 Duration (ms)

Description

Specifies the duration to encode Single Tone 2. The default value is 500 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- This feature is supported in Analog mode only.

See Also

- 5 Tone Frequencies and Durations

Decoder Single Tone

Enable Tone 1

Description

Allows the user to enable or disable Single Tone 1 decode.

Note

- This feature is supported in Analog mode only.

Single Tone 1 Frequency (Hz) (Decoder)

Description

Specifies the frequency to decode Single Tone 1. The default value is 885 Hz.

Range	
Maximum	3000 Hz
Minimum	300 Hz
Increment	1 Hz

Note

- This feature is enabled when the **Enable Tone 1** feature is enabled.

- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

Single Tone 1 Minimum Duration (ms)

Description

Specifies the minimum duration to decode Single Tone 1. The default value is 400 ms.

Range	
Maximum	6000 ms
Minimum	10 ms
Increment	10 ms

Note

- This feature is enabled when the **Enable Tone 1** feature is enabled.
- The value of this feature must not be greater than Single Tone 1 Maximum Duration (ms).
- This feature is supported in Analog mode only.

Single Tone 1 Maximum Duration (ms)

Description

Specifies the maximum duration to decode Single Tone 1. The default value is 600 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- This feature is enabled when the **Enable Tone 1** feature is enabled.
- The value of this feature must always be greater or equal to the value of Single Tone 1 Minimum Duration (ms).
- This feature is supported in Analog mode only.

Enable Tone 2

Description

Allows the user to enable or disable Single Tone 2 decode.

Note

- This feature is supported in Analog mode only.

Single Tone 2 Frequency (Hz) (Decoder)

Description

Specifies the frequency to decode Single Tone 2. The default value is 885 Hz.

Range	
Maximum	3000 Hz
Minimum	300 Hz
Increment	1 Hz

Note

- This feature is enabled when the **Enable Tone 2** feature is enabled.
- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

Single Tone 2 Minimum Duration (ms)

Description

Specifies the minimum duration to decode Single Tone 2. The default value is 400 ms.

Range	
Maximum	6000 ms
Minimum	10 ms
Increment	10 ms

Note

- This feature is enabled when the **Enable Tone 2** feature is enabled.
- The value of this feature must not be greater than Single Tone 2 Maximum Duration (ms).
- This feature is supported in Analog mode only.

Single Tone 2 Maximum Duration (ms)

Description

Specifies the maximum duration to decode Single Tone 2. The default value is 600 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- This feature is enabled when the **Enable Tone 2** feature is enabled.
- The value of this feature must always be greater or equal to the value of Single Tone 2 Minimum Duration (ms).
- This feature is supported in Analog mode only.

5 Tone Predefined Signaling Standards

The table below lists the tone frequency and duration definition for the supported predefined 5 Tone signaling standards.

Tone Number	Code Digit	Frequency (Hz)						
		ZVEI1	ZVEI2	ZVEI3	CCIR20	CCIR70	CCIR100	EEA
Tone 0	0	2400	2400	2200	1981	1981	1981	1981
Tone 1	1	1600	1600	970	1124	1124	1124	1124
Tone 2	2	1160	1160	1060	1197	1197	1197	1197
Tone 3	3	1270	1270	1160	1275	1275	1275	1275
Tone 4	4	1400	1400	1270	1358	1358	1358	1358
Tone 5	5	1530	1530	1400	1446	1446	1446	1446
Tone 6	6	1670	1670	1530	1540	1540	1540	1540
Tone 7	7	1830	1830	1670	1640	1640	1640	1640
Tone 8	8	2000	2000	1830	1747	1747	1747	1747
Tone 9	9	2200	2200	2000	1860	1860	1860	1860

Tone A	A	2800	885	885	2400	2400	2400	1055
Tone B	B	810	810	810	930	930	930	930
Tone C	C	970	2800	2600	2247	2247	2247	2247
Tone D	D	885	2600	2800	991	991	991	991
Tone E	E	2600	970	2400	2110	2110	2110	2110
Tone F	F	930	930	930	873	873	873	873
Encode Tone Duration (ms)		70 ± 20	70 ± 20	70 ± 20	25 ± 5	70 ± 10	100 ± 10	40 ± 10
Max Inter-tone Time (ms)		15	15	15	7.5	7.5	7.5	4
Encoder Frequency Tolerance		±1.5%	±1.5%	±1.5%	±8Hz	±8Hz	±8Hz	±1%
Must Decode Bandwidth		±1.5%	±1.5%	±1.5%	±1%	±1%	±1%	±1%
Must Reject Bandwidth		±4.5%	±4.5%	±4.5%	±3%	±3%	±3%	±3%

Note

- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

User Defined 5 Tone

Encoder Tone Duration (ms)

Description

Specifies the duration to encode a user-defined 5 Tone signaling standard. The default value is 70 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- This feature is supported in Analog mode only.

See Also

- Select 5 User-Defined Signaling Standards

Decoder Minimum Tone Duration (ms)

Description

Specifies the minimum duration to decode a user-defined 5 Tone signaling standard. The default value is 40 ms.

Range	
Maximum	6000 ms
Minimum	10 ms
Increment	10 ms

Note

- The value of this feature must not be greater than Decoder Maximum Tone Duration (ms).
- This feature is supported in Analog mode only.

See Also

- Select 5 User-Defined Signaling Standards

Decoder Maximum Tone Duration (ms)

Description

Specifies the maximum duration to decode a user-defined 5 Tone signaling standard. The default value is 100 ms.

Range	
Maximum	6000 ms
Minimum	40 ms
Increment	10 ms

Note

- The value of this feature must always be greater or equal to the value of Decoder Minimum Tone Duration (ms).
- This feature is supported in Analog mode only.

See Also

- Select 5 User-Defined Signaling Standards

Tone Freq (Hz)

Description

Specifies the frequency to encode the specified tone (0-9 and A-F) for the user-defined 5 Tone signaling standard. The default frequency is the same with the predefined signaling standard ZVEI1.

Range	
Maximum	3000 Hz
Minimum	300 Hz
Increment	1 Hz

Note

- If the frequency of the user-defined tones are too close to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap of these tones is the “must-reject” bandwidth of the user-defined signaling standard. Refer to 5 Tone User-Defined Signaling Standards.
- This feature is supported in Analog mode only.

See Also

- **Signaling System**

5 Tone User-Defined Signaling Standards

The table below lists the tone frequency and duration definition for the user-defined 5 Tone signaling standards.

Encode Tone Duration	±20% (from the rated value)
Max Inter-tone Time (ms)	15
Encoder Frequency Tolerance	±1.5% (from the rated value)
Must Decode Bandwidth	±2%
Must Reject Bandwidth	±4.5%

Note

- If the frequency of a single tone is too close to the tones in the specified signaling standard or to each other, the receiving radio may not be able to differentiate them. The suggested minimal frequency gap is the “must reject” bandwidth of the specified signaling standard.
- This feature is supported in Analog mode only.

Encoder

Multicall Advanced User Mode 

Description

Sets the 5 Tone operating mode. When enabled, the user mode is Advanced User. When disabled, the user mode is Basic User.

User Mode	Functionality
Basic User	Basic User 5 Tone Calls: In this mode, it is only possible to use a preprogrammed telegram button to transmit the telegram. A preprogrammed telegram can be assigned to any of the following buttons: Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, or PTT button. The Address Send button is available for the Display model only. The variable digit positions of the CPS programmed telegram must be substituted for the correct number of digits by the radio before transmission. The user needs to enter the variable called radio ID digits ("U1" - "U8") before selecting the preprogrammed telegram in manual dial. The radio will also substitute this user-entered digits into the telegram before transmission. The user is able to scroll through the Contacts list via the menu and select an entry. Pressing the preprogrammed telegram button causes the radio to substitute the Contact list entry into the preprogrammed telegram and transmit it. Basic User Telegram Decode: On decode of a received telegram sequence, the radio attempts to find an entry in the Contacts list where the decoded ID digits match the ID digits of an entry in the Contacts list. If Call Back is enabled, the current contents of the variable digits in the address buffer will be overwritten with the digits from the corresponding positions of the received telegram. Basic User Status Calls: The user must enter the required status digits ("S1" - "S3") and then select the preprogrammed telegram button. The preprogrammed telegram can be assigned to any of the following buttons: Call 1, Call 2, Call 3, Call 4, Call 5, Call 6, or PTT button. The radio will substitute the user-entered digits into the telegram and then send it. This mode has the following limitations: • No Telegram parameter in the Missed Calls list. • No Telegram used for Call Back. • No Telegram parameter in the decoder (the matching Encode Telegram parameter in decoder setting is used by the Advanced user). • Call Log only saves the call initiator ID or Status • The user cannot enter a telegram by manual dial but only select a preprogrammed telegram.
Advanced User	Advanced User 5 Tone Calls: In this mode, the user can use either the preprogrammed telegram buttons or

Address Send button (available for Display model only) to transmit the telegram.

The user can also enter the telegram number (1 - 9) followed by the variable called radio ID digits ("U1" - "U8") in manual dial. The user then use either the Address Send button or a preprogrammed telegram button to transmit. If the preprogrammed telegram button is used, the variable digits are substituted into the preprogrammed telegram before transmission.

The user is also able to scroll through the Contacts list, select an entry and press the Address Send button to transmit the associated telegram for that entry. This allows the user more choices of selectable telegrams (including preprogrammed telegrams associated with the Call buttons). However, if a preprogrammed telegram button is pressed before transmission, then the entered telegram is ignored and the digits from its corresponding positions will be substituted into the variable digit positions of the preprogrammed telegram, assigned to that button and then transmitted.
Example:
Telegram number entered = 1 i.e. 45(A1)(A2)(A3))
ID = 123
Final telegram = 45123. (Press PTT or Address Send button to send the telegram.)
If a preprogrammed call button has a value of 3 (3 = 78(A1)(A2)(A3)), pressing the button before the PTT or Address Send button may result in the following telegram being sent instead:
78123 where the telegram has now changed from 1 to 3. If the telegram IDs are used to define some places, it may well mean that the calling radios position has been given as Gatwick instead of Heathrow.

Advanced User Telegram Decode:
A decode telegram format may match the format of a corresponding telegram which is used for alias display or Call Back, it identifies that telegram number, and is used as follows:

- On decode, the radio attempts to find an entry in the Contacts list where the decoded ID digits match the ID digits of an entry in the Contacts list (by identity, position and number). In addition, the decoders Matching Encode Telegram must also match the Contacts list entry telegram.

  Example:
  4123. Successfully checked against the Contacts list may cause the following to be displayed:
  'John - Gatwick' where 123 = John, the callers identity and 44 = his location (Gatwick)
  If there is no name, the telegram number and ID is displayed.
- On decode, if call back is enabled, the current contents of the address buffer will be overwritten with both the variable digit ids and the decoders Matching Encode Telegram.

On completion of the call, the clear down sequence is sent to reset the system if required.
Call set up and clear down telegrams/sequences may be assigned to buttons.

Advanced User Status:
Telegrams can be set up in several different ways with variable digits in different places.
Example:
1. A status telegram can include an address and have variable digits for the status number.
2. It may have variable digits for both the address and status number.

	3. It may just have variable digits for the address. 4. It may be a complete telegram with no variable digits. A programmed Status button can be used for direct entry into the menu's Status list, or the user may enter the menu in the normal way. Once the Status list is entered, the last person contacted will be displayed and this could be from the Contacts list, **Call Back** or manual dial. A selected entry from the Status list may be sent (if it does not require direct entry of digits) by pressing the Address Send button.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Multicall Address and Multicall Status

Multicall Address and Multicall Status

Description

In the 5 Tone Signaling Systems, the Multicall feature allows a radio to call other radios either by selecting the call number (Address) of the targeted radio from the Contacts list or by entering the call number of the targeted radio via the keypad (manual dial). For manual dialing of Address, the Numeric Keypad feature is set to *Address*.

Multicall also allows a radio to send status information to other users. This status may either be selected from the Status list or entered directly from the keypad (manual dial). For manual dialing of Status, the Numeric Keypad feature is set to *Status*.

For both the Address and Status, the user can specify up to 3 ranges of allowable variable digits from the CPS. See Encoder->Multicall Address->Address Range and Encoder->Multicall Status->Status Range. The address entered by the user is validated against the range(s) that have the same number of digits. The dialed digits are accepted when any one of the three ranges is matched. Otherwise, the dialing is rejected if there are no ranges that are matched.

For both the Address and Status, group digits can be locked out from variable positions by setting the corresponding bits of a Group Lockout mask from the CPS. See Encoder->Multicall Address->Position for Group Lockout Digit and Encoder->Multicall Status->Position for Group Lockout Digit. For both the Address and Status, the CPS user can program a digit that can be locked out from all the positions or a specified variable digit position. Validation against the allowable variable digits is done on keypad entry.

Values in the Contacts list (Contacts->5 Tone Call) or Status list (Encoder->Status), which are outside the ranges, can be entered via the CPS. However, if an attempt is made to transmit a telegram with insufficient Variable Digits entered, the transmission will fail and a button error alert is sounded. If an attempt is made to transmit a telegram that contains address digit positions that have not been filled, then the transmission will fail and a button error alert is sounded. To prevent a user from entering an Address not in the Contacts list or a Status not in the Status list, Multicall Address Keypad and Multicall Status Keypad can be disabled via the CPS.

Variable Digit Entry:

- For each designated variable position, the following digits may be entered: 0-9, or * for group. The user will not be able to enter encode single tones 1 and 2 or digits A-F or Repeat.

- For both Address and Status, the CPS user can specify up to 3 ranges of allowed variable digits. Entered variable digits that fall outside specified ranges are considered invalid entries. For each range the minimum and maximum must have the same number of digits. The range selected for validation matches the number of variable digits for the selected telegram. The address entered by the user will be validated against range(s) that have the same number of digits.
- For both Address and Status, group digits can be lockout from variable positions by setting the corresponding bits of a Group Lockout mask.
- For both Address and Status, the CPS user can program a digit that can be locked out from all positions.
- For both Address and Status, the CPS user can program a digit to lockout from a specified variable digit position.
- Validation against the allowed variable digits gets done on keypad entry.
- The CPS is allowed to enter numbers in the Contacts list/Status list that are outside the ranges.
- If an attempt is made to transmit a telegram when there are not enough Variable Digits entered, transmission will fail and the button/keypad error alert is sounded.
- If an attempt is made to transmit a telegram where the telegram contains address digit positions that have not been entered, transmission will fail and the button/keypad error alert is sounded.
- If variable digits have not been selected from the Address/Status list or entered by manual dial then attempts to transmit a Multicall telegram will fail and the button/keypad error alert is sounded.

Note

- Any variable digits are substituted with the real digits before a telegram is transmitted.
- This feature is supported in Analog mode only.

See Also

- **Multicall Advanced User Mode**

Multicall Address

General Lockout Digit (Multicall Address)

Description

Specifies the digits that are barred from use in any position in telegrams that have variable digit positions. The choices are None and numbers from 0 to 9.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position Lockout Digit (Multicall Address)

Description

Specifies a digit that will be barred from use in positions specified by the Position for Position Lockout Digit in telegrams that have variable digit positions. The choices are None and numbers from 0 to 9.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position for Position Lockout Digit (Multicall Address)

Description

Specifies the position in variable digit telegrams where Position Lockout Digit cannot be placed. The choices are numbers from 1 to 8.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position for Group Lockout Digit (Multicall Address)

Description

Specifies the position(s) in variable digit telegrams where Group Digits cannot be placed. A user can choose one or multiple numbers from 1 to 8.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Address Range

Description

Allows the user to enable or disable the Multicall Address Range Minimum and Maximum. The **Minimum** and **Maximum** define the number entry range within the variable digit telegrams.
Example:
Sequence = 54(A1A2A3), Address Range 1 = 800 to 999. This means for the variable digits used in Sequence, only numbers between 800 and 999 are allowed.

Note

- **Minimum** and **Maximum** must have the same number of digits.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Minimum (Multicall Address)

Description

Defines the minimum number entry within the variable digit telegrams for the Multicall Address Range.

Range	
Maximum	99999999
Minimum	0
Increment	1

Note

- The value of this feature must not be greater than the Maximum.
- This feature is supported in Analog mode only.

See Also

- Address Range

Maximum (Multicall Address)

Description

Defines the maximum number entry within the variable digit telegrams for the Multicall Address Range.

Range	
Maximum	99999999
Minimum	0
Increment	1

Note

- The value of this feature must always be greater or equal to the value of **Minimum**.
- This feature is supported in Analog mode only.

See Also

- Address Range

Multicall Status

General Lockout Digit (Multicall Status)

Description

Specifies the digits that are barred from use in any position in telegrams that have variable digit positions. The choices are None and numbers from 0 to 9.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position Lockout Digit (Multicall Status)

Description

Specifies a digit that will be barred from use in positions specified by the Position for Position Lockout Digit in telegrams that have variable digit positions. The choices are None and numbers from 0 to 9.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position for Position Lockout Digit (Multicall Status)

Description

Specifies the position in variable digit telegrams where Position Lockout Digit cannot be placed. The choices are numbers from 1 to 3.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Position for Group Lockout Digit (Multicall Status)

Description

Specifies the position(s) in variable digit telegrams where Group Digits cannot be placed. A user can choose one or multiple numbers from 1 to 3.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Status Range

Description

Allows the user to enable or disable the Multicall Status Range **Minimum** and Maximum. The **Minimum** and **Maximum** define the number entry range within the variable digit telegrams.
Example:
To limit dialling capabilities to own group on a PABX. Sequence 42(S1S2) Status Range 1 = 10 to 99. This means for the variable digits used in Sequence, only numbers between 10 and 99 are allowed.

Note

- Minimum and Maximum must have the same number of digits.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode for Display model only.

Minimum (Multicall Status)

Description

Defines the minimum number entry within the variable digit telegrams for the Multicall Status Range.

Range	
Maximum	999
Minimum	0
Increment	1

Note

- The value of this feature must not be greater than the Maximum.
- This feature is supported in Analog mode only.

See Also

- Status Range

Maximum (Multicall Status)

Description

Defines the maximum number entry within the variable digit telegrams for the Multicall Status Range.

Range	
Maximum	999
Minimum	0
Increment	1

Note

- The value of this feature must always be greater or equal to the value of **Minimum**.
- This feature is supported in Analog mode only.

See Also

- Status Range

Status

Only Use Decoder Status List

Description

Allows the user to enable or disable the Only Use Decoder Status List feature. If enabled, the encode Status list is disabled and decode Status list is used for both the encode and decode status.

Note

- This feature is supported in Analog mode only.

Adding Status (Encoder)

Description

Allows the user to add an encoder status.

To add an encoder status:

1. Click the **Add** button.
2. A new row will be inserted at the end of the table. Enter a name and configure the remaining parameters related to the Status.

Note

- This feature is disabled if the Use Decoder Status List feature is enabled.
- This feature is supported in Analog mode only.

See Also

- Deleting Status (Encoder) for deleting the encoder status.

Deleting Status (Encoder)

Description

Encoder statuses may be deleted if they are no longer in use.

To delete an encoder status:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is disabled if the Use Decoder Status List feature is enabled.
- This feature is supported in Analog mode only.

See Also

- Adding Status (Encoder) for adding the encoder status.

Name (Encoder)

Description

Specifies an alias for each encoder status list entry. The range for the alias is up to 16 UCS-2 characters.

Note

- This feature is disabled if the Use Decoder Status List feature is enabled.
- This feature is supported in Analog mode only.

Status (Encoder)

Description

Specifies a status value from 1 to 3 variables. The user can use the following input to represent a variable:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

Note

- This feature is disabled if the Use Decoder Status List feature is enabled.
- The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.
- The value of this feature is reset to the original value if the user input is out of range or blank.
- The value of this feature is automatically set to an upper case if the user input is lower case.
- The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".
- This feature is supported in Analog mode only.

Sequences

Adding Encoder Sequences

Description

Conventional signalling provides a mechanism for selective calling between radio users operating on the same channel frequency and privacy is required during the call. This mechanism uses sequences comprising of 1 to 12 5 Tone tones. This mechanism uses sequences comprising of 1 to 12 5 Tone tones (for MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 1 to 20 5 Tone tones (for MOTOTRBRO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only). The sequence acts in the same manner as a telephone number to make a call. A 5 Tone telegram encodes the sequence(s) to send to the targeted radio. When the radio receives its code, its user is alerted to the call by a series of 5 rapid alert tones and the radio unmutes. e.g.:
12345, or
12345 34251, or
12345 34251 87589

If any of the supported signalling standard is chosen, the tones will be predefined for frequency, duration and the time interval between the tones. The radio also offers the choice of two user-defined standards.

Up to 32 encoder sequence lists may be programmed into the radio and then be associated to any available telegrams.

To add a sequence:

1. Right-click the **Encoder**->**Sequences** folder of the Tree View.
2. Select **Add->Sequence**. A new sequence is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Items, for more ways of adding the sequences.
- Deleting Encoder Sequences.
- Renaming Items, for more ways of renaming the sequences.
- Sorting Items

Deleting Encoder Sequences

Description

Sequences may be deleted if they are no longer in use.

To delete a sequence:

1. Right-click an individual sequence of the Tree View.

2. Select **Delete**.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Encoder Sequences.
- Deleting Items, for more ways of deleting signaling systems.

Sequence Name 

Description

Displays the 5 Tone encoder sequence name.

Note

- This feature is supported in Analog mode only.

Signaling System (Sequences) 

Description

Associates a 5 Tone system to each 5 Tone encode tone sequence. The choices are all available 5 Tone Signaling Systems.

Note

- The value of this feature is set to the first available choice if the selected choice is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Sequence 

Description

Specifies 1 to 12 tones to make a 5 Tone encode tone sequence. Specifies 1 to 12 (for MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBRO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones to make a 5 Tone encode tone sequence. The tone is a single frequency audible (300-3000 Hz) tone and the frequency and duration are specified by the sequence signaling standard. The user can input the following digit to represent a tone:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable address digit: "A1" - "A8"
- a variable status digit: "S1" - "S3"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

For Display model, each tone can be a fixed digit of 0-9 or A-F, a variable address digit of A1-A8, a variable status digit of S1-S3, a variable subscriber ID digit of U1-U8, a fixed single tone digit of T1-T2 and a fixed group tone digit.

For Non-Display model, each tone can be a fixed digit of 0-9 or A-F, a variable subscriber ID digit of U1-U8, a fixed single tone digit of T1-T2 and a fixed group tone digit.

The user then attaches the specified encoded tone sequence to a telegram in the Sequence 1-3 parameters.

Note

- This feature must not be empty.
- The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.
- The value of this feature is reset to the original value if the user input is out of range or blank.
- The value of this feature is automatically set to an upper case if the user input is lower case.
- The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".
- Variable digits in a telegram must be substituted for the correct number of digits before transmission.
- This feature is supported in Analog mode only.

Pretime (ms) (Sequences)

Description

Sets the duration in milliseconds (ms) that the radio waits for the repeater to reach its operating power output before the radio sends its encode sequences. It is recommended to set this duration above 400ms when transmitting a telegram on a 5 Tone channel with Private Line (PL) or Digital Private Line (DPL), or when transmitting on a Repeater mode.

To increase the scan landing rate of a 5 Tone telegram on the decoding radio, calculates the recommended **Pretime** setting on the encoding radio using the formula below. After that, configures the Signaling Hold Time as recommended by the formula in the Notes section of the topic.

Decoding Radio 5 Tone Channel Configuration	Calculation for Encoding Radio Pretime (ms)
CSQ and analog mode scan list	100 x (total number of scan member - 1)
CSQ and mixed mode scan list	50 + 200 x (total number of scan member - 1)
PL and analog mode scan list	50 + 100 x (total number of scan member - 1)
PL and mixed mode scan list	50 + 200 x (total number of scan member - 1)

Range	
Maximum	2550 ms
Minimum	0 ms

Increment	10 ms

Note

- This feature is disabled if set to 0.
- The value of this feature must not be 0 (disabled) at the same time with the Extended 1st Tone Duration feature. If the value is the same, this value will automatically be incremented by the Increment value.
- This feature is supported in Analog mode only.

Extended 1st Tone Duration and Telegram 1st Tone Duration (ms)

Description

Specifies an extended first tone duration in milliseconds (ms) for each sequence. If a transmitted sequence has an extended first tone, the receiver decoders must know what the duration of this extended first tone is, otherwise the sequence would be corrupted on decode. The length of the tone would not be of the correct duration for the standard used (CCIR, EEA, ZVEI etc). This may be used with the Telegram Repeat feature for multi-channel systems that use the scan feature.

For Telegram 1st Tone Duration (ms), total first tone duration for MOTOTRBO radios are extended 1st tone duration plus default tone duration. For Professional Conventional Series radios, the extended first tone duration field is the total length of the first tone duration. Because of the differences in the expected duration of the first tone, the Professional Series radios will trigger time out while decoding the first tone.

Range	
Maximum	2550 ms
Minimum	0 ms
Increment	10 ms

Telegram 1st Tone Duration (ms) Example: Professional Conventional Series Radios Setting	
Extended First Tone	800 ms
5 Tone Signalling Standard	CCIR 100 ms
Telegram 1st Tone Duration	Extended First Tone = 800 ms

Telegram 1st Tone Duration (ms) Example: MOTOTRBO Radios Setting	
Extended First Tone	800 ms
5 Tone Signalling Standard	CCIR 100 ms
Telegram 1st Tone Duration	Extended First Tone (800 ms) + 5 Tone Signalling Standard (100 ms) = 900 ms

Notes

- This feature is disabled if set to 0.
- The value of this feature must not be 0 (disabled) at the same time with the Pretime feature. If the value is the same, this value will automatically be incremented by the Increment value.
- This feature is supported in Analog mode only.

Telegrams

Adding Encoder Telegrams

Description

A 5 Tone telegram is composed of one to three 5 Tone sequences. To make a selective call, the radio can be programmed to send up to three 5 Tone sequences in rapid succession, e.g.:
12345, or
12345 34251, or
12345 34251 87589
Whatever the number and combination of sequences, this is known as a telegram.

Besides addressing a specific radio for selective call, telegrams are also used to define the message sent by the Auto-Acknowledge and Call Forward features.

Telegrams may be sent in a couple of ways:

- Fixed Telegram - by pressing the PTT or one of the programmable function buttons which had been set to be a call button (*Call 1-6*) in the radio home screen.
- Dynamic Telegram - by manual dialing.

It is also possible for groups of users to share a group number as well as having an individual number. If a sequence has identical sequential digits, the radio automatically changes some of the digits for repeat tones.
E.g. 1 2 3 3 3 5.
This will be changed by the radio to: 1 2 3 R 3 5.
This process is used to prevent code corruption during decoding.

Up to 32 telegrams may be programmed into the radio, each being any combination of the 32 encode sequences.

To add a telegram:

1. Right-click the **Encoder**->**Telegrams** folder of the Tree View.
2. Select **Add->Telegram**. A new row is inserted at the end of the table in the Configuration View.

Alternatively, the user can add a telegram by clicking the **Add** button in the Configuration View.

Note

- This feature is supported in Analog mode only.

See Also

- Deleting Encoder Telegrams.

Add (Encoder Telegrams)

Description

Adds a new telegram entry. Up to 32 telegrams may be programmed into the radio, each being any combination of the 32 encode sequences.

Note

- This feature is supported in Analog mode only.

Delete (Encoder Telegrams)

Description

Removes a telegram entry.

Note

- This feature is supported in Analog mode only.

Repeat Counter

Description

Defines the number of times the encoder telegram is repeated. Every valid receive decode will cancel this function.

Range	
Maximum	255
Minimum	1
Increment	1

Note

- This feature is supported in Analog mode only.

Periodic Repeat Time (sec)

Description

Defines when the radio automatically sends out its PTT Keyup for Telegram Repeat.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

See Also

- **Minimum Keyup for Repeat (sec)**

Minimum Keyup for Repeat (sec)

Description

Defines the minimum time interval between successive, automatic, telegram transmissions by the radio. These transmissions will coincide with the pressing of the PTT button. The time before sending the first telegram after keyup is defined only by the Periodic Repeat Time.

Range	
Maximum	255
Minimum	0
Increment	1

Note

- This timer must be less than the **Periodic Repeat Time**.
- This feature is supported in Analog mode only.

Power Up Auto Telegram

Description

Configures a 5 Tone telegram that will be automatically sent after the radio has powered up. The choices are None and all available telegrams.

Note

- This feature is set to *None* if the selected telegram is deleted.
- This feature is supported in Analog mode only.

Power Down Auto Telegram

Description

Configures a 5 Tone telegram that will be automatically sent after the radio has powered down. The choices are None and all available telegrams.

Note

- This feature is set to *None* if the selected telegram is deleted.
- This feature is supported in Analog mode only.

Power Up Auto Telegram Revert Channel

Description

Specifies a channel for the 5 Tone Power Up Auto Telegram. The choices are Selected and all available 5 Tone channels.

Note

- This feature is set to *Selected* if the selected channel is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Power Down Auto Telegram Revert Channel

Description

Specifies a channel for the 5 Tone Power Down Auto Telegram. The choices are Selected and all available 5 Tone channels.

Note

- This feature is set to *Selected* if the selected channel is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Telegram Name

Description

Displays the 5 Tone encoder telegram name.

Note

- This feature is supported in Analog mode only.

Sequence 1

Description

Specifies the 5 Tone encoder telegram Sequence 1. The choices are all available sequences.

Note

- The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Sequence 2

Description

Specifies 5 Tone encoder telegram Sequence 2. The choices are None and all available sequences.

Note

- The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Sequence 3

Description

Specifies 5 Tone encoder telegram Sequence 3. The choices are None and all available sequences.

Note

- This feature is enabled when Sequence 2 is not set to None.
- The value of this feature is set to one of the available choices if the selected sequence is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Acknowledge Expected

Description

Defines how the radio handles telegram encode acknowledgement before voice transmission is allowed on the calling radio.

Option	Functionality
None	The radio does not expect an acknowledgement before voice transmission is allowed on the calling radio.
ACK1	ACK1 is required to allow the calling radio to transmit voice.
ACK1 with Answer	ACK1 and voice transmission is required to allow the calling radio to transmit.

Note

- This feature is supported in Analog mode only.

Telegram Repeat

Description

When enabled, this feature allows the encoded telegram to be repeated when the following event happens:

- An acknowledgement is not received within the acknowledge expected duration or
- The Tx Admit Criteria is not satisfied on the first attempt or any subsequent attempts. However, if the transmit attempt fails due to decode authorization or channel set as RX Only, the call attempt will fail.

The telegram may be repeated until it reaches the maximum number of retries specified in the Repeat Counter. This feature can be programmed for any of the Acknowledge Expected options (including No ACK).

Note

- This feature is supported in Analog mode only.

Decoder

Acknowledge Expected Duration (sec)

Description

Specifies the duration to expect an acknowledgement from the target radio after sending a 5 Tone encode telegram with the Acknowledgement Expected feature not set to *None*.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is supported in Analog mode only.

Sequence TOT (ms)

Description

Specifies the maximum delay between 2 successive 5 Tone decode sequences.

Range	
Maximum	5100 ms
Minimum	25 ms
Increment	25 ms

Note

- This feature is supported in Analog mode only.

Status

Adding Status (Decoder)

Description

Allows the user to add a decoder status.

To add a decoder status:

1. Click the **Add** button.

2. A new row will be inserted at the end of the table. Enter a name and configure the remaining parameters related to the Status.

Note

- This feature is supported in Analog mode only.

Deleting Status (Decoder)

Description

Decoder statuses may be deleted if they are no longer in use.

To delete a decoder status:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is supported in Analog mode only.

Name (Decoder)

Description

Specifies an alias for each decoder status list entry. The range for the alias is up to 16 UCS-2 characters.

Note

- This feature is supported in Analog mode only.

Status (Decoder)

Description

Specifies a status value from 1 to 3 variables. The user can use the following input to represent a variable:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

Note

- The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.
- The value of this feature is reset to the original value if the user input is out of range or blank.
- The value of this feature is automatically set to an upper case if the user input is lower case.
- The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".
- This feature is supported in Analog mode only.

Definitions

Adding Definitions

Description

The radio supports decode using the 5 Tone signaling systems.

Unlike for encode, the same signaling system is used for each decode sequence within the telegram, hence signalling systems are assigned per decoder. This is to avoid problems that arise from signaling systems that use tone frequencies, which overlap, with tone frequencies used by other signalling systems. For example, if the radio received a tone of frequency 1060 Hz, duration 70 ms, the software wouldn't be able to tell if this was Modified ZVEI tone 2 or French Modified tone 1. In addition the software wouldn't know which signaling standards decode tolerances to use when determining whether to accept/reject a tone, for example different signalling standards use different frequency and duration tolerances.

Tones for reception are again grouped into sequences. A decode telegram consists of 1-3 concatenated decode sequences.

Up to 16 definitions can be added, each of which can be enabled/disabled per personality.

To add a definition:

1. Right-click the **Decoder**->**Definitions** folder of the Tree View.
2. Select **Add->Definition**. A new definition is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Items, for more ways of adding the definitions.
- Deleting Definitions.
- Renaming Items, for more ways of renaming the definitions.
- Sorting Items

Deleting Definitions

Description

Definitions may be deleted if they are no longer in use.

To delete a definition:

1. Right-click an individual definition of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Definitions.
- Deleting Items, for more ways of deleting definitions.

Definition Name

Description

Displays the 5 Tone decoder definition name.

Note

- This feature is supported in Analog mode only.

5 Tone Signaling System

Description

Specifies one 5 Tone Signaling System. The choices are all the available 5 Tone Signaling Systems.

Note

- This feature is supported in Analog mode only.

Decoder Type

Description

Determines the type of action taken by the radio on receiving a valid telegram. The type of action can be from lifting the squelch and opening the radios audio circuits for an individual call sequence, to instigating an emergency and displaying information if the radio has a display or giving alerts.

Option	Functionality
General	On decoding the sequence, the radio starts a 5 Tone call. The decoder assumes voice to follow the encode telegram.
Incoming Emergency	When an emergency decode is received, any further calls will not interrupt the emergency call, either during the call or while the call is waiting to be answered. The incoming emergency alert will be sounded. The radio emergency can be reset on successful decode of the appropriate emergency exit sequence. If Call Back is enabled, and non-emergency calls are received, the emergency call remains active for call back. It is possible to use status messaging for emergency calls. Reception of a decode telegram with the status digits matching an entry for emergency in the status list, will cause that entry, indicating emergency, to be displayed.
Priority	When a priority decode is received, any further non priority/priority calls will not interrupt the priority call, either during the call or while the call is waiting to be answered. The incoming priority alert will be sounded. It will be interrupted if an Emergency sequence is decoded.
Emergency Exit	When an emergency exit decode is received while in an emergency mode, the radio exits the emergency Mode.
Stun	On decoding the sequence, the radio is 'stunned'. All attempts at user activity, except powering on/off, are ignored. The radio display is blank and the only received signal action by the radio is the unstun decode sequence. This is similar to the MOTOTRBO Radio Disable feature.
Unstun	On decoding the sequence, the radio is 'unstunned'. The radio reverts to the normal radio operation. The radio may also be unstunned by reprogramming the radio. This is similar to the MOTOTRBO Radio Enable feature.
Clear Down	On decoding the sequence, the radio ends the current call session.
Silent Interrogate	On decoding the sequence, the radio is interrogated without the user knowing it. The radio transmits an ACK. This is similar to the MOTOTRBO Radio Check feature.
ACK1/Ringing	If ACK1 is received in response to the transmission of a telegram with the Acknowledge Expected feature set to *ACK 1 with Answer*, the transmitting

	radio waits for the receiving radio to answer before being allowed to transmit.
ACK1/Authorization	If ACK1 and authorization decode is received in response to the transmission of a telegram with the Acknowledge Expected feature set to *ACK 1*, the transmitting radio is allowed to transmit.

Note

- This feature is supported in Analog mode only.

Group Type

Description

Specifies the group type for each 5 Tone decoder. Two types of group calls are supported.

Option	Functionality
Standard	For standard group call, a group position will be a position(s) in the decode sequence at which the radio will accept either the group tone or the individual tone. After detection of a valid group tone, all subsequent tones of the sequence must also be group tones for the sequence to be recognized as a call for the radio. I.e. Group tones run consecutively in the sequence from the last tone towards the first tone. **Note:** Consecutive group tones will be subject to auto 'R' insertion. Example: Radio ID is: 1 2 3 4 5. Group digits: 1 2 3 G G. Radio will respond to: 12345 (Individual Call). 123GG (Group of up to 100 radios). 1234G (Sub-Group of 10 radios).
Expanded	For expanded group call, a group position will be a position at which the radio will accept either the group tone or the individual tone. Group tones will not be accepted in positions other than group positions. Group positions can be random throughout the sequence. Example: Radio ID is: 1 2 3 4 5. Group digits: 1 G 3 4 G. Radio will respond to: 12345 (Individual Call). 1G34G (Group of up to 100 radios). 1234G (Sub-Group of 10 radios).

Note

- This feature is supported in Analog mode only.

Decoder Sequence

Description

Configures up to three decoder sequences (i.e. Decoder Sequence 1, Decoder Sequence 2, and Decoder Sequence 3). 12 20 tones are the maximum tone for each sequence. The user can input the following digit to represent a tone:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable address digit: "A1" - "A8"
- a variable status digit: "S1" - "S3"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"
- a fixed group tone digit: "G"

For the display model, the user can configure 1 to 12 tones for each decoder sequence, each tone can be digit 0-9, A-F, variable address digit A1-A8, variable status digit S1-S3, variable radio ID digit U1-U8, single tone T1-T2, and group tone G. For the display model, the user can configure 1 to 12 (for MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBRO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones for each decoder sequence, each tone can be digit 0-9, A-F, variable address digit A1-A8, variable status digit S1-S3, variable radio ID digit U1-U8, single tone T1-T2, and group tone G.

For the non-display model, the user can configure 1 to 12 tones for each decoder sequence, each tone can be digit 0-9, A-F, variable radio ID digit U1-U8, single tone T1-T2, and group tone G. For the non-display model, the user can configure 1 to 12 (for MOTOTRBO 2.0 Alphanumeric Display Mobile radios with DTP capability only) or 20 (for MOTOTRBRO 2.0 radios except for Alphanumeric Display Mobile radios with DTP capability only) tones for each decoder sequence, each tone can be digit 0-9, A-F, variable radio ID digit U1-U8, single tone T1-T2, and group tone G.

Note

- The user must use "(" character as a prefix and ")" character as a suffix to specify an address variable, a status variable, a radio ID variable, and a single tone variable.
- The value of this feature is reset to the original value if the user input is out of range or blank.
- The value of this feature is automatically set to an upper case if the user input is lower case.
- The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".
- This feature is unable to be set to a variable if the variable has not been defined. For example, if U2 is empty, this feature cannot use U2 as a tone.
- Decoder Sequence 1 cannot be empty.
- A decoder sequence composed of only address or status variable digits is fragile and subject to intervention. Such a definition should be avoided.
- This feature is supported in Analog mode only.

Group Sequence

Description

Configures up to three decoder group sequence (i.e. Group Sequence 1, Group Sequence 2, and Group Sequence 3) to enable each decode sequence position to match a group tone.

Note

- This feature is disabled if the Decoder Type feature is set to *Silent Interrogate* or *ACK1/Ringing*.
- Group Sequence 2 can be enabled if only one Decoder Sequence 2 is not empty.
- Group Sequence3 can be enabled if only one Decoder Sequence 3 is not empty.
- This feature is supported in Analog mode only.

Call Forwarding Acknowledge

Description

Specifies an acknowledge for a 5 Tone decoder when it matches the incoming tones and the radio is in call forwarding mode, if the Call Forward feature is enabled. The choices are *None* and all available acknowledges. In the radio, the user may enable or disable the sending of this telegram via a short or long programmable button press (*Button Features - Call Forwarding Set/Clear*).

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is disabled if the Decoder Type feature is set to *ACK1/Ringing* or *ACK1/Authorization*.
- This feature is supported in Analog mode only.

Telegram 1st Tone Duration (ms)

Description

Specifies the duration in milliseconds (ms) of the first tone of the received sequence. If a transmitted sequence has an extended first tone, the receiver's decoders must know what the duration is, otherwise the sequence would be corrupted on decode. The length of the tone would not be of the correct duration for the standard used (e.g. CCIR, EEA, ZVEI).

Range	
Maximum	2550 ms
Minimum	0 ms
Increment	10 ms

Note

- This feature is disabled if set to 0.
- This feature is supported in Analog mode only.

External Alarm

Description

When enabled, informs the user using the horn or/and lights alarm feature if there is an incoming call alert/private call when the user is not in their vehicle.

Note

- This feature is disabled if the Decoder Type feature is set to *Stun*, *Silent Interrogate, ACK1/Ringing* or *ACK1/Authorization*.
- This feature is supported in Analog mode only.

See Also

- GPIO Feature - *Ext Alarm/Horn & Lights.*
- Alarm (Horn/Lights)

Decoder Output Control

Description

Specifies GPIO output for a 5 Tone decoder. By programming a decoder for output control, the radio can, on successful decoding of a telegram sequence, assert or deassert the output of the GPIO Decode Output Control Line on the accessory connector.

Option	Functionality
Disabled	On successful decoding of a telegram sequence, no action is done on the output of the GPIO Decode Output Control Line on the accessory connector. .
Assert	On successful decoding of a telegram sequence, the radio asserts the output of the GPIO Decode Output Control Line on the accessory connector.
De-assert	On successful decoding of a telegram sequence, the radio de-asserts the output of the GPIO Decode Output Control Line on the accessory connector.

Note

- An output line (GPIO Pins - *5 Tone Decoder Output Control*) is programmed to the Decoder Output Control.
- This feature is supported in Analog mode only.

Auto Reset Start

Description

A decoder may be programmed such that on receiving and decoding the correct sequence the radio will enter auto-reset, which activates the Auto Reset Timer.

Note

- This feature is disabled if the Decoder Type feature is set to *Stun*, *Clear Down*, *Silent Interrogate, ACK1/Ringing* or *ACK1/Authorization*.
- The *None* option is not available if the Decoder Type feature is set to *Silent Interrogate*.
- This feature is supported in Analog mode only.

Call Answer Timer

Description

After the call answer timer expires due to no radio user operation, the incoming radio address will be stored in the missed call list.

Note

- This feature is disabled if the Decoder Type feature is set to *Stun*, *Unstun*, *Clear Down*, *Silent Interrogate, ACK1/Ringing* or *ACK1/Authorization*.
- This feature is supported in Analog mode only.

Call Back

Description

If enabled, the radio user will be able to talk back to the incoming radio address, otherwise a PTT press during an active call will initiate a new call.

Note

- This feature is disabled if the Decoder Type feature is set to *Stun*, *Clear Down*, *Silent Interrogate, ACK1/Ringing* or *ACK1/Authorization*.
- This feature is supported in Analog mode only.

Auto Acknowledge

Description

Selects an auto acknowledge to be sent in a telegram in response to a received and decoded individual call sequence. The choices are *None* and all the available acknowledges. No acknowledgement is sent if *None* is selected. For display model, the name/digits will be displayed on the called radio.

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is disabled if the Decoder Type feature is set to *ACK1/Ringing* or *ACK1/Authorization*.
- The *None* option is not available if the Decoder Type feature is set to *Silent Interrogate*.
- This feature is supported in Analog mode only.

Matching Encode Telegram

Description

The specified telegram will be stored into call log list with the decoded radio address, and if the user initiates a call from call log list, the telegram will be encoded.

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is disabled if the Decoder Type feature is set to *Stun, Clear Down, Silent Interrogate, ACK1/Ringing*, or *ACK1/Authorization*.
- This feature is supported in Analog mode only.

Auto Acknowledges

Adding Auto Acknowledges

Description

After transmission of a telegram, the radio may be programmed to expect various acknowledgement(s), responses from the called radio / called radio user.

The following Acknowledge Expected options are programmable per telegram on the encoder side:

- None
- Ack1
- Ack1 with Answer

For each decoder, any of the following 'Auto-Acks' can be enabled or disabled:

- Auto-Ack On Decode: ''Auto-Ack'' telegram is sent automatically immediately on decode.
- Call Forward - An ''Auto-Ack'' telegram is sent if the radio user has enabled call forward to indicate he/she is away from the vehicle.

The Call Forward telegram will only be sent if the user selects the Call Forward feature.

For the display models only, Call Forward may be enabled / disabled from a menu programmed for Call Forward.

If both the ''Auto-Ack'' On Decode and Call Forward ''Auto-Ack'' are enabled for a given decoder, if the user enables Call Forward and a decode matching the decoder is received, then the ''Auto-Ack'' telegram, followed by the Call Forward telegram will be transmitted.

Acknowledge Delay:
Auto acknowledge, call forward. All support two options for determining when the reply signalling is sent. When the radio receives a call and establishes that some type of reply is required, the acknowledge timer will be started, and the reply sent will depend on which of the two options, listed below, below has been selected.

Up to 16 auto acknowledges can be added.

To add an auto acknowledge:

1. Right-click the **Decoder**->**Auto Acknowledges** folder of the Tree View.
2. Select **Add->Auto Acknowledge**. A new auto acknowledge is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Items, for more ways of adding the auto acknowledges.
- Deleting Auto Acknowledges.
- Renaming Items, for more ways of renaming the auto acknowledges.
- Sorting Items

Deleting Auto Acknowledges

Description

Auto acknowledges may be deleted if they are no longer in use.

To delete an auto acknowledge:

1. Right-click an individual auto acknowledge of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Analog mode only.

See Also

- Adding Auto Acknowledges.
- Deleting Items, for more ways of deleting auto acknowledges.

Acknowledge Name

Description

Displays the 5 Tone decoder auto acknowledge name.

Note

- This feature is supported in Analog mode only.

Telegram (Auto Acknowledges)

Description

Specifies a telegram to encode for a 5 Tone acknowledge configuration. The choices are all available telegrams.

Note

- The value of this feature is reset to one of the valid choices if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

See Also

- **Auto Acknowledge**

Channel Free

Description

If enabled, the radio checks for channel free before sending an acknowledge telegram, otherwise the telegram will be sent anyway.

Note

- This feature is supported in Analog mode only.

Sidetone (Auto Acknowledges)

Description

Allows the user to enable or disable the side tone for acknowledge telegram sending for a 5 Tone acknowledge configuration. When disabled, no side tone indications are given when the radio performs Auto Acknowledgement or Call Forwarding Acknowledge.

Note

- This feature is supported in Analog mode only.

Acknowledge Delay (ms)

Description

Specifies the delay duration in milliseconds (ms) before sending the acknowledge telegram for a 5 Tone acknowledge configuration.

Range	
Maximum	6375 ms
Minimum	0 ms
Increment	25 ms

Note

- If the duration is programmed as zero, the radio will reply to the call as fast as possible, but obviously not instantly.
- This feature is supported in Analog mode only.

Revert Channel

Description

Specifies the revert channel for sending the acknowledge telegram for a 5 Tone acknowledge configuration. The choices are *Selected* and all available 5 Tone channels.

Note

- The value of this feature is reset to *Selected* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Contacts

Analog

Adding Analog Call Members

Description

For MOTOTRBO Conventional radios, an analog call allows the radio to communicate with another radio or a group of radios using the Motorola Data Communication (MDC) protocol. The user builds an analog call list by creating new call members under the Analog folder. A call member is an entry that contains a unique ID of another radio and the signaling system that will be used during transmission. It also belongs to a particular call type (Group Call, Private Call or All Call). Among the members of an Analog contact list, only 1 member is allowed for All Call. The user may access this list via a short or long programmable button press (*Button Features - Contacts*) or access the Contacts menu to only make a Call Alert to a Group, Private or All Call.

For 3600 Trunking capable radios, an analog call allows the radio to communicate with another radio or a group of radios using the 3600 Trunking capable radios Trunking system. The user builds an analog call list by creating new call members under the Analog folder. A call member is an entry that contains a unique ID of another radio and the signaling system that will be used during transmission. It also belongs to a particular call type (Private Call). The user may access this list via a short or long programmable button press (*Button Features - Contacts*) or access the Contacts menu to only make a Call Alert to a Private Call.

For MOTOTRBO Conventional radios, to add an analog call member:

1. Right-click the **Analog** folder of the Tree View.
2. Select **Add->Group Call/Private Call/All Call**. A new member is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

For 3600 Trunking capable radios, to add an analog call member:

1. Click the **Add** button in the Configuration View. A new row is inserted at the end of the table. Enter a Call name and ID in the respective column.

Note

- For MOTOTRBO Conventional radios, adding members to lists (call members, scan lists, group lists, channels, zones, etc.) is limited by the radio memory space.
- For 3600 Trunking capable radios, the user can only add Private Calls.
- For 3600 Trunking capable radios, the user can only perform copy/paste, drag/drop of this node from the source to destination archive.
- This feature is supported in Analog mode only.

See Also

- Call Types

- Deleting Analog Call Members.
- Adding Items, for more ways of adding analog call members.
- Renaming Items, for more ways of renaming analog call members.

Deleting Analog Call Members

Description

Call members may be deleted if they are no longer in use.

For MOTOTRBO Conventional radios, to delete a Call member:

1. Right-click an individual call member of the Tree View.
2. Select **Delete**.

For 3600 Trunking capable radios, to delete a Call member:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

See Also

- Adding Analog Call Members.
- Deleting Items, for more ways of deleting call members.

Contact Name (MDC Call)

Description

This displays the name of this contact.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Contact Name (Analog Call) (3600 Trunking Capable radio)

Description

This displays the name of this contact.

Note

- This feature is applicable to 3600 Trunking capable radios only.

Call ID (MDC Call)

Description

Sets an ID for an analog call member. This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There are three call types (Group Call, Private Call and All Call). Call ID for Private Call starts with a hexadecimal digit of 0 to D whereas Call ID for Group Call starts with a hexadecimal digit of E. An All Call has a fixed Call ID of FFFF.

Range	
Maximum	DFFF (Private Call) / EFFF (Group Call)
Minimum	1 (Private Call) / E000 (Group Call)
Increment	1 (Hex)

Note

- The "F" character is allowed and can be used as a wildcard (an all-inclusive digit) in the last three digits of the MDC Call ID. For example, if the Group Call ID is set as E00F, the user is able to communicate with any radios with Group Call IDs between E000 to E00E.
- The Call ID of an All Call is not editable.
- This feature is used only with the Call Alert and MDC Emergency feature.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Call ID (Analog Call) (3600 Trunking capable radios)

Description

Sets an ID for an analog call member. This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There is only one call type, i.e. Private Call.

Range	
Maximum	FFFE (Private Call)
Minimum	0000 (Private Call)
Increment	1 (Hex)

Note

- This feature is applicable to 3600 Trunking capable radios only.

MDC System (MDC Call)

Description

Sets the Motorola Data Communication (MDC) Signaling System's configuration to be used by the current MDC call. Any programmed MDC systems in the radio may be selected.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Revert Channel (Analog Call)

Description

Allows the user to transmit a call on an alternative channel as indicated by the Revert Channel, instead of the channel indicated by the radio's channel selector. Once the call completes, the radio reverts back to the channel indicated by the radio's channel selector. The *Selected* option is used when this call member is expected to be transmitted on the channel indicated by the radio's channel selector.

Note

- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Strip TPL/DPL (MDC System)

Description

When enabled (checked), this feature excludes TPL/DPL codes from the MDC transmissions.

Note

- This feature is supported in Analog mode only.

Digital

Adding Digital Call Members

Description

A digital call allows the radio to communicate with another radio or a group of radios in digital mode. The user builds a digital call list by creating new call members under the Digital folder. A call member is an entry that contains a unique ID that can designate a Talkgroup, All Call, or individual radio. It also belongs to a particular call type (Group Call, Private Call, All Call, Dispatch Call or PC Call) . The maximum number of call members that may be added to a Digital contact list is listed in the table below, but do note that only 1 member is allowed for All Call. The user may access this list via a short or long programmable button press (*Button Features - Contacts*) or access the Contacts Menu. From the list, the user can then make a call or initiate any supplementary call features (e.g. Call Alert, Remote Monitor, Radio Disable, Radio Enable, Radio Check), as long as the radio has been configured to support these features.

To add a digital call member:

1. Right-click the **Digital** folder of the Tree View.
2. Select **Add->Group Call/Private Call/All Call/Dispatch Call/PC Call**. A new member is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- Adding members to lists (call members, scan lists, group lists, channels, zones, etc.) is limited by the radio memory space.
- This feature is supported in Digital mode only.
- The digital call lists can be sorted according to name or Call Type.

See Also

- Call Types
- Adding Digital Groups.
- Deleting Digital Call Members.
- Adding Items, for more ways of adding digital call members.
- Renaming Items, for more ways of renaming digital call members.

Deleting Digital Call Members

Description

Call members may be deleted if they are no longer in use.

To delete a Call member:

1. Right-click an individual call member of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Digital mode only.

See Also

- Adding Digital Call Members.
- Deleting Items, for more ways of deleting call members.

Contact Name (Digital Call)

Description

This displays the name of this contact.

Note

- This feature is supported in Digital mode only.

Call ID (Digital Call)

Description

Sets an ID for a digital call member. This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There are five call types (Group Call, Private Call, All Call, Dispatch Call and PC Call). The meaning of the call type's ID is explained as follows.

- Group Call - This is the ID of the Group that the user wishes to subscribe to.
- Private Call - This is the Radio ID of the target radio.
- All Call - This has a fixed ID of 16777215 (value is not editable).
- Dispatch Call - This call enables an individual radio to send a text message to a PC-based Dispatch client on the fixed network. The ID of the dispatch call must match the target dispatcher's ID programmed in the text message server.
- PC Call - This call enables an individual radio to send a text message to a personal computer (PC) through a radio connected to the PC. The ID of this call must match the Radio ID of the radio connected to the PC.

The ID that is chosen for a particular call type should be consistent with the ID of the target radio's call type.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- This feature is supported in Digital mode only.

Call Receive Tone (Digital Call)

Description

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call. This is to notify the user that the radio is unmuting. This feature is set on a per-call basis.

Note

- The **Disable All Tones** feature must be disabled.
- This feature is supported in Digital mode only.

Ring Style (Digital Call)

Description

Configures the ring tone for a received Private Call, Dispatch Call, or PC Call. The choices are No Style, Ringer 1 to Ringer 10. If set to *No Style*, the default tone is sounded.

Note

- This feature is supported in Digital mode only.

Text Message Alert Tone (Digital Call)

Description

This alert tone sounds when a text message is received from a specific contact in the Contacts list.

Option	Functionality
Momentary	The radio plays the alert tone once. The message alert screen is dismissed after 60 seconds.
Repetitive	The radio starts the **Text Message Alert Tone Duration** timer and plays the alert tone repeatedly until the user reads the message, the timer expires, the radio enters into the test mode, or the radio is turned off. The message alert screen is still dismissed after 60 seconds.

Note

- This feature is supported in Digital mode only.

Connection Type (Digital)

Description

Configures the connection type for a PC call in a Digital system. The choices are *USB* and *Bluetooth*.

Note

- The *Bluetooth* option is available only when the Bluetooth feature is enabled in the radio.
- This feature is supported in Digital mode only.

Route Type (Digital Call)

Description

Allow user to configure where the data message, including text message or telemetry, received in radio is routed to. This feature is configured in the radio from which the data message transmits out. The data message will be routed to different target after peer radio received it.

Option	Functionality
Regular	The data message is to routed to the receiving radio itself.
Option Board	The data message is to routed to the option board device.
Non-IP Peripheral	The data message is to routed to the Non-IP peripheral device.

Notes

- DMR Standard Text Message Type cannot be routed to *Non-IP Peripheral* or Option Board. Refer to Text Message Type for more information.
- Non-IP Peripheral is not applicable for SL Series Radio.

Capacity Plus

Contact Name (Capacity Plus)

Description

This displays the name of this contact.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Call ID (Capacity Plus)

Description

This feature specifies the Capacity Plus - Single Site call's group ID, private ID, or all system ID depending on the call type. For Dispatch Call, this feature is only applicable to text messages, not voice calls. For more information about each call types, refer to Call Types. This is a radio-wide feature.

Range for Group ID	
Maximum	254
Minimum	1
Increment	1

Range for Private ID	
Maximum	65535
Minimum	1
Increment	1

Range for All System ID	
Maximum	255
Minimum	255
Increment	0

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Call Receive Tone (Capacity Plus)

Description

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call. This is to notify the user that the radio is unmuting. This feature is set on a per-call basis.

Note

- The **Disable All Tones** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Ring Style (Capacity Plus)

Description

Configures the ring tone for a received Private Call, Dispatch Call, or PC Call. The choices are No Style, Ringer 1 to Ringer 10. If set to *No Style*, the default tone is sounded.

Note

- This feature is supported in Digital mode only.

Text Message Alert Tone (Capacity Plus)

Description

This alert tone sounds when a text message is received from a specific contact in the Contacts list.

Option	Functionality
Momentary	The radio plays the alert tone once. The message alert screen is dismissed after 60 seconds.
Repetitive	The radio starts the **Text Message Alert Tone Duration** timer and plays the alert tone repeatedly until the user reads the message, the timer expires, the radio enters into the test mode, or the radio is turned off. The message alert screen is still dismissed after 60 seconds.

Note

- This feature is supported in Digital mode only.

Connection Type (Capacity Plus)

Description

Configures the connection type for a PC call in a Capacity Plus - Single Site system. The choices are *USB* and *Bluetooth*.

Note

- The *Bluetooth* option is available only when the Bluetooth feature is enabled in the radio.

Route Type (Capacity Plus)

Description

Allow user to configure where the data message, including text message or telemetry, received in radio is routed to. This feature is configured in the radio from which the data message transmits out. The data message will be routed to different target after peer radio received it.

Option	Functionality
Regular	The data message is to routed to the receiving radio itself.
Option Board	The data message is to routed to the option board device.
Non-IP Peripheral	The data message is to routed to the Non-IP peripheral device.

Notes

- DMR Standard Text Message Type cannot be routed to *Non-IP Peripheral* or Option Board. Refer to Text Message Type for more information.
- Non-IP Peripheral is not applicable for SL Series Radio.

Phone

Adding Phone Call Members

Description

A phone call allows the radio to initiate and receive a simplex telephone call. The user builds a phone list by adding new phone members in the phone list. The user may access this list via a short or long programmable button press (*Button Features - Phone Call*).

Model	Maximum Number of Call Members
Portable Display	1000
Mobile Display	1000
Portable Non-Display	256
Mobile Numeric Display	256

To add a digital call member:

1. Right-click the **Phone** folder of the Tree View.
2. Select **Add**->**Phone Call** A new member is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.

See Also

- Call Types
- Deleting Phone Call Members.
- Adding Items, for more ways of adding phone call members.
- Renaming Items, for more ways of renaming phone call members.

Deleting Phone Call Members

Description

Call members may be deleted if they are no longer in use.

To delete a Call member:

1. Right-click an individual call member of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Digital mode only.

See Also

- Adding Phone Call Members.
- Deleting Items, for more ways of deleting call members.

Name (Phone Call)

Description

Configures the phone call alias in the Unicode format for each entry in the Phone Call list to identify the phone call.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios.

Number

Description

Allows the user to enter a phone number.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

Phone (3600 Trunking capable radios)

Adding Phone Call Members (3600 Trunking capable radios)

Description

A phone call allows the radio to initiate and receive a simplex telephone call. The user builds a phone list by adding new phone members in the phone list. The user may access this list via a short or long programmable button press (*Button Features - Phone*).

Model	Maximum Number of Call Members
Portable Display	50
Mobile Display	50
Portable Non-Display	0
Mobile Numeric Display	0

To add a phone call member:

1. Click the **Add** button in the Configuration View. A new row will be inserted at the end of the table. Enter a Phone name and number in the respective column.

Note

- The user can only perform copy/paste, drag/drop of this node from the source to destination archive.
- This feature is applicable to 3600 Trunking capable radios only.

See Also

- Call Types
- Deleting Phone Call Members.

Deleting Phone Call Members (3600 Trunking capable radios)

Description

Call members may be deleted if they are no longer in use.

To delete a Call member:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- All the phone call members can be deleted, unlike other list that need to have at least one member available in the list.
- This feature is applicable to 3600 Trunking capable radios only.

See Also

- Adding Phone Call Members.

Name (Phone Call)

Description

Configures the phone call alias in the Unicode format for each entry in the Phone Call list to identify the phone call.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios.

Number

Description

Allows the user to enter a phone number.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode and 3600 Trunking capable radios only.

Quik-Call II

Contact Name (Quik-Call II)

Description

Displays the name of a contact.

Note

- This feature is supported in Analog mode only.

Quik-Call II System

Description

Sets the Quik-Call II Signaling System's configuration to be used by the current Quik-Call II call. Any programmed Quik-Call II system in the radio may be selected.

Note

- This feature is supported in Analog mode only.

Revert Channel (Quik-Call II Call)

Description

Selects the revert channel on which the Quik-Call II calls are transmitted. The radio performs this action by automatically switching to the revert channel for the duration of the call, and then switches back to the previously used channel when the call has ended.

Note

- This feature is supported in Analog mode only.

Call Format

Description

Selects the QCII UCL Call Format from the available choices: Long Tone, Two Tone.

Note

- This feature is supported in Analog mode only.

Tone A Freq (Hz)

Description

Selects the frequency of Tone A to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone A>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Tone B Freq (Hz)

Description

Selects the frequency of Tone B to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Code <Tone B>** field, and vice versa.

Range	
Maximum	3086.0 Hz
Minimum	288.5 Hz
Increment	0.1 Hz

Note

- This feature is supported in Analog mode only.

Strip TPL/DPL (Quik-Call II Call)

Description

When enabled (checked), this feature excludes TPL/DPL codes from the Quik-Call II transmissions.

Note

- This feature is supported in Analog mode only.

Code <Tone A>

Description

Selects the code of Tone A to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the **Tone A Freq (Hz)** field, and vice versa.

Note

- This feature is supported in Analog mode only.

Code <Tone B>

Description

Selects the code of Tone B to be transmitted for the Quik-Call II two-tone signaling system. Selecting a value for this field automatically selects a correlating value for the Tone B Freq (Hz) field, and vice versa.

Note

- This feature is supported in Analog mode only.

5 Tone

Adding 5 Tone Call Members

Description

A 5 Tone call allows the radio to communicate with another radio or a group of radios using the 5 Tone signaling system. The user builds a 5 Tone call list by creating new call members under the 5 Tone Call folder. A call member is an entry that contains a unique ID that can designate a Talkgroup, All Call, or individual radio. It also belongs to a particular call type (Group Call, Private Call, All Call, Dispatch Call or PC Call) . The maximum number of call members that may be added to a Digital contact list is listed in the table below, but do note that only 1 member is allowed for All Call. The user may access this list via a short or long programmable button press (*Button Features - Contacts*) or access the Contacts Menu. From the list, the user can then make a call or initiate any supplementary call features (e.g. Call Alert, Remote Monitor, Radio Disable, Radio Enable, Radio Check), as long as the radio has been configured to support these features.

To add a 5 Tone call member:

1. Right-click the **5 Tone Call** folder of the Tree View.
2. Select **Add->5 Tone Call**. A new member is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- The 5 Tone call lists can be sorted according to name.
- This feature is supported in Analog mode for Display model only.

See Also

- Adding Digital Groups.
- Deleting 5 Tone Call Members.
- Adding Items, for more ways of adding 5 Tone call members.
- Renaming Items, for more ways of renaming 5 Tone call members.

Deleting 5 Tone Call Members

Description

Call members may be deleted if they are no longer in use.

To delete a Call member:

1. Right-click an individual call member of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Analog mode for Display model only.

See Also

- Adding 5 Tone Call Members.
- Deleting Items, for more ways of deleting call members.

Contact Name (5 Tone Call)

Description

Displays the name of this contact.

Note

- This feature is supported in Analog mode for Display model only.

Telegram (5 Tone Call)

Description

Specifies an encode telegram to be used when making a call to this entry. The choices are all available telegrams.

If variable digit positions have been defined in the telegram, the entry will specify the variable digits to be encoded in those positions. For a given telegram the same number of variable digits must always be specified.

The CPS user is able to specify up to three ranges of allowed variable digits. A validation check is made to ensure that the number of variable digits entered is a match for the selected telegram. The address entered by the user will be validated against range(s) that have the same number of digits.

Validation against the allowed variable digit entry is done on keypad entry. If an attempt is made to transmit a telegram where not enough Variable Digits are entered, transmission will fail and the button/keypad error alert is sounded.

Note

- The value of this feature is reset to one of the valid choices if the selected value is deleted or the pasted value does not exist in the available choices.

- This feature is supported in Analog mode for Display model only.

See Also

- Encoder

Address (5 Tone Call)

Description

Configures a radio address from one to eight variables. The user can the following input to represent a variable:

- a fixed number digit: 0 - 9
- a fixed character digit: "A"-"F"
- a variable radio ID digit: "U1" - "U8"
- a fixed single tone digit: "T1" - "T2"

Note

- The user must use "(" character as a prefix and ")" character as a suffix to specify a radio ID variable and a single tone variable.
- The value of this feature is reset to the original value if the user input is out of range or blank.
- The value of this feature is automatically set to an upper case if the user input is lower case.
- The value of this feature is automatically corrected if the user input is missing an opening bracket "(" or a closing bracket ")".
- This feature is supported in Analog mode for Display model only.

Call Types

Description

Lists the types of calls available to the radio user.

For MOTOTRBO Conventional radios:

Type	Definition
Private Call	A call from an individual radio to another individual radio. DMR Standard Text Message Type cannot be routed to *Non-IP Peripheral* or Option Board (Route Type). Refer to Text Message Type for more information.
Group Call	A call from an individual radio to a group of radios. DMR Standard Text Message Type cannot be routed to *Non-IP Peripheral* or Option Board (Route Type). Refer to Text Message Type for more information.
All Call	A one-way call from an individual radio to every radio on that channel. All Calls do not communicate across different timeslots or channels within the system. The ability to initiate an All Call is only programmed into radios that are used in supervisory roles. All other radios monitor All Call transmissions by default. This feature is very useful when a supervisor needs to communicate with all the users on a logical channel, rather than just a particular group or individual.

Dispatch Call	A call which allows an individual radio to send a text message to a PC-based Dispatch client on the wired network. The text message is routed through the text message server. The ID of the dispatch call must match the target dispatcher's ID programmed in the text message server (applicable to Digital mode only). DMR Standard Text Message Type do not support Dispatch call. Refer to Text Message Type for more information.
PC Call	A call which allows an individual radio to send a text message to a personal computer (PC) through a radio connected to the PC. The ID of this call must match the Radio ID of the radio connected to the PC (applicable to Digital mode only). DMR Standard Text Message Type do not support PC call. Refer to Text Message Type for more information.
Phone Call	A call which allows an individual radio to initiate a Phone call to and receive a Phone Call from a PSTN phone user (This feature is disabled when the Digital or Digital Phone Patch feature is disabled.)

For 3600 Trunking capable radios:

Type	Definition
Private Call	A call from an individual radio to another individual radio.
Phone Call	A call which allows the radio to initiate and receive a simplex telephone call.

RX Group Lists

Adding RX Group Lists

Description

The RX Group List specifies which Groups the radio is a member of (or subscribed to). When this list is attached to a digital channel (Channels->Group List), the user can listen to any Group in this list when there is any activity on it and talk back within the Group Call hang time. This is also known as a Group Scan.

To add a RX Group List:

1. Right-click the RX Group Lists folder of the Tree View.
2. Select **Add**->**RX Group List**. A new list is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Notes

- The Group Scan does not have the advanced features and configuration options of a channel scan. For example, once configured via CPS, the Group Scan cannot be turned on or off and

members cannot be added or removed. Furthermore, the configurable scan options (Scan Hang Time Timer, Talkback, etc.) do not work with the Group Scan. The Group Scan should be used in simple systems where no advanced scan options are required. If advanced scan options and features are required, a Channel Scan should be configured instead.
- Adding members to lists (call members, scan lists, group lists, channels, zones, etc.) is limited by the radio memory space.
- This feature is supported in Digital mode only.

See Also
- Adding Digital Groups.
- Removing Digital Groups.
- Deleting RX Group Lists.
- Adding Items, for more ways of adding RX Group Lists.
- Renaming Items, for more ways of renaming RX Group Lists.
- **Group Call Hang Time**, if the radio is in Repeater mode or **Talkaround Group Call Hang Time**, if the radio is in Talkaround mode.
- Adding Scan Lists.

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Deleting RX Group Lists

Description

RX Group Lists may be deleted if they are no longer in use.

To delete a RX Group List:

1. Right-click on a RX Group List on the CPS Tree View.
2. Select **Delete**.

Note
- This feature is supported in Digital mode only.

See Also
- Adding RX Group Lists.
- Deleting Items, for more ways of deleting RX Group Lists.

Digital Group Lists

Adding Digital Groups

Description

Adds the selected Digital Group(s) from the **Available** list into the **Members** list. A maximum of 16 Digital Groups may be added to the Members list.

To add a Digital Group:

1. Select a Digital Group to be added from the **Available** list.

2. Click the **Add** button.

Note

- This feature is disabled if no Digital Group is selected in the **Available** list or if the list is empty.
- This feature is supported in Digital mode only.

See Also

- Adding Digital Calls.
- Removing Digital Groups.

Available (Digital Group List)

Description

Displays all available Digital Groups that can be added to the RX Group's Members list.

Note

- This feature is supported in Digital mode only.

Members (Digital Group List)

Description

Lists all Digital Groups which the radio is a member of (or subscribed to) on channels which the list is attached to. When the channel selected has this list attached, if the radio receives a group call that is addressed to any one of its subscribed groups, the radio will participate in that group call (i.e. it will unmute for incoming transmissions and talkback when the PTT is pressed).

Note

- This feature is supported in Digital mode only.

Removing Digital Groups

Description

Removes the selected Digital Group(s) from the **Members** list.

To remove a Digital Group:

1. Select the Digital Group to be removed from the **Members** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no Digital Group is selected in the **Members** list or if the list is empty.
- This feature is supported in Digital mode only.

See Also

- Adding Digital Groups.

Capacity Plus Group Lists

Adding Capacity Plus Groups

Description

Adds group(s) from the Available list into the Members list. Group(s) added to the **Members** list will be removed from the **Available** list.

Note

- This feature is disabled if no channel is selected in the **Available** list or if the list is empty.
- This feature is supported in Digital mode only.

Available (Capacity Plus Group List)

Description

Displays all available Capacity Plus - Single Site Groups that can be added to the Capacity Plus - Single Site Group's Members list.

Note

- This feature is supported in Digital mode only.

Members (Capacity Plus Group List)

Description

Lists all Capacity Plus - Single Site Groups which the radio is a member of (or subscribed to) on channels which the list is attached to. When the channel selected has this list attached, if the radio receives a group call that is addressed to any one of its subscribed Capacity Plus - Single Site groups, the radio will participate in that group call (i.e. it will unmute for incoming transmissions and talkback when the PTT is pressed).

Note

- This feature is supported in Digital mode only.

Removing Capacity Plus Groups

Description

Removes group(s) from the Members list to the **Available** list.

Note

- This feature is disabled if no channel is selected in the **Members** list or if the list is empty.
- This feature is supported in Digital mode only.

Flexible Capacity Plus Group List

Adding Flexible Capacity Plus Groups

Description

Adds group(s) from the Available list into the list. Group(s) added to the **Members** list will be removed from the **Available** list.

Notes

- This feature is disabled if no Talk Group is selected in the Available or Members list, or the list is empty.
- If the user attempts to add more talkgroups than allowed, an error message will be prompted.
- This field shall be shown when the Capacity Plus - Single Site or Capacity Plus - Multi Site feature is enabled.
- This feature is supported in Digital mode only.

Removing Flexible Capacity Plus Group List

Description

Removes the highlighted selection from the Members List and adds them back into the Available List.

Notes

- This button is disabled, if no selection is highlighted in the selected list or the list is empty.
- This field is disabled if Available or Members are not visible (if the control is removed through custom view).
- This field enabled if the user enabled the Capacity Plus - Single Site or Capacity Plus - Multi Site feature.
- This feature is supported in Digital mode only.

Members (Flexible Capacity Plus Group List)

Description

Displays all the member talkgroups.

Note

- This feature is supported in Digital mode only.
- This field enabled if the user enabled the Capacity Plus - Single Site or Capacity Plus - Multi Site feature.

Available (Flexible Capacity Plus)

Description

Displays all the available Capacity Plus - Single Site Talkgroups for the selected Talkgroup list.

Notes

- This feature is supported in Digital mode only.
- Only Capacity Plus - Single Site group calls must be part of the Available List.
- This field is enabled if the Capacity Plus - Single Site or Capacity Plus - Multi Site feature is enabled.

Channels

Adding Zones, Channels and Personalities

Description

Zones are used in the CPS to conveniently organize conventional channels/trunking personalities in the radio. If more than one zone is programmed into the radio, the user can change to a different zone via a short or long programmable button press (*Zone Selection (Display model)* or *Zone Toggle (Non-Display or Numeric Display model)*).

Channel Pool is used for organizing channels in the radio that are not tied to a position. These channels may be referenced by personalities or used for revert purposes. The Channel Pool is not visible when the user navigates through the zones.

To add a zone:

1. Right-click the **Channels** folder of the Tree View.
2. Select **Add**->**Zone** to create a zone. Only one Channel Pool is allowed per radio. A new zone is inserted at the end of the folder list. The user may rename it except if it is a Channel Pool. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

To add a channel/personality in the zone:

1. Right-click the zone.
2. Select **Add->Analog Channel/Digital Channel/Capacity Plus - Single Site Personality/Conventional Channel/Trunking Personality/Dynamic Mixed Mode Channel/5 Tone Channel/Capacity Plus - Single Site Personality (Linked)/Capacity Plus - Single Site Voice Channel (Linked)/Capacity Plus - Single Site Data Channel (Linked)** to create either an Analog Channel, Digital Channel, Capacity Plus - Single Site Personality, Conventional Channel, Trunking Personality, Dynamic Mixed Mode, 5 Tone Channel, Capacity Plus - Multi Site Personality, Capacity Plus - Multi Site Voice Channel or Capacity Plus - Multi Site Data Channel. A new channel/personality is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

To add a channel in the Channel Pool:

1. Right-click the Channel Pool.
2. Select **Add->Analog Channel/Digital Channel/Capacity Plus - Single Site Voice Channel/ Capacity Plus - Single Site Data Channel** to create either an Analog, Digital, Capacity Plus - Single Site Voice, or Capacity Plus - Single Site Data channel. A new channel is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Notes

- For MOTOTRBO Conventional radios, adding members to lists (call members, scan lists, group lists, channels, zones, etc.) may be limited by the radio's memory space.
- For MOTOTRBO Conventional radios, the channel option, Digital Channel is available only when the Digital feature is enabled in the device.
- For MOTOTRBO Conventional radios, the channel option, Capacity Plus - Single Site Personality is not available for repeaters.
- For MOTOTRBO Conventional radios, a notification to set the **Link Type** to *Master* or *Peer* is displayed for the channel options, Capacity Plus - Single Site Voice Channel and Capacity Plus - Single Site Data Channel.
- For MOTOTRBO Conventional radios, the channel options, Capacity Plus - Single Site System, Capacity Plus - Single Site Voice Channel, and Capacity Plus - Single Site Data Channel are available only when the Capacity Plus - Single Site feature is enabled in the device.
- For MOTOTRBO Conventional radios, the channel option, Dynamic Mixed Mode Channel is available only when the Dynamic Mixed Mode feature is enabled in the device.
- For 3600 Trunking capable radios, the add trunking personality(s) feature is software system key protected.
- For Dynamic Mixed Mode Channel, all the features from the Analog or Digital Channel are displayed on the configuration view, except for the IP Site Connect, Messaging Delay, RSSI Threshold, Enhanced GNSS, and Phone Gateway features.

See Also

- Deleting Zones and Channels.
- Adding Items, for more ways of adding zones and channels.
- Renaming Items, for more ways of renaming zones and channels.

Deleting Zones, Channels and Personalities

Description

Zones and conventional channels/trunking personalities may be deleted if they are no longer in use. Deleting a zone automatically deletes all the channels/personalities grouped under it.

To delete a channel/personality:

1. Right-click an individual channel/personality of the Tree View.
2. Select **Delete**.
3. Click the **Yes** button when prompted with a confirmation box. The channel/personality is removed.

To delete a zone:

1. Right-click the zone folder of the Tree View.
2. Select **Delete**.
3. Click the **Yes** button when prompted with a confirmation box. The zone is removed.

Note

- For 3600 Trunking capable radios, the delete trunking personality(s) feature is software system key protected.

See Also

- Adding Zones and Channels.
- Deleting Items, for more ways of deleting zones and channels.

Channel Position and Name

Description

Allows channels to be assigned to a particular position of the channel selector on the radio. A user may use the mouse to move a row by dragging it up or down to the desired location or use the Ctrl Up/Down key to move the channel to the desired position.

Channel Name

Description

This displays the name of the channel.

Personality Name

Description

Displays the trunking personality name.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Set Voice Files (Channels)

Description

Automatically configures a voice file to each channel Voice Announcement File that is set to *None*. The filename of the voice file must follow the default naming convention and set to the corresponding channel position. Example, "Channel10" voice file will be automatically set to a channel at position 10. The -, _, and white space characters are ignored during the case-insensitive matching process.

Note

- This button is disabled if there is no voice file available.

Clear Voice Files (Channels)

Description

Automatically sets each channel Voice Announcement File to *None.*

Note

- This button is disabled if there is no voice file available.

Zone Name

Description

Configures the Zone alias.

Note

- The alias must be unique.

Voice Announcement File (Zone)

Description

Associates a voice announcement file to this zone. Voice announcement is played when the user switches to this zone. Up to 20 zones are supported. This is a zone-wide feature.

Position

Description

This corresponds to the selector's position on the radio.

Set Voice Files (Zone)

Description

Automatically configures a voice file to each Zone Voice Announcement File that is set to *None*, if the filename of the voice file matches the zone alias. The -, _, and white space characters are ignored during the case-insensitive matching process.

Note

- This button is disabled if there is no voice file available.

Clear Voice Files (Zone)

Description

Automatically sets each Zone Voice Announcement File to *None.*

Note

- This button is disabled if there is no voice file available.

Digital Private Line (DPL) Squelch Codes

Code	Code	Code	Code
023	152	343	565
025	155	346	606
026	156	351	612
031	162	364	624
032	165	365	627
043	172	371	631
047	174	411	632
051	205	412	*645
054	223	413	654

065	226	423	662
071	243	431	664
072	244	432	703
073	245	445	712
074	251	464	723
114	261	465	731
115	263	466	732
116	265	503	734
125	271	506	743
131	306	516	754
132	311	*525	
134	315	532	
143	331	546	

Note

- The codes marked with an asterisk (*) are not part of the 83 EIA/TIA-603 standard codes.
- Non-standard codes may be chosen but the radio performance with these codes is not guaranteed. The radio might fail to decode or incorrectly decode to another code that is close but not the exact match.
- This feature is supported in Analog mode only.

Tone Private Line (TPL) Frequencies and Codes

Frequency (Hz)	Code	EIA Group
67.0	XZ	A
69.3	WZ	
71.9	XA	B
74.4	WA	C
77.0	XB	A
79.7	WB	C
82.5	YZ	B
85.4	YA	C
88.5	YB	A
91.5	ZZ	C
94.8	ZA	B
97.4	ZB	
100.0	1Z	A
103.5	1A	B
107.2	1B	A
110.9	2Z	B
114.8	2A	A
118.8	2B	B
123.0	3Z	A
127.3	3A	B
131.8	3B	A
136.5	4Z	B
141.3	4A	A
146.2	4B	B
151.4	5Z	A

Frequency (Hz)	Code	EIA Group
156.7	5A	B
159.8		
162.2	5B	A
165.5		
167.9	6Z	B
171.3		
173.8	6A	A
177.3		
179.9	6B	B
183.5		
186.2	7Z	A
189.9		
192.8	7A	B
196.6		
199.5		
203.5	M1	A
206.5	8Z	
210.7	M2	B
218.1	M3	A
225.7	M4	B
229.1	9Z	
233.6	M5	A
241.8	M6	B
250.3	M7	A
254.1	0Z	

Note

- Groups A, B and C are all EIA-Standard codes.
- In the United Kingdom, MPT 1306 limits usage of tones to EIA-Groups A (except 100 Hz) and B.
- A channel should always use codes from the same EIA-Group.
- Tones not in EIA-Standard Groups A, B and C may be chosen but the radio performance at these frequencies is not guaranteed.
- This feature is supported in Analog mode only.

Selecting the Right Antenna for the Channel Frequency

The following stubby antennas are available, and should be matched to meet the intended programmed frequencies. The frequency range is imprinted on the back side of each stubby antenna.

- SL Series
- SL Series Commercial

SL Series

The following stubby antennas are available, and should be matched to meet the intended programmed frequencies. The frequency range is imprinted on the back side of each stubby antenna.

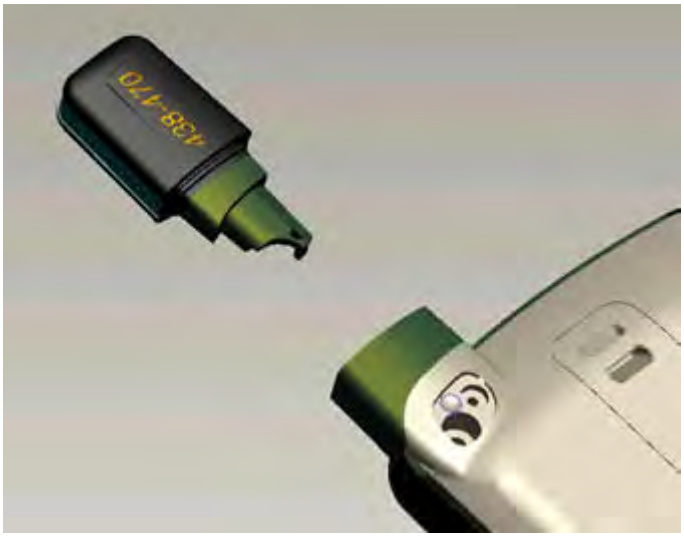
Part Number	Type of Antenna
PMAE4078A	Stubby Antenna Kit (403-425 MHz)
PMAE4076A	Stubby Antenna Kit (420-445 MHz)
PMAE4077A	Stubby Antenna Kit (438-470 MHz)

To disassemble the stubby antenna:

1. Remove the antenna screw plug from the back housing.

2. Remove the antenna screw.

3. Pull out the antenna from the radio.



SL Series Commercial

The following stubby antennas are available, and should be matched to meet the intended programmed frequencies. The frequency range is imprinted on the back side of each stubby antenna.

Part Number	Type of Antenna
PMAE4093A	UHF1 Stubby Antenna Kit (403-425 MHz)
PMAE4094A	UHF1 Stubby Antenna Kit (420-445 MHz)
PMAE4095A	UHF1 Stubby Antenna Kit (438-470 MHz)
PMAD4144A	VHF Stubby Antenna Kit (136-144 MHz)
PMAD4145A	VHF Stubby Antenna Kit (144-156 MHz)
PMAD4146A	VHF Stubby Antenna Kit (156-174 MHz)

To disassemble the stubby antenna, rotate out the antenna from the radio.

Note

- This feature is applicable to SL Series radios.

Conventional Channel

Channel Bandwidth (KHz)

Description

Sets the channel bandwidth for the Transmit and Receive frequencies to either 12.5, 12.5/15, 20, 25/30 or 25. This is a channel-wide feature.

Notes

- 12.5/15, 25/30, and 20 KHz are only supported for selected models.
- For UHF/VHF radios (NA region), radios with 20/25 KHz channel bandwidth will reset to 12.5 KHz.
- In Digital mode, the channel bandwidth is fixed at 12.5 KHz and not CPS configurable.
- Programming of the radio to operate on 20/25 kHz channel spacing is not permitted and has been disabled in this application in compliance with the FCC Narrowbanding mandate for Part 90 VHF and UHF in the United States effective Jan. 01 2013. Please see readme file and Release Notes for more information.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR series repeaters, and 3600 Trunking capable radios in Conventional mode only.

Voice Announcement File (Conventional Channel)

Description

Associates a voice announcement file to this channel. Voice announcement is played when the user switches to this channel. Up to 128 channels are supported. This is a channel-wide feature.

Dual Capacity Direct Mode (DCDM)

Description

The Dual Capacity Direct Mode (DCDM) feature supports two simultaneous subscriber transmissions within a 12.5 kHz channel bandwidth for Direct Mode transmissions. The radios within the same group must use the same timeslot so that the group using timeslot 1 does not interfere with the group using timeslot 2. For proper operation, the radios need to identify and track the timeslot structure. A unique radio is elected as a channel timing leader. The other radios adjust their clocks to synchronize as possible with the channel timing leader.

Note

- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is supported in Digital mode only.

Timing Leader Preference

Description

In a Dual Capacity Direct Mode (DCDM) system, a unique radio needs to be elected as a channel timing leader. The preferred channel timing leader should be a subscriber that has the following characteristics: always turned on, has large transmit coverage, always selected to Dual Capacity Direct Mode channel, and never scans. When possible, a Mobile should act as the preferred channel timing leader since synchronization beaconing may drain more battery current.

Option	Functionality
Preferred	Provision the radio as the preferred timing leader, e.g. control station.
Eligible	The radio is able to be the timing leader, but should yield leadership to higher preference candidates.
Ineligible	Provision the radio to not be the leader, e.g. radio that roams frequently.

Note

- This feature is enabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is supported in Digital mode only.

Scan List (Conventional Channel)

Description

Associates a Scan List to this conventional channel. All the members on this list will be scanned during a scan operation. Any available Scan List can be selected. Selecting the *None* option disables scanning (including **Auto Scan**) on this channel. This is a channel-wide feature.

Note

- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

See Also

- Adding Scan Lists.

Auto Scan (Conventional Channel)

Description

Allows the radio to automatically begin scanning when the user selects the current conventional channel. When disabled, the user is still able to invoke the scan operation, via a short or long programmable button press (*Scan On/Off*) or **Scan** (Scan Menu) feature. This is a channel-wide feature.

Note

- This feature is disabled when the **Scan List** feature is set to *None*.
- This feature is disabled when the **Option Board Trunking** feature is enabled (checked).
- This feature is not available in the Capacity Plus - Single Site system.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

Phone System (3600 Trunking capable radios)

Description

Associates any available Phone System to the channel for use when initiating or receiving a phone call on a conventional channel. Selecting the *None* option disables the user from initiating or receiving phone calls on this channel. This is a channel-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Conventional mode for Display model only.

RF AGC (Conventional Channel)

Description

Selects the type of Receive Frequency (RF) Automatic Gain Control (AGC) used for the channel. This is a channel-wide feature.

Option	Functionality
Disabled	The radio will not enable any software RF AGC algorithms. .
Standard	The radio enables the standard software RF AGC algorithm.
Enhanced	The radio enables the enhanced software RF AGC algorithm.

Note

- This feature is applicable to 3600 Trunking capable radios in Conventional mode only.

Phone Interconnect (Conventional Channel)

Description

Selects the type of phone interconnect support enabled for the conventional channel. The Phone Interconnect feature supports the Phone feature that allows the radio to initiate and receive a simplex telephone call. For radios capable of receiving an incoming phone call, the landline caller enters the radio number and the user is made aware of the incoming call with a unique ring. To receive an incoming phone call on a talkgroup, the landline caller enters the talkgroup number and all radios

affiliated with the talkgroup hear and respond to the call as they would a normal talkgroup call. This is a channel-wide feature.

Option	Functionality
Disabled	The radio is not capable of initiating or receiving phone interconnect calls.
List Only	The radio is capable of receiving phone interconnect calls and initiating phone interconnect calls to phone numbers in the radio's phone list. (applicable to Display model only).
Unlimited	The radio is capable of receiving phone interconnect calls and initiating phone interconnect calls without restriction. (applicable to Display model only).

Note

- This feature is applicable to 3600 Trunking capable radios in Conventional mode only.

Option Board

Description

This feature enables or disables the option board capability on the channel. When the option board capability on the channel is disabled, the option board itself may still function but may not interact with this channel's radio option board functionality. The option board must be installed in the radio else enabling this feature will be ineffective. The option board is connected through the MOTOTRBO Option Board interface to expand the capability of the radio. The option board interface is used by third party developers as part of the MOTOTRBO Application Developers Program to create a variety of applications, including enhancements on existing applications and also new applications other than those already available on the radio. Channels with the option board capability enabled can use up to six programmable buttons to toggle option board based functionalities on/off (Option Board Feature). This is a channel-wide feature.

Enhanced Option Board

Description

The Enhanced Option Board feature allows the option board to provide additional third-party security options on one or more of the radio personalities. This is a radio-wide feature.

Notes

- This field is hidden when the Enhanced Option Board feature is disabled.
- This field is only applicable for archives and radios that have the Enhanced Option Board feature enabled.
- This field is only applicable for Analog, Digital, Select 5, Capacity Plus - Single Site System, and Capacity Plus - Multi Site System personalities.
- This field is greyed out when Option Board is greyed out or unchecked.

- This field is unchecked when Option Board is unchecked.
- This feature depends on the Option Board Capable Feature.

Squelch

Description

Filters incoming signals that are not strong enough to produce a clear transmission, thereby eliminating unwanted noise. This feature adjusts the squelch threshold of an incoming transmission. This feature can be toggled between tight or normal squelch, via a short or long programmable button press (*Tight/Normal Squelch*) or **Squelch** (Utilities Menu). This is a channel-wide feature.

Option	Functionality
Normal	Unmutes to incoming transmission with a normal signal strength.
Tight	Unmutes to incoming transmission with a tight signal strength.
Specific	Allows the Squelch Level value to be invoked as opposed to either the *Tight* or *Normal* setting (applicable to Repeater only).

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog radios, MOTOTRBO SLR Series repeaters and 3600 Trunking capable radios in Conventional mode only.

Squelch Level

Description

Provides more resolution (15 settings) to set the desired carrier squelch level to - as opposed to the two settings afforded by the tight and normal settings.

Range	
Maximum	14
Minimum	0
Increment	1

Note

- This feature is applicable to MOTOTRBO Conventional radios in Analog mode, 3600 Trunking capable radios, and MOTOTRBO SLR Series repeaters in Conventional mode only.
- This feature is enabled when Squelch is set to *Specific*.
- This feature is supported in Analog mode only.

Voice Emphasis

Description

Enhances audio clarity for higher frequencies by applying an audio shaping filter to reduce noise in the radio signal. The type of filter used depends on the option selection. If *None* is selected, no filter is applied to the signal. Pre-emphasis (*Pre*) is used to filter the transmit signal and De-emphasis (*De*) is used to filter the receive signal. This is a channel-wide feature.

For MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters :

Option	Functionality
None	Neither receive nor transmit audio filtering is applied.
De & Pre	Receive and transmit audio filtering are enabled.

For 3600 Trunking capable radios in Conventional mode and MOTOTRBO SLR Series repeaters :

Option	Functionality
None	Neither receive nor transmit audio filtering is applied.
De & Pre	Receive and transmit audio filtering are enabled.
De Only	Receive audio filtering are enabled.
Pre Only	Transmit audio filtering are enabled.

Notes

- This field is set to *None* and is unavailable if **Audio Type** is set to *Flat Unsquelch* in MOTOTRBO Repeaters/MOTOTRBO SLR Series repeaters or *RX & TX Flat* in MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters .
- This field is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies to MOTOTRBO radios 1.6A+ releases, MOTOTRBO SLR Series repeaters 1.0+ releases, and MOTOTRBO 2.0+ releases.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters , MTR3000 base radio/repeater and 3600 Trunking capable radios in Conventional mode only.

ARTS

Description

The Auto-Range Transpond System (ARTS) feature is used to inform users when a radio gets out of range from contact with another ARTS-equipped radio.

Option	Functionality
Disabled	The radio disables ARTS.
TX	The radio transmits polling signals only to connect with other radios. The radio cannot notify the user of its own range status.
RX	The radio receives polling signals only to be notified when in range or out of range. The radio can notify the user of its own range status.
RX & TX	The radio transmits and receives polling signals, connects with other radios and can be notified of its own range status.

Note

- The *TX* and *RX & TX* options are not supported if RX Only is enabled.
- This feature is disabled if **RX Squelch Type** or **TX Squelch Type** is set to *CSQ*.
- This feature is supported in Analog mode only.

ARS

Description

The Automatic Registration Service (ARS) feature provides an automated data application registration for the radio. When the radio powers up, the radio automatically registers with the server. This feature is used with data applications, i.e. any data traffic on this channel that is associated with an application server such as MOTOTRBO Text Messaging or MOTOTRBO Location Services.

Option	Functionality
Disabled	Disables the ARS feature.
On System Change	Enables the ARS feature for single site.
On System/Site Change	Enables the ARS feature for single site and when the radio roams from one site to another site (available when IP Site Connect or **Auto Roam** is enabled).

Note

- This feature is disabled when the **Option Board Trunking** feature is enabled.
- This feature is supported in Digital mode only.

Privacy (Conventional Channel)

Description

This feature allows privacy on selected digital channels. Privacy is a software-based scrambling solution that is not robust, and is only meant to prevent eavesdropping. The signaling and user identification portions of a transmission are not scrambled. Receiving radio(s) must have the same

Basic Privacy Key as the transmitting radio in order to unscramble the privacy-enabled voice call or to receive the privacy-enabled data transmission.

Channels may have their privacy enabled or disabled via a short or long programmable button press (Privacy On/Off) or Privacy (Utilities Menu). A radio must have privacy enabled on the channel to transmit a privacy-enabled transmission, but this is not necessary for receiving radio(s). Privacy-enabled channels are still able to receive clear (unscrambled) transmissions. A visual indication appears on all display radios if the channel is privacy-enabled. The radio LED lights up green when transmitting and blinks rapidly when receiving an ongoing privacy-enabled transmission. The same behavior will be observed during scan operations. This is a channel-wide feature.

This feature is not available on certain radio models.

Notes

- This feature is disabled during mix-mode selection.
- This feature is hidden when the Digital feature is disabled. This is only applicable for MOTOTRBO Conventional 1.5a+ and MOTOTRBO 2.0+ releases.
- This feature is greyed out when Privacy Type is set to *None.*
- This feature is unchecked when Symmetric Keys is set to a value other than *None.*

See Also

- **Basic Privacy Key**
- ***Privacy On/Off***
- ***Privacy***
- ***Symmetric Keys***
- ***Privacy Type***

Privacy Alias

Description

The Privacy Alias feature allows the user to assign the Enhanced Privacy Key/Alias for the channel. This is a channel-wide feature.

Notes

- This feature is greyed out if **Privacy Type** is set to a value other than *Enhanced*.
- This feature is greyed out when Privacy is unchecked.
- This feature is visible if Enhanced Privacy is supported by the radio.
- This feature is hidden if the Digital feature is disabled. This is only applicable for 1.5a+ releases.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

RAS Alias

Description

Configures a digital personality to be connected to a specific RAS ID (identified via Key Alias in CPS). When a RAS ID is connected to a specific digital personality, that personality is considered to be RAS-enabled; otherwise, the personality is RAS-disabled. All radios and repeaters have default RAS Key. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is

000000. To disable RAS, go to Authentication (RAS) and select *Disable*. For radios, select the channel in the Radio, and browse to *None*.

Note

- This feature is supported in Digital mode only.

Fixed Privacy Key Decryption

Description

When enabled, the privacy key for decode will be fixed, using the same privacy key as the current transmit (Tx) privacy settings.

Ignore Rx Clear Voice/Packet Data

Description

When enabled, the clear voice call received in the encrypted channel will be muted.

Mandown Profile

Description

Configures a conventional personality to be connected to a specific Mandown Profile.

Note

- This feature is disabled until a system is selected in Emergency System for the selected channel(s) in Digital or Capacity Plus - Single Site channel(s).
- This feature is enabled only when a MDC system is selected in TX Signaling System for the selected channel(s) in Analog channel(s).
- This feature is disabled if 5 Tone Emergency Alarm Type is set to *Disabled* or RX Only is enabled.
- This field is hidden when the Radio Mandown feature is disabled.

Color Code (Conventional Channel)

Description

This feature allows a color code to be assigned to a given channel. Channels may have the same or different color codes. A repeater can only have one color code.

A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes. The radio will be able to scan across channels with different color codes. Radios will ignore any channel activity not containing the matching color code for that system. Repeaters using

the same frequency may be associated with different color codes. On shared channels, spectrum regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.

Range	
Maximum	15
Minimum	0
Increment	1

Notes

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.
- This feature can be set per digital channel from MOTOTRBO 1.2 and MOTOTRBO SLR Series repeaters releases.
- This feature is disabled when Repeater Mode is set to Analog.
- The range is 0 to 14 when the Dual Capacity Direct Mode (DCDM) feature is enabled.
- This feature is applicable in the repeater Dynamic Mixed Mode channel MOTOTRBO version 1.6a+ and MOTOTRBO SLR Series repeater releases.

Extended Range Direct Mode

Description

Extended Range Direct Mode is a conventional solution that extends the 12.5e direct mode range. When you select *Enabled*, the radios can support additional features that are not currently supported in direct mode.

Inbound Color Code

Description

This feature allows a color code to be assigned to a given inbound channel. Channels may have the same or different color codes.

A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes. The radio will be able to scan across channels with different color codes. The radio will ignore any channel activity not containing the matching color code for that system. Repeaters using the same frequency may be associated with different color codes. On shared channels, spectrum regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.

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Outbound Color Code

Description

This feature allows a color code to be assigned to a given outbound channel. Channels may have the same or different color codes. A repeater can only have one color code.

A color code is used to identify a system. Different color codes are used to identify different systems. This feature enables a radio to roam between multiple systems by switching between channels with different color codes. The radio will be able to scan across channels with different color codes. Radios will ignore any channel activity not containing the matching color code for that system. Repeaters using the same frequency may be associated with different color codes. On shared channels, spectrum regulators may wish to assign different color codes to different licensees as part of their license agreement. This is a channel-wide feature.
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Repeater/Time Slot

Description

MOTOTRBO utilizes digital Time Division Multiple Access (TDMA) technology to divide a 12.5kHz channel into two alternating time slots, with each carrying an individual call when operating in Repeater mode. As a result, both the assigned frequency and the assigned time slot must be specified in order to completely describe a digital repeater channel. Radios or Groups that need to talk together must be assigned to the same frequency and time slot. This is a channel-wide feature.

For interoperation with other ETSI-DMR radios, it is important to note that transmissions received on repeater inbound (MS TX) slot 1 are repeated on outbound (BS TX) slot 2. This is referred to as aligned channel timing.

The slot number provisioned in the Motorola radio CPS corresponds to the outbound transmission (BS TX) that the subscriber will monitor. For example, if a channel in the radio CPS is provisioned for slot 1, this corresponds to the outbound transmission (BS TX) that the subscriber will monitor. Therefore the transmitting unit will use repeater inbound (MS TX) slot 2 while the receiving units will monitor repeater outbound (BS TX) slot 1.

When observing the repeater, the RxA LEDs correspond to the repeater inbound (MS TX) Slot 2 and repeater outbound (BS TX) slot 1. Conversely, the RxB LEDs correspond to repeater inbound (MS TX) slot 1 and repeater outbound (BS TX) slot 2. Therefore, a radio provisioned for slot 1 will light up the RxA LEDs on the repeater and a radio provisioned for slot 2 will light up the RxB LEDs on the repeater.

Note

- This feature is only applicable while operating in Repeater mode and Dual Capacity Direct Mode.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- A radio configured for repeater slot 1 or slot 2 operation will always hear a radio transmitting in Talkaround mode regardless of which slot the radio is configured to hear in repeater mode. A receiving radio in Talkaround mode will hear any Talkaround calls as well as repeated calls on the configured repeater slot.
- This feature is supported in Digital mode only.

- For Capacity Plus - Multi Site channels, this feature needs to be set the same as the Repeater Channel Slot ID.

Phone System

Description

Associates any available Phone System to the channel for use when initiating or receiving a phone call on a conventional channel. Selecting the *None* option disables the user from initiating or receiving phone calls on this channel. This is a channel-wide feature.

Note

- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is supported in Digital mode only.

Enhanced GNSS

Description

Allows the user to enable the Enhanced GNSS feature on a channel for subscriber models. This feature mainly helps to offload GNSS messages away from the selected channel with increased reliability and throughput compared to the standard GNSS revert feature by scheduling the GNSS transmissions of the radios. The Enhanced GNSS Revert channel supports ARS and GNSS data from radio internal application as well as GNSS data and Raw data from XCMP device. Voice and other data are not supported on a channel when this feature is enabled. This is a channel-wide feature.

Notes

- This feature is applicable in repeater mode only.
- This feature is disabled if the Option Board Trunking feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.

Allow Talkaround

Description

Ensures that the Receive parameters are used in place of the Transmit parameters when transmitting. This feature enables communication between radios in close proximity without the use of a repeater, and is, therefore, particularly useful when the radios are in close proximity and the repeater is out of range. This feature can be toggled between Repeater or Talkaround mode, via a short or long programmable button press (*Repeater/Talkaround*) or **Talkaround** (Utilities Menu) feature. This is a channel-wide feature.

Notes

- For MOTOTRBO Conventional radios on a Digital channel, the Transmit and Receive frequencies must be different for this feature to be enabled.
- To disable this feature, the **RX Signaling System** and **TX Signaling System** must have the same values.
- This feature is not editable and is disabled if RX Only (Conventional Channel) is enabled.

- For MOTOTRBO Conventional radios on an Analog channel, at least one of the following Transmit and Receive parameters must be different for this feature to be enabled: **Frequency**, **Squelch Type**, **DPL Code**, **DPL Invert**, **TPL Frequency**, **TPL Code** and **Signaling System**.
- For MOTOTRBO Conventional radios on an Analog channel, the channel must have its **RX Signaling System** feature set to an MDC System to send an MDC Emergency in Talkaround mode.
- For 3600 Trunking capable radios on an Analog conventional channel, at least one of the following Transmit and Receive parameters must be different for this feature to be enabled: **Frequency**, **Squelch Type**, **DPL Code**, **DPL Invert** and **TPL Setting**.
- This feature is not available in the Capacity Plus - Single Site system.
- This feature is disabled and greyed out if Enhanced GNSS is enabled. This dependency is not applicable for MOTOTRBO codeplug version R06.00.xx and later.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

Audio Enhancement (Conventional Channel)

Description

Provides additional audio processing to reduce undesirable audio artifacts and improve audio quality. This is a channel-wide feature.

Option	Functionality
Companding	The Companding algorithm reduces noise due to the channel characteristics by compressing the dynamic range of the audio at the transmitter and expanding the dynamic range of the audio at the receiver. This attenuates the low level additive channel noise since it is only expanded, not compressed.
Flutter Fighter	The Flutter-Fighter is an FM noise canceling algorithm which reduces noise due to the channel characteristics by eliminating audio pops caused by FM spikes during channel fading in high Signal to Noise ratio (S/N) conditions.
Hear Clear	Hear Clear is designed to provide the maximum level of audio quality by reducing low-level additive noise as well as the FM spikes due to channel fading. The use of this option enables both the Companding algorithm and the Flutter-Fighter algorithm. Hear Clear is most effective when used on 900 MHz channels or 800 MHz channels with 12.5 KHz channel bandwidth.
None	Additional audio processing is disabled.

Notes

- For MOTOTRBO repeater models and MOTOTRBO SLR Series repeaters, the choice *Companding* is removed when **Audio Type** is set to *RX & TX Flat* for MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters or *Flat Unsquelch* for MOTOTRBO repeaters/MOTOTRBO SLR Series repeaters.
- For MOTOTRBO subscriber models and MOTOTRBO 2.0 models, the choice *Companding* is removed when RX Audio Type is set to *Flat Unsquelch*.

- For MOTOTRBO repeater models and MOTOTRBO SLR Series repeaters, the choice *Hear Clear* is removed when **Audio Type** is set to *RX & TX Flat* for MTR3000 base radio/repeater/MOTOTRBO SLR Series repeaters *or Flat Unsquelch* for MOTOTRBO repeaters/MOTOTRBO SLR Series repeaters.
- This feature is set to a default value if the selected value becomes invalid because of Note 1-4.
- This feature is greyed-out when the choice *None* is the only choice that is currently valid.
- Similar audio enhancement settings should be used by all radios assigned to a Talkgroup. Specifically, if *Hear Clear* is enabled on the transmitting radio, it should also be enabled on all of the receiving radios.
- *Hear Clear* can effectively inter-operate with legacy radios which only support *Companding*. On legacy radios which support multiple Companding algorithms, some trial-error may be needed to determine which legacy algorithm performs the best with Hear Clear.
- The *Flutter Fighter* option can be used when the transmitting radio has no audio enhancements enabled (i.e. when the transmitting radio has *Hear Clear* and *Companding* disabled).
- For MTR3000 base radio/repeater, the compressor function for Repeater Mic path in *Companding* cannot be supported if **Audio Type** is set to *TX Flat Only.*
- For MTR3000 base radio/repeater, the expander function for Repeater Speaker path in *Companding* cannot be supported if **Audio Type** is set to *RX Flat Only*.
- For MTR3000 base radio/repeater, *Companding* and *Hear Clear* is not supported if **Audio Type** is set to *RX and TX Flat*.
- In 800/900 MHz MTR3000 base radio/repeater, *Companding* is only for the microphone/speaker path. *Companding* will not take effect in the repeat path.
- For MOTOTRBO and 3600 Trunking capable radios in Conventional mode, *Companding* and *Hear Clear* is not supported if **Audio Type** is set to *Flat Unsquelch*.
- Starting from MOTOTRBO 2 radios, this feature is disabled if **Audio Type** is set to *Flat Unsquelch*.

MPT1327

Description

This checkbox allows the user to enable/disable the support of MPT1327 analog trunking feature on an analog conventional channel.

Note

- This feature is available in MOTOTRBO SLR Series repeaters only.

Channel Inhibit

Description

Identifies if a channel is a valid or invalid channel. If invalid, the channel must not be selected as a Revert Channel or added to a Scan List.

Scrambling Enable

Description

Allows the user to enable or disable the Scrambling feature.

Fist Microphone Disable

Description

This check box allows the user to disable or enable the fist microphone feature.

Compressed UDP Data Header

Description

This feature selects the type of compression protocol used for the UDP Data Header. Selecting *MSI* or *DMR* reduces delays in over-the-air data transmissions. However, when working with legacy radios that do not have the capability to handle compressed UDP data packets, this feature should be set to *None*. This droplist allows the user to select the compression to use for UDP data headers per channel.

Text Message Type

Description

When creating a new or forwarding a text message, user must choose to send the text message type as MSI proprietary TMS (*Proprietary*) or DMR Tier2 Text *(DMR Standard)* message. When replying or re-sending a text message, the text message type of the original message will be followed. This droplist allows the user to choose which type of text message to use. This is a personality-wide feature.

Option	Functionality
Proprietary	MSI proprietary TMS.
DMR Standard	DMR Tier2 Text Message. This option is only for individual or group radio-to-radio calls. Do not configure contacts as *PC Call*, *Dispatch Call. For Private Call* or *Group Call,* ensure that the Route Type is not configured as *Non-IP Peripheral* or *Option Board.*

Note

- This feature is only applicable for Digital personalities.

Telemetry VIO 1 GPO Level

Description

This feature allows the user to specify the pin level for Telemetry VIO 1. When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

Telemetry VIO 2 GPO Level

Description

This feature allows the user to specify the pin level for Telemetry VIO 2. When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

Telemetry VIO 3 GPO Level

Description

This feature allows the user to specify the pin level for Telemetry VIO 3. When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

Telemetry VIO 4 GPO Level

Description

This feature allows the user to specify the pin level for Telemetry VIO 4. When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

Telemetry VIO 5 GPO Level

Description

This feature allows the user to specify the pin level for Telemetry VIO 5. When the user changes the channel, the radio automatically toggles the GPO pin according to the value set in this field. The available options are Default, High, and Low.

Over-The-Air Battery Management

Description

This checkbox allows the user to enable or disable the initial registration of Over-the-Air Battery Management data.

Note

- This feature is only applicable for Digital personalities.

RX Only (Conventional Channel)

Description

Configures the channel to receive only without any transmission capability. All Transmit features for the channel will also be disabled, except GNSS Revert. This is a channel-wide feature.

Note

- The channel must not be set as any Revert Channel (e.g. Emergency **Revert Channel**) or TX Designated Channel (e.g. the Scan **TX Designated Channel**).
- This feature is not available in the Capacity Plus - Single Site system.
- This feature sets the **Allow Talkaround** to unchecked and make it not editable (if this feature is checked).
- This feature makes all (except GNSS Revert) the Transmit fields under TX not editable (if this feature is checked).
- This feature sets the Admit Criteria selections to *Channel Free* (if this feature is checked).
- This feature disables the Copy button (if this feature is checked).
- This feature sets the TX Signaling System selections to *None* (if this field is checked).
- This feature sets the Contact Name selection to *None* (if this field is checked).
- This feature sets the Emergency System to *None* (if this field is checked).
- This feature is applicable to MOTOTRBO SLR Series repeaters, MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

Signaling Pre-emphasis/De-emphasis

Description

When enabled, provides a filtering algorithm, used by the Audio Signaling Filter Integrated Circuit (ASFIC), to reduce the signal noise ratio in two-way radio RF systems. Pre-emphasis is used to filter the transmit signal and De-emphasis is used to filter the receive signal.

Note

- This feature is supported in Analog mode only.

Offset (MHz)

Description

Creates a Transmit **Frequency** from the Receive **Frequency** with an added Offset value. This ensures that a radio's offset is consistent with the repeater's offset. A user may enter up to a maximum of 11 digits or characters, including the decimal point and negative sign (e.g. -12.025). Clicking on the **Copy** button will populate the Transmit side. This is a channel-wide feature.

Note

- This feature is not available in the Capacity Plus - Single Site system.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters and 3600 Trunking capable radios in Conventional mode only

Copy

Description

Adds the **Offset** to the Receive **Frequency** to generate the Transmit **Frequency**. For an Analog channel, this feature also copies all the Receive parameters, i.e. features inside the RX box such as the **Frequency** (MHz), **Squelch Type**, Digital Private Line (**DPL**) **Code** (Octal), **DPL Invert**, Tone Private Line (**TPL**) **Frequency** (Hz), **TPL Code** and **Signaling System** to the Transmit side. For a Digital channel, the RX box has only the **Receive Frequency** (MHz) feature, therefore only this is copied to the Transmit side. This is a channel-wide feature.

Notes

- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature automatically adds the value from Offset (MHz) to RX Frequency (MHz) (Conventional Channel), when copying the value from RX Frequency (MHz) (Conventional Channel) to TX Frequency (MHz) (Conventional Channel).
- This feature verifies that the resultant frequency value is within range, when copying the RX frequency to TX frequency, after applying the Offset (MHz).
- This feature is not available in the Capacity Plus - Single Site system Channel.
- This feature is disabled for multiple selection. To enable multiple selection, change the value in RX Frequency (MHz) (Conventional Channel) from blank to a value. This is available for subscriber models only.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

Phone Gateway

Description

Defines whether the Repeater is used as a phone gateway for the configured timeslot. Since this configuration is set on the timeslot (in Conventional Single Site and IPSC) through the digital personality and on per digital personality basis in Capacity Plus - Single Site , the configuration is different for different digital channels/personalities. On the Capacity Plus - Single Site Voice channel,

the choices are *None* and *Slot 1 & Slot 2*. On the conventional digital channel, the choices are *None*, *Slot 1*, *Slot 2*, and *Slot 1 & Slot 2, Slot 1 (Preconfigured) & Slot 2, Slot 1 & Slot 2 (Preconfigured)*.

Notes

- For Digital personalities, the choice *Slot 1 & Slot 2* is only applicable when Enable (Preconfigured Call) is unchecked or not applicable.
- For Digital personalities, the choices *Slot 1 (Preconfigured) & Slot 2* and *Slot 1 & Slot 2 (Preconfigured)* is only applicable when Enable (Preconfigured Call) is checked.
- This feature is supported in Digital mode only.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is is hidden when Digital or Digital Phone Patch feature is disabled.

System Controller Mode

Description

This feature allows user to enable or disable System Controller Mode.

Notes

- This feature is applicable for Digital channels only.
- This feature is should be unchecked and disabled when Link Type is set to *None* or *Master*.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is disabled when IP Site Connect is set to *Slot 1, Slot 2, or Slot 1 & Slot 2.*

IP Site Connect

Description

This feature allows the user to select the Multi-Site Channel Configuration from *None*, *Slot 1*, *Slot 2,* or *Slot 1* & *Slot 2* for repeaters. This is a channel-wide feature.

Option	Functionality
None	Both slot 1 and slot 2 function in single site mode.
Slot 1	Only slot 1 functions in IP Site Connect mode.
Slot 2	Only slot 2 functions in IP Site Connect mode.
Slot 1 & Slot 2	Both slot 1 and slot 2 function in IP Site Connect mode.

Notes

- If **Repeater Type** is set to *Single Site*, this field should be set to *None* and greyed-out.
- During cut, paste,drag, drop, write, or clone, if target archive does not support multi site, this feature should be set to *None*.
- This feature is only applicable for digital channel.
- For 1.5a+ releases, this feature is hidden when the IP Site Connect or the Satellite Receiver feature is disabled.
- This feature is grey-out when System Controller Mode is enabled

IP Site Connect

Description

This feature assigns the selected channel as an IP Site Connect enabled channel.

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.

Per-Site RSSI Threshold (dBm)

Description

This feature provides you with the ability to configure the Per-Site RSSI Threshold (Roam List) per channel. With this feature, you are able to set each individual site with different RSSI threshold (dBm). This feature resolves the unequal coverage from different sites due to buildings and terrains. You can specify which RSSI Threshold to use for this channel when it is acting as a site in an IP Site Connect system. When this feature is enabled, the radio ignores the existing global RSSI Threshold (dBm) (Roam List).

Notes

- This feature is applicable to MOTOTRBO 2.0 radios in Digital mode only.
- This feature is enabled if Use Per-Site RSSI Threshold (Roam List) is checked.
- RSSI Threshold (dBm) is disabled (unchecked) when this feature is enabled.
- This feature is hidden when **IP Site Connect** or the digital feature is disabled (unchecked).
- This feature is greyed out when the **Dual Capacity Direct Mode (DCDM)** feature is enabled (checked).

Scan/Roam List

Description

Associates a Scan/Roam List to this channel. All the members on this list will be scanned during scan operation or roamed during roam operation. Any available Scan/Roam List can be selected. Selecting the *None* option disables scanning (including **Auto Scan**) and roaming (including **Manual Site Roam**) on this channel. For roaming, the list must consist of only IP Site Connect enabled channels. Each channel can only have either Scan or Roam enabled, and not both. If the current digital channel is not an IP Site Connect enabled channel, or if it is an analog channel, only the Scan Lists are displayed. This is a channel-wide feature.

Notes

- The **Auto Scan** feature is disabled if this feature is set to *None*.
- The **Auto Scan** feature is disabled if the current digital channel is a IP Site Connect enabled channel and this feature associates Roam List(s) to this channel.
- Only Scan List is available when the Dual Capacity Direct Mode (DCDM) feature is enabled.

See Also

- Adding Scan Lists.

Messaging Delay (ms)

Description

This feature sets the inter-repeater messaging delay based on the IP network configuration. This is a channel-wide feature.

Range	
Maximum	510 ms
Minimum	60 ms
Increment	30 ms

Note

- This feature is disabled when **IP Site Connect** is disabled (unchecked) or when IP Site Connect is set to *None*.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.

Messaging Delay

Description

This feature sets the inter-repeater messaging delay based on the IP network configuration. This is a channel-wide feature.

Option	Functionality
60 (0)	The inter-repeater messaging delay is 60 ms.
90 (1)	The inter-repeater messaging delay is 90 ms.
150 (2)	The inter-repeater messaging delay is 150 ms.

Notes

- This feature is disabled when IP Site Connect is set to *None*.
- This feature is only applicable for 1.4+ releases.
- For Digital channels, this feature is hidden if the Satellite Receiver and IP Site Connect features are disabled. This is applicable for 1.5+ releases only.
- This feature is greyed-out when the System Controller Mode is enabled.

Lone Worker

Description

This feature enables Lone Worker on the radio. The Lone Worker feature prompts an emergency to be raised if there has been no user activity for a predefined time. The Response Time resets with user activity. The Reminder Time begins when the **Response Time** expires. The **Reminder Time** determines how long it takes the radio waits before raising the emergency. User activity is defined as activation of any radio button or of the channel selector. This is a channel-wide feature.

Notes

- This feature is disabled when CPC Emergency System has not been selected.
- In a 5 Tone channel, this feature is disabled if the 5 Tone Emergency Alarm Type is set to *Disabled* or the channel is RX Only.

Auto Roam

Description

Configures the roaming capability in a Capacity Plus - Multi Site system. If disabled, the radio will not be able to roam to another Capacity Plus - Multi Site site when moving from one site to another.

Notes

- This feature is applicable for Capacity Plus - Multi Site System Personality only.
- This feature is supported in Digital mode only.

Site List

Description

Associates a Site List with a Capacity Plus - Multi Site personality. The subscriber radio can roam to the sites listed in the Site List. Any available Site List can be selected. If the *None* option is selected, the subscriber radio cannot roam to other site, only a local site. This is a personality-wide feature.

Notes

- This feature is applicable for Capacity Plus - Multi Site System Personality only.
- This feature is supported in Digital mode only.

Option Board Trunking

Description

This feature enables or disables the option board trunking capability on the channel. This feature prevents non-supported conventional features from being used while the radio is using the option board trunking capability (i.e. Scan is disabled automatically). The option board must be installed in the radio; otherwise enabling this feature will be ineffective. The option board is connected through the MOTOTRBO Option Board interface to expand the capability of the radio. The option board interface is

used by third party developers as part of the MOTOTRBO Application Developers Program to create a variety of applications, including enhancements on existing applications and also new applications other than those already available on the radio. Channels with the option board capability enabled can use up to six programmable buttons to toggle option board based functionalities on/off (Option Board Feature). This is a channel-wide feature.

Note

- This feature is disabled if **Option Board** is disabled (unchecked).
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Beacon Interval (ms)

Description

This feature specifies how often the radio sends out the beacon signal for Capacity Plus - Single Site. In a Capacity Plus - Single Site system, this feature value should be higher in the subscriber than the repeater. In a Capacity Plus - Multi Site system, this feature value should be the same in both the subscriber and repeater. This is a channel-wide feature.

Range	
Maximum	4800 ms
Minimum	960 ms
Increment	480 ms

Note

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Preference Level

Description

This feature adjusts the usage preference level for the repeaters of a Capacity Plus - Single Site/Capacity Plus - Multi Site site. *1* identifies the highest preference level, or most preferred repeater to be used, while, *10* identifies the lowest preference level, or least preferred repeater to be used.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is only applicable for Capacity Plus - Single Site and Capacity Plus - Multi Site Voice personalities in 1.5a+ releases only.

- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Rest Channel Acquisition TOT (min)

Description

This feature determines the interval for tone to sound to indicate to the radio user when a radio is "lost" or out of range from the Capacity Plus - Single Site system. A "lost" radio is unable to determine which is the rest channel it should be on. This is a radio-wide feature.

Range	
Maximum	20 min
Minimum	0 min
Increment	1 min

Notes

- This feature is applicable for 1.5+ releases only.
- This feature is applicable for Capacity Plus - Single Site System and Capacity Plus - Multi Site System Personalities only.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Capacity Plus Contact Name

Description

Defines the call that may be initiated on the channel by pressing the Push-to-Talk (PTT) button. However, if the channel is attached to a Group List with multiple Groups and there is an activity on one of the Groups, pressing PTT will initiate a talkback instead of a new call if it is within the hang time of the prior call. Selecting the *None* option prevents a call from being initiated on the channel. This is a channel-wide feature.

Note

- Create the Call member under the Contacts folder before selecting it or the default will be used.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Wide Area

Description

Configures a Capacity Plus - Multi Site Data Revert channel to be wide area.

Note

- This feature is only applicable to Capacity Plus - Multi Site Data personalities.
- If a wide area data repeater requires IP connection with other site-wide area data repeaters in the Capacity Plus - Multi Site system then it must have the same Slot 1 Channel ID .
- Slot 1 Channel ID value must be unique for each data repeater at a site.
- This feature is supported in Digital mode only.

Slot 1 Channel ID

Description

Specifies the Slot 1 channel ID for voice or data channels. This also determines the value for **Slot 2 Channel ID** which is always one increment higher than the value of **Slot 1 Channel ID**. This is a channel-wide feature.

Range for Slot ID 1	
Maximum	15 (voice channel), 253 (data channel)
Minimum	1 (voice channel), 33 (data channel)
Increment	2

Range for Slot ID 2	
Maximum	16 (voice channel), 254 (data channel)
Minimum	2 (voice channel), 34 (data channel)
Increment	2

Notes

- This feature is applicable for 1.5+ releases only .
- This feature field is applicable for the Capacity Plus - Single Site voice and Capacity Plus - Multi Site voice and data channel types only.
- For Capacity Plus - Multi Site data channel, the Repeater/Time Slot value of the subscriber radio must match this value.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR series repeaters in Digital mode only.

Slot 2 Channel ID

Description

Displays the Slot 2 channel ID for voice or data channels. This is determined by the value for Slot 1 Channel ID which is always one increment lower than the value of **Slot 2 Channel ID**. This is a channel-wide feature.

Range for Slot ID 1	
Maximum	15 (voice channel), 253 (data channel)
Minimum	1 (voice channel), 33 (data channel)
Increment	2

Range for Slot ID 2	
Maximum	16 (voice channel), 254 (data channel)
Minimum	2 (voice channel), 34 (data channel)
Increment	2

Notes

- This feature is applicable for 1.5+ releases only and not editable.
- This feature field is applicable for the Capacity Plus - Single Site voice and Capacity Plus - Multi Site voice and data channel types only.
- For Capacity Plus - Multi Site data channel, the Repeater/Time Slot value of the subscriber radio must match this value.
- The value in the feature must be 1 value greater than the value of Slot 1 Channel ID.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Capacity Plus Voice List

Description

Associates a Capacity Plus - Single Site Voice List to this channel. While in Capacity Plus - Single Site mode, rest channels, channels for voice calls, and channels for transmitting radio-to-radio Text Messaging Service (TMS) data calls are selected from the Members of this list. Any available Capacity Plus - Single Site Voice List can be selected. This is a channel-wide feature.

Notes

- This feature is applicable for 1.5+ releases only.
- This feature is applicable for Capacity Plus - Single Site System channel type only.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Capacity Plus Data List

Description

Associates a Capacity Plus - Single Site Data List to this channel. While in Capacity Plus - Single Site mode, channels for data calls (except radio-to-radio Text Messaging Service (TMS) data calls) are selected from the Members of this list. Any available Capacity Plus - Single Site Data List can be selected. This is a channel-wide feature.

Notes

- This feature is applicable for 1.5+ releases only.
- This feature is applicable for Capacity Plus - Single Site System channel type only.
- This feature is not applicable to SL Series Commercial radios.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Enhanced Channel Access

Description

Allows the user to enable or disable the Enhanced Channel Access feature. When enabled, the Enhanced Channel Access feature improves the reliability of transmissions by minimizing Over The Air (OTA) collisions when two or more radios initiate a call simultaneously. For effective operation, this feature needs to be enabled on all the radios accessing the channel. This is a channel-wide feature.

Notes

- This feature is disabled if the Enhanced GNSS feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is disabled if the Option Board Trunking feature is enabled.
- This feature is not supported in the Dynamic Mixed Mode system configuration.
- This feature is applicable in the Repeater mode of operation only. When this feature is enabled, all the radios under the same system must have different **Radio ID**.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is greyed out if Admit Criteria is set to *Always*.
- This feature is applicable to digital channel (including Single Site, IP Site Connect, GNSS revert mode) and Capacity Plus - Single Site data channel. Capacity Plus - Single Site voice channel where this feature is inbuilt is not configurable by the user.

Wireline Mute Pin

Description

Configures the Wireline Mute Pin (GPIO Index) for the channel. For MTR3000 models and SLR Series repeaters, the choices are "None", "Pin #4", "Pin #15", "Pin #24", "Pin #8, #25", "Pin #10, #12", "Pin #21", and "Pin #5". For MOTOTRBO Repeater models, the choices are "None", "Pin #19", "Pin #21", "Pin #20", and "Pin #22".

Note

- This feature is supported in Analog mode only.

Symmetric Keys

Description

Allows user to assign the Symmetric Keys and Alias for the channel.

Notes

- This feature is hidden if the Symmetric Keys is disabled.
- This feature is greyed-out if **Privacy Type** is set to *Basic*.
- This feature is greyed-out and set to *None* if **Privacy (Conventional Channel)** is enabled.

RSSI Threshold (dBm)

Description

This threshold defines a level at which the repeater will not transmit due to interference. For a multi-repeater trunked system this threshold also determines the level at which a repeater will temporarily remove itself from the system due to interference.

IP Site Connect Systems
The threshold should be set according to any license restrictions (for example FCC), increasing the level will make the repeater increasingly impolite to other systems.

Capacity Plus - Single Site Systems and Capacity Plus - Multi Site Trunked Systems
When this threshold is exceeded by an unwanted RF signal then the repeater will be temporarily removed from the system. When the interference falls below this threshold the repeater will return. This happens very rapidly.

Dealers should estimate the level of interference and set this level accordingly; setting the level too high will result in wanted signals not being received when interference is present, whereas setting the level too low will result in a loss of channel capacity. This is a channel-wide feature.

Range	
Maximum	-40 dBm
Minimum	-130 dBm
Increment	1 dBm

Notes

- This feature is disabled when IP Site Connect is set to *None* and System Controller Mode is unchecked.
- This feature is applicable for 1.4+ releases only.
- This feature must always be enabled for Capacity Plus system.
- This feature is hidden on a Digital channel when the IP Site Connect or the Digital feature is disabled. This is ony applicable for 1.5+ releases.
- When Capacity Plus - Single Site or Capacity Plus - Multi Site system is enabled, this field is displayed on a Capacity Plus - Single Site Data and Voice channel.

Dual Slot Data Operation

Description

This feature provides you the ability to configure the Dual Slot Data Operation per channel to either *None* or *GNSS*.

Note

- This feature is hidden when the Priority GNSS over Voice or Digital feature is disabled (unchecked).
- This feature is set to *None* and greyed out when Enhanced GNSS and RX Only are disabled (unchecked).
- This feature is set to *None* and greyed out when Dual Capacity Direct Mode is disabled (unchecked).
- This feature is set to None and greyed out when Dual Capacity Direct Mode is checked.

IF Filter Type

Description

IF Filter is required to reduce the interference from the adjacent channels. This droplist allows you to choose which type of IF Filter to use. Available choices are Wide (default) and Narrow. Select *Narrow* to improve the Adjacent Channel Selection (ACS) by 3-4 dB and degrade the sensitivity by 0.5 dB. Motorola recommends you to select narrow IF filter if the adjacent channel separation is 12.5 KHz. This selection is applicable to digital channels only. Select *Wide* for most deployments (all analog and DMM channels use wide IF filter).

Notes

- This feature is applicable for Capacity Plus - Single Site Voice, Capacity Plus - Single Site Data, Capacity Plus - Multi Site Voice, and Capacity Plus - Multi Site Data personalities in digital mode only.
- Motorola recommends frequency tuning when your mobile, portable, or repeater is older than 2 years and you select Narrow IF filter.

BSI Mode

Description

This field allows the user to determine the BSI mode.

Notes

- If System Controller Mode is enabled, then the BSI Mode is enabled.
- If System Controller Mode is disabled, then the BSI Mode is disabled and set as *Analog*.

Network Application Interface Phone

Description

This checkbox allows user to enable or disable the Network Application Interface Phone feature. When NAI Phone is enabled, the MOTOTRBO system will support the telephone calls over repeater NAI interface instead of the 4-wire phone patch.

Value	
Enable	1
Disable	0 (default)
Increment	1

Notes

- This feature is only applicable for Digital, Capacity Plus - Single Site Voice and Capacity Plus - Multi Site Voice channels on MOTOTRBRO repeaters and MOTOTRBO SLR Series repeaters.
- This feature is hidden when the Network Application Interface Voice feature is disabled.

Enhanced GNSS

Enable (Slot 1)

Description

Configures the Enhanced GNSS feature on Repeater Slot 1. When this feature is enabled on the Repeater slot, then the slot is responsible for scheduling the GNSS or other scheduled updates of all the subscribers. This is a slot-wide feature so each slot can be configured independently. In a Capacity Plus - Single Site data channel, one slot can be used for GNSS and other scheduled data, and the other slot can be used for non-GNSS or other non-scheduled data. This also applies for Single Site and IP Site Connect modes.

Note

- This feature is supported in Digital mode only.

Enable (Slot 2)

Description

Configures the Enhanced GNSS feature on Repeater Slot 2. When this feature is enabled on the Repeater slot, then the slot is responsible for scheduling the GNSS or other scheduled updates of all the subscribers. This is a slot-wide feature so each slot can be configured independently. In a Capacity Plus - Single Site data channel, one slot can be used for GNSS and other scheduled data, and the other slot can be used for non-GNSS or other non-scheduled data. This also applies for Single Site and IP Site Connect modes.

Note

- This feature is supported in Digital mode only.

Enhanced GNSS Window Size (Slot 1)

Description

Configures the Window Size for the Repeater Slot 1. This is a slot-wide feature.

Range	
Options	1,2,5,6,7,8,9, and 10
Maximum	10
Minimum	1
Increment	1

Notes

- This feature can only be used by Location CSBK Data.
- This feature is only be editable if Enable (Slot 1) is checked.
- This feature is hidden when the Digital or Enhanced GNSS feature is disabled. This is only applicable to a digital channel.
- This feature is hidden when the Digital, Capacity Plus - Single Site, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus - Single Site data channel.
- This feature is hidden when the Digital, Capacity Plus - Multi Site, or Enhanced feature is disabled. This is only applicable to a Capacity Plus - Multi Site data channel.
- If the Window Size is configured as 1 or 2, user can use the updated rate of 7.5s/15s/30s/1min/2min.
- If the window size is configured as 5, 6, 7, 8, 9 or 10, user can use the updated rate of 30s/1min/2min/4min/8min.
- Window Size option 1 can only be configured if the system are using the MOTOTRBO Network Interface Service (MNIS) wireline mode.
- The Window Size of the subscriber units must be the same with the Repeater to avoid collision and loss of GNSS data transmission functionality.
- This feature is supported in Digital mode only.

Enhanced GNSS Window Size (Slot 2)

Description

Allows user to configure the Window Size of repeater Slot 2 for an Enhanced GNSS channel. User can configure Window Size option 1 and 2 if the CSBK Data feature is used. Window Size option 1 can only be configured if the system are using the MOTOTRBO Network Interface Service (MNIS) wireline mode.

This feature is applicable for single-site and IP Site Connect modes in Digital conventional mode. This feature is applicable for Capacity Plus - Single Site Data Channels in Capacity Plus - Single Site mode and Capacity Plus - Multi Site Data channels. It is not applicable for the repeater Dynamic Mixed Mode channel.

Range	
Options	1,2,5,6,7,8,9, and 10
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is only be editable if Enable (Slot 2) is checked.
- This feature is hidden when the Digital or Enhanced GNSS feature is disabled. This is only applicable to a digital channel.
- This feature is hidden when the Digital, Capacity Plus, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus - Single Site data channel.
- This feature is hidden when the Digital, Capacity Plus - Multi Site, or Enhanced GNSS feature is disabled. This is only applicable to a Capacity Plus - Multi Site data channel.
- If the Window Size is configured as 1 or 2, user can use the updated rate of 7.5s/15s/30s/1min/2min.
- If the Window Size is configured as 5, 6, 7, 8, 9 or 10, user can use the updated rate of 30s/1min/2min/4min/8min.
- For Capacity Plus - Single Site channel, this feature is hidden when the Digital, Capacity Plus - Single Site, or Enhanced GNSS feature is disabled.
- For Capacity Plus - Multi Site data channel, this feature is hidden when the Digital, Capacity Plus - Multi Site, or Enhanced GNSS feature is disabled.
- This feature is supported in Digital mode only.

Periodic Window Reservation (Slot 1)

Description

Specifies the percentage of windows that can be reserved for periodic updates for the Enhanced GNSS Slot 1. The available choices are None, 45%, 60%, 75% and 90%. If the user chooses 90%, it means that 90% of the total available windows are reserved for periodic updates and the remaining 10% are reserved for a one-time updates. If there is a high call volume on the selected channel, the user should not run at 90% capacity, instead use 60% or 45% capacity. This is a slot-wide feature.

Notes

- This feature is enabled if **Enable (Slot 1)** is enabled.
- The *None* choice is applicable only when IP Site Connect is set to *Slot 1* or *Slot 1 & Slot 2*.
- In IP Site Connect and Capacity Plus - Multi Site modes, when this feature is set to 45%, 60%, 75%, or 90%, it will configure the slot as the Scheduler. When the feature is set to None, it will configure the slot as the Slave. There should be one Scheduler for the Enhanced GNSS feature in an IP Site Connect System.
- This feature is supported in Digital mode only.

Periodic Window Reservation (Slot 2)

Description

Specifies the percentage of windows that can be reserved for periodic updates for the Enhanced GNSS Slot 2. The available choices are None, 45%, 60%, 75% and 90%. If the user chooses 90%, it means that 90% of the total available windows are reserved for periodic updates and the remaining 10% are reserved for a one-time updates. If there is a high call volume on the selected channel, the user should not run at 90% capacity, instead use 60% or 45% capacity. This is a slot-wide feature.

Notes

- This feature is enabled if **Enable (Slot 2)** is enabled.
- The *None* choice is applicable only when IP Site Connect is set to *Slot 2* or *Slot 1 & Slot 2*.
- In IP Site Connect and Capacity Plus - Multi Site modes, when this feature is set to 45%, 60%, 75%, or 90%, it will configure the slot as the Scheduler. When the feature is set to None, it will configure the slot as the Slave. There should be one Scheduler for the Enhanced GNSS feature in an IP Site Connect and Capacity Plus - Multi Site Systems.
- This feature is supported in Digital mode only.

Window Size

Description

Allows the user to configure the Window Size for an Enhanced GNSS channel.

Range	
Maximum	10
Minimum	1
Increment	1

Notes

- This feature is editable if Enhanced GNSS is editable and enabled.
- This feature is disabled when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is disabled when the Extended Range Direct Mode feature is enabled.
- This feature is supported in Digital mode only.

Shared Channel Frequency

Repeater Slot 1

Description

Configures a repeater slot 1 to enable a shared channel frequency. This is a personality-wide feature.

Note

- This feature is enabled if repeater slot is configured for Enhanced GNSS.
- This feature is hidden when you disable the Digital or Enhanced GNSS feature. This dependency is only applicable to a Digital Channel.
- This feature is hidden when you disable the Digital, Capacity Plus - Single Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus - Single Site Data Channel.
- This feature is hidden when you disable the Digital, Capacity Plus - Multi Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus - Multi Site Data channel.
- This feature is enabled if Periodic Window Reservation (Slot 1) is not set to *None*.
- This feature is supported in Digital mode only.

Repeater Slot 2

Description

Configures a repeater slot 2 to enable a shared channel frequency. This is a personality-wide feature.

Note

- This feature is enabled if repeater slot is configured for Enhanced GNSS.
- This feature is hidden when you disable the Digital or Enhanced GNSS feature. This dependency is only applicable to a Digital Channel.
- This feature is hidden when you disable the Digital, Capacity Plus - Single Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus - Single Site Data Channel.
- This feature is hidden when you disable the Digital, Capacity Plus - Multi Site, or Enhanced GNSS feature. This dependency is only applicable to a Capacity Plus - Multi Site Data channel.
- This feature is enabled if Periodic Window Reservation (Slot 2) is not set to *None*.
- This feature is supported in Digital mode only.

RX

RX Frequency (MHz) (Conventional Channel)

Description

Sets a frequency (in MHz) on which the signal is received for the current channel. This is a channel-wide feature.

Notes

- When the Spain Band Frequency Range feature is enabled in the application, this feature will not accept any values except for the frequencies in the bands that are permitted in Spain (146-174 MHz for VHF or 406.1-430 MHz and 440-470 MHz for UHF). When the Spain Band Frequency Range feature is disabled in the application, this feature accepts values that are outside of the Spain permitted bands.
- The feature is not available in the Capacity Plus - Single Site system Channel.
- This feature is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies for MOTOTRBO 1.6A+ and MOTOTRBO 2.0+ releases.

- When adding a channel in MTR3000 repeaters, this feature's value is set to a minimum RX Frequency of the band.
- The range of frequencies that can be set depends on the radio's band.
- For Digital Mode, MOTOTRBO does not support the configuration of a direct mode channel that has different TX and RX frequencies. When TX and RX frequencies are different, the channel is defined as a repeater channel and the MOTOTRBO radio expects to communicate with a repeater.
- For 3600 Trunking capable radios, this feature is disabled until Channel Bandwidth (KHz) is selected when multiple channels are selected.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

RX Squelch Type

Description

Sets the type of decoding needed for the radio to receive a call on the channel. The options are Carrier Squelch (*CSQ*), Tone Private Line (*TPL*) and Digital Private Line (*DPL*). This feature allows for more privacy on a frequency. This is a channel-wide feature.

Note

- CSQ based repeat is not supported in Dynamic Mixed Mode.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode and 3600 Trunking capable radios in Conventional mode only.

See Also

- RX DPL Code.
- RX TPL Frequency and Code.

RX DPL Code (Octal)

Description

This is the designated digital code received when a Digital Private Line (DPL) coded transmission is received on the channel. The DPL code is a three-digit octal number. This is a channel-wide feature.

Range	
Maximum	777
Minimum	000
Increment	1 (Octal)

Note

- The Receive **Squelch Type** feature must be set to *DPL*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

See Also

- DPL Squelch Codes.

RX DPL Invert

Description

Causes the radio to invert the Digital Private Line (DPL) code upon receiving the signal. Inverted codes allow for compatibility with the equipment that requires it. This is a channel-wide feature.

Note

- The Receive (RX) **Squelch Type** feature must be set to *DPL*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode and 3600 Trunking capable radios in Conventional mode only.

RX TPL Setting

Description

Allows the user to select a TPL setting from a list of standard TPL frequency choices. This frequency is a designated frequency received when a Tone Private Line (TPL) encoded transmission is received on this channel. The TPL frequency is modulated into the carrier frequency. This is a personality-wide feature.

Note

- The Receive (RX) Squelch Type feature must be set to *TPL*.
- Only the 83 EIA/TIA-603 standard codes are supported. Motorola codes and non-standard codes are not supported in these radios.
- This feature is applicable to 3600 Trunking capable radios only.

See Also

- TPL Frequencies and Codes.

RX TPL Frequency (Hz)

Description

This is the designated frequency received when a Tone Private Line (TPL) encoded transmission is received on this channel. The TPL frequency is modulated into the carrier frequency. This is a channel-wide feature.

Range	
Maximum	255.0 Hz
Minimum	67.0 Hz
Increment	0.1 Hz

Note

- The Receive (RX) **Squelch Type** feature must be set to *TPL*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

RX TPL Code

Description

This is a code representing a specific tone. This tone is received when a Tone Private Line (TPL) encoded transmission is received on this channel. The TPL codes are predefined in the CPS. When setting this field, the **TPL Frequency** is automatically set to the frequency corresponding to the selected code. This is a channel-wide feature.

Note

- The Receive (RX) **Squelch Type** feature must be set to *TPL*.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

See Also

- TPL Frequencies and Codes.

RX Signaling System

Description

Associates any available Motorola Data Communications (MDC) signaling system and Quick Call II signaling system to be used during reception. Any available MDC system and Quick Call II system may be associated with the channel. Selecting *None* disables the user from receiving any MDC signaling and Quick Call II signaling related data, and disables MDC and Quick Call II related features (such as MDC Emergency and Call Alert) on this channel. This is a channel-wide feature.

Note

- Configure the MDC Signaling System before selecting it or the default will be used.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

See Also

- Adding MDC Systems.

RX Ref Frequency

Description

Selects the Reference Frequency used when receiving on the current channel. The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. The options are Default, Nominal or Alternate. For Nominal and Alternate frequency for the different radios, refer to the Rx Reference Frequency table. This is a channel-wide feature.

The radio as it is shipped is compliant with all RTTE regulations. Changing the reference to these frequencies will impact the radio's performance specifications and could result in non-compliance with the RTTE requirements. Conformity to the local regulatory standards must be verified by the person/organization applying this change. Press F1 to view the Rx Frequency Range table.

Rx Ref Frequency Table

Product	Nominal Frequency (MHz)	Alternate Frequency (MHz)
MOTOTRBO Light 350 MHz Portable Radios	19.2	9.6
MOTOTRBO Light VHF Mobile Radios	9.6	6.4
MOTOTRBO Mid Tier VHF Mobile Radios	9.6	6.4
MOTOTRBO 2.0 SL Series 800 MHz Radios	9.6	6.4
MOTOTRBO 2.5 SL Series 800 MHz Radios	9.6	6.4
MOTOTRBO VHF Mobile Radios	4.8	3.84
Other mobile radios	9.6	6.4
Other portable radios	Not programmable	Not programmable

Note

- This feature is applicable to MOTOTRBO Conventional radios only.
- For MOTOTRBO codeplug versions 09.04.XX+ and MOTOTRBO Light codeplug versions 08.01.XX+, the choices are Default, Nominal, and Alternate.
- For MOTOTRBO codeplug versions 09.04.XX+ and MOTOTRBO Light codeplug versions 08.01.XX+, the only choice is Default.

Signaling Squelch

Description

Sets the rule determining when the radio unmutes to receive Signaling System data. This is a channel-wide feature.

Option	Functionality
And	Unmutes when the current channel's Private Line Unmute Rule is satisfied.
Or	Unmutes either when the current channel's Private Line Unmute Rule is satisfied or when a voice call is detected.

Notes

- The **Unmute Rule** selected applies only to the detection of voice calls (audio), not data.
- This feature is enabled only if the Receive **Signaling System** is set to *Quik-Call II* or *MDC*.
- Starting from MOTOTRBO 2 radios, this feature is enabled only if the Receive **Signaling System** is not set to *N*
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Unmute Rule

Description

Sets the rule that determines when the radio unmutes its speaker to receive audio or data. This is a channel-wide feature.

Option	Functionality
Std Unmute, Mute	Unmutes when a proper Private Line (PL) code is detected, and mutes on the loss of the PL code.
And Unmute, Mute	Unmutes when a proper Private Line (PL) code and a Carrier Squelch is detected, and mutes on the loss of the PL code.
And Unmute, Or Mute	Unmutes when a proper Private Line (PL) code and a Carrier Squelch is detected, and mutes on the loss of the proper PL code, or the loss of the Carrier Squelch.

Note

- The Receive **Squelch Type** feature is not set to Carrier Squelch (CSQ).
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode and 3600 Trunking capable radios in Conventional mode only.

Group List

Description

Associates any available RX Group List to the channel for reception. The user can listen to any Group in this list when there is any activity on it and talk back within the Group Call hang time. This is also known as a Group Scan. Selecting the *None* option disables the user from receiving any Group Calls on this channel, except when the Call ID is the same as the **Call ID** of the transmit member. The **Call ID** from the **Contact Name** is automatically added to the RX Group List on this channel by default. This allows the user to receive this call, even though this feature is set to *None*. This is a channel-wide feature.

Note

- This feature is disabled when the **Option Board Trunking** feature is enabled (checked).
- This feature is applicable for Digital and Capacity Plus - Single Site System Personalities only.
- Configure the RX Group List under the RX Group Lists folder before selecting it or the default will be used.
- This feature is useful if the user wants to receive calls from multiple groups.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

See Also

- Adding RX Group Lists.
- **Group Call Hang Time**, if the radio is in Repeater mode or **Talkaround Group Call Hang Time**, if the radio is in Talkaround mode.

Emergency Alarm Ack

Description

Determines if the radio is allowed to acknowledge an emergency alarm. This is a channel-wide feature.

Note

- It is recommended that only a single radio on the group be programmed to acknowledge emergency alarms. This check box should typically only be checked on the dispatchers radio.
- The **Emergency Alarm Indication** feature must be enabled.
- This feature is applicable to MOTOTRBO Conventional radios for Display model only.

Emergency Alarm Indication

Description

Determines if audio and visual indication is given by the radio when an emergency alarm is received. If the checkbox is unchecked, the radio displays nothing when it receives an emergency alarm. This is a channel-wide feature.

Note

- This feature is disabled when the **Option Board Trunking** feature is enabled (checked).
- This feature is applicable to MOTOTRBO Conventional radios for Display model only.

Emergency Call Decode Tone

Description

This checkbox allows you to enable or disable the Emergency Call Decode Tone.

Notes

- This feature is disabled when the **Emergency Call Indication** feature is disabled (unchecked).
- This feature is applicable for Analog, Digital, Capacity Plus - Single Site system, and Capacity Plus - Multi Site system personalities.

Emergency Call Indication

Description

Determines if a visual indication is given by the radio when an emergency call is received. This is a channel-wide feature.

Notes

- This feature is disabled when the **Option Board Trunking** feature is enabled (checked).
- This feature is applicable for MOTOTRBO Conventional radios for Display model only.

PL for Data

Description

This feature enables or disables the usage of Private Line (PL) code before signaling data can be received on the channel. This is a channel-wide feature.

Note

- The Receive **Squelch Type** feature is set to either Tone Private Line (*TPL*) or Digital Private Line (*DPL*).
- The Receive **Signaling System** feature is not set to *None*.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Squelch Mode

Description

Configures the squelch mode which uses the 5 Tone tones to determine the radio un-muting requirement on a 5 Tone channel. This is a channel-wide feature.

Option	Functionality
CSQ	Unmutes to all incoming channel voice. (Available when the Squelch Type is set to

	CSQ)
Tone	Unmutes only when the 5 Tone tone matches. (Available when the Squelch Type is set to *CSQ*)
PL	Unmutes only when TPL/DPL code matches. (Available when the Squelch Type is set to *DPL* or *TPL)*
PL & Tone	Unmutes when TPL/DPL code matches, as well as 5 Tone tone matches. (Available when the Squelch Type is set to *DPL* or *TPL)*

Note

- This feature is supported in Analog mode only.

Auto Reset Mode

Description

On reception of a selective call or upon de-keying, the radio enters into the Auto Reset mode in which certain squelch requirements are defeated. On entering into the Auto Reset mode, the auto reset timer will be started. The radio resets to the previous Squelch Mode on expiration of the auto reset timer. This feature determines how the radio resets in the Auto Reset mode. This is a channel-wide feature.

Option	Functionality
Disabled	The auto reset timer will not be started and auto reset mode will not be entered.
Carrier Override	The auto reset timer will be started and stopped by timer expiration or monitor button press. The timer will also be restarted if carrier is detected while the timer is still active.
Carrier Independent	The auto reset timer will be started and stopped by timer expiration or monitor button press.
Manual Override	The auto reset timer will not be started. The radio will stay in the auto reset mode until the monitor button is pressed.

Note

- This feature is supported in Analog mode only.

TX

TX Frequency (MHz) (Conventional Channel)

Description

Sets a frequency (in MHz) on which a signal is transmitted for the current channel. This is a channel-wide feature.

Note

- When the Spain Band Frequency Range feature is enabled in the application, this feature will not accept any values except for the frequencies in the bands that are permitted in Spain (146-174 MHz for VHF or 406.1-430 MHz and 440-470 MHz for UHF). When the Spain Band Frequency Range feature is disabled in the application, this feature accepts values that are outside of the Spain permitted bands.
- The feature is not available in the Capacity Plus - Single Site system Channel.
- When adding a channel in MTR3000 repeaters, this feature's value is set to a minimum TX Frequency of the band.
- This feature is hidden on a Dynamic Mixed Mode Channel when the Dynamic Mixed Mode Feature is disabled. This applies for MOTOTRBO 1.6A+ and MOTOTRBO 2.0+ releases.
- The range of frequencies that can be set depends on the radio's band.
- For MOTOTRBO Conventional radios in Digital mode, MOTOTRBO does not support the configuration of a direct mode channel that has different TX and RX frequencies. When TX and RX frequencies are different, the channel is defined as a repeater channel and the MOTOTRBO radio expects to communicate with a repeater.
- The **RX Only** feature must be disabled.
- For 3600 Trunking capable radios, this feature is disabled until Channel Bandwidth (KHz) is selected when multiple channels are selected.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is disabled and its value is equal to the value of RX Frequency when the **Dual Capacity Direct Mode (DCDM)** feature is enabled.
- This feature is disabled and set to the same value as the RX Frequency (Conventional
- Channel) if Extended Range Direct Mode is enabled.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters and 3600 Trunking capable radios in Conventional mode only.

TX Squelch Type

Description

Sets the type of encoding the radio transmits on this channel. The options are Carrier Squelch (*CSQ*), Tone Private Line (*TPL*) and Digital Private Line (*DPL*). This feature allows for more privacy on a frequency. This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters and Analog mode and 3600 Trunking capable radios in Conventional mode only.

See Also

- **TX DPL Code.**
- **TX TPL Frequency** and **Code.**

TX DPL Code

Description

This is the designated digital code transmitted on a Digital Private Line (DPL) coded transmission for this channel. The DPL code is a three-digit octal number. This is a channel-wide feature.

Range	
Maximum	777
Minimum	000
Increment	1 (Octal)

Note

- The Transmit **Squelch Type** feature must be set to *DPL*.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

See Also

- DPL Squelch Codes.

TX DPL Invert

Description

Causes the radio to invert the Digital Private Line (DPL) code before transmitting. Inverted codes allow for compatibility with the equipment that requires it. This is a channel-wide feature.

Note

- The Transmit (TX) **Squelch Type** feature must be set to *DPL*.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode and 3600 Trunking capable radios in Conventional mode only.

TX TPL Setting

Description

Allows the user to select a TPL setting from a list of standard TPL frequency choices. This frequency is the designated frequency encoded into the transmitted signal for this channel. The TPL frequency is modulated into the carrier frequency. This is a channel-wide feature.

Note

- The Transmit (TX) Squelch Type feature must be set to *TPL*.
- Only the 83 EIA/TIA-603 standard codes are supported. Motorola codes and non-standard codes are not supported in these radios.
- The **RX Only** feature must be disabled.
- This feature is applicable to 3600 Trunking capable radios only.

See Also

- TPL Frequencies and Codes.

TX TPL Frequency (Hz)

Description

This is the designated frequency encoded into the transmitted signal for this channel. The Tone Private Line (TPL) frequency is modulated into the carrier frequency. This is a channel-wide feature.

Range	
Maximum	255.0 Hz
Minimum	67.0 Hz
Increment	0.1 Hz

Note

- The Transmit (TX) **Squelch Type** feature must be set to *TPL*.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

See Also

- TPL Frequencies and Codes.

TX TPL Code

Description

This is a code representing a specific tone. This tone is encoded into transmissions on this channel. The Tone Private Line (TPL) codes are predefined in the CPS. When setting this field, the **TPL Frequency** automatically sets to the frequency corresponding to the selected code. This is a channel-wide feature.

Note

- The Transmit (TX) **Squelch Type** feature must be set to *TPL*.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Analog mode only.

See Also

- TPL Frequencies and Codes.

TX Signaling System

Description

Associates any available Motorola Data Communications (MDC) signaling system and Quick Call II signaling system to be used during transmission. Any available MDC system and Quick Call II system may be associated with the channel. Selecting *None* limits the user to only be able to transmit a dispatch call upon a PTT (Push-to-Talk) button press. However, note that in this situation, an MDC or Quik-Call II call may be transmitted but only through the UCL (Unified Call List). This is a channel-wide feature.

Note

- Configure the MDC Signaling System before selecting it or the default will be used.
- The **RX Only** feature must be disabled.
- When the radio is transmitting in Talkaround mode, the RX settings including RX Signaling System will be used for the transmission. However, it still requires the TX Signaling System to be set to a valid signaling system to enable the emergency settings of that assigned signaling system.
- This feature is applicable to MOTOTRBO Conventional radios only.

See Also

- Adding MDC Systems.
- Adding Quik-Call II Systems.

TX Ref Frequency (MHz)

Description

Selects the Reference Frequency used when transmitting on the current channel. The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. The options are Default, Nominal or Alternate. For Nominal and Alternate frequency for the different radios, refer to the Tx Reference Frequency table. This is a channel-wide feature.

The radio as it is shipped is compliant with all RTTE regulations. Changing the reference to these frequencies will impact the radio's performance specifications and could result in non-compliance with the RTTE requirements. Conformity to the local regulatory standards must be verified by the person/organization applying this change. Press F1 to view the Tx Ref Frequency Table.

Tx Ref Frequency Range Table

Product	Nominal Frequency (MHz)	Alternate Frequency (MHz)
MOTOTRBO Light UHF-B1 MHz Portable Radios	9.6	6.4
MOTOTRBO Light VHF Mobile Radios	4.8	3.84
MOTOTRBO Mid Tier VHF Mobile Radios	4.8	3.84
XiR C Series UHF-B1 Portable Radios	9.6	6.4
MOTOTRBO Light UHF-B2 Portable Radios	9.6	6.4
MOTOTRBO Light UHF-B1 Portable Radios	9.6	6.4
MOTOTRBO 2.0 SL Series 800 MHz radios	9.6	6.4
MOTOTRBO 2.5 SL Series 800 MHz radios	9.6	6.4
MOTOTRBO VHF Mobile Radios	4.8	3.84
Other mobile radios	9.6	6.4
Other portable radios	Not programmable	Not programmable

Notes

- The **RX Only** feature must be disabled.
- This feature is disabled when Dual Capacity Direct Mode (DCDM) is enabled.
- For MOTOTRBO codeplug versions 09.04.XX+ and MOTOTRBO Light codeplug versions 08.01.XX+, the choices are Default, Nominal, and Alternate.
- This For MOTOTRBO codeplug versions 09.04.XX+ and MOTOTRBO Light codeplug versions 08.01.XX+, the only choice is Default.

DPL Turn-Off Code

Description

When a radio is programmed to transmit a Digital Private Line (DPL) code, it sends the digital code when the Push-to-talk(PTT) is keyed. On PTT de-key, the tone signal is stopped, and a DPL Turn Off Code is sent to indicate the end of transmission to the receiving radio. This sub-audible code causes the receiving radio to mute its speaker before the loss of a carrier is detected to eliminate unwanted noise (squelch tail). This feature can be inhibited by assigning and asserting a GPIO pin (*TOC/Reverse Burst Disable*) to its active level. This is a channel-wide feature.

Note

- The Transmit **Squelch Type** feature must be set to *DPL*.
- The **RX Only** feature must be disabled.
- For 3600 Trunking capable radios, only standard codes are supported.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode and 3600 Trunking capable radios in Conventional mode only.

TPL Reverse Burst

Description

When the radio is programmed to transmit a Tone Private Line (TPL) code, it sends the tone code when Push-to-Talk (PTT) button is pressed. On PTT dekey, the tone signal is stopped, and a Private Line (PL) 'reverse burst' is generated and sent to indicate the end of the transmission to the receiving radio. This sub-audible code causes the receiving radio to mute its speaker before the loss of a carrier is detected to eliminate unwanted noise (squelch tail). This feature can be inhibited by assigning and asserting a GPIO pin (*TOC/Reverse Burst Disable*) to its active level. This is a channel-wide feature.

Option	Functionality
None	No PL reverse burst sequence is transmitted at the end of a transmission.
Non-Standard	A non-standard reverse burst sequence is transmitted at the end of a transmission.
Standard	A standard reverse burst sequence is transmitted at the end of a transmission.

Note

- A standard reverse burst consists of a PL code with a 240-degree phase shift, whereas a non-standard reverse burst consists of a PL code with a 180-degree phase shift. For compatibility with other manufacturers, the non-standard reverse burst is also supported.
- The Transmit (TX) **Squelch Type** feature is set to *TPL*.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode and 3600 Trunking capable radios in Conventional mode only.

Contact Name (Conventional Channel)

Description

Defines the call that may be initiated on the channel by pressing the Push-to-Talk (PTT) button. However, if the channel is attached to a Group List with multiple Groups and there is an activity on one of the Groups, pressing PTT will initiate a talkback instead of a new call if it is within the hang time of the prior call. Selecting the *None* option prevents a call from being initiated on the channel. This is a channel-wide feature.

Note

- Create the Call member under the Contacts folder before selecting it or the default will be used.
- The **RX Only** feature must be disabled.
- The PC Call and Dispatch Call options cannot be set for this feature.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

See Also

- Adding Digital Call

Emergency System

Description

Associates any available digital emergency system to this channel for use during an emergency. Selecting the *None* option disables the user from transmitting an emergency call from this channel. This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is set to *None* and grayed out when the **Option Board Trunking** feature is enabled (checked).
- This feature is applicable for Digital, Capacity Plus - Single Site System, and Capacity Plus - Multi Site System Personalities only.
- This feature is hidden on a Digital Channel when the Digital Emergency feature is disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

See Also

- Adding Digital Emergency Systems.

Power Level

Description

Sets the radio's transmission power level for this channel. This feature can be toggled between high or low, via a short or long programmable button press (*High/Low Power*) or **Power** (Utilities Menu) feature. In MOTOTRBO SLR Series repeater models, it can also select DC Cutback per channel (conventional)/personality (trunking). This is a channel-wide feature.

Option	Functionality
High	Used when a stronger signal is needed to extend transmission distances.
DC Cutback	This feature allows the station to transmit at a different output power when operating from a DC source. When running on DC, the high power or low power cannot be higher than the DC power. Only for MOTOTRBO SLR Series repeaters only.
Low	Used when communicating in close proximity, and to prevent transmissions into other geographical groups.

Notes

- For UHF Portable, Low Power is equivalent to 1W and High Power is equivalent to 4W. For Mobile and Repeater, the High and Low values are configurable through the TX High Power (W) and TX Low Power (W) features under General Settings.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO SLR Series repeaters , MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.
- This feature is applicable in the repeater Dynamic Mixed Mode channel MOTOTRBO version 1.6a+ and MOTOTRBO SLR Series repeater releases

TOT (sec)

Description

The Time-Out Timer (TOT) is the duration that the radio can continuously transmit before a transmission is automatically terminated. This feature is used to ensure the channel is not monopolized by any one radio. The user may set smaller time-outs for busier channels. This is a channel-wide feature.

Range	
Maximum	495 sec (for digital channels in Portables/Mobiles and analog channels in Portable CSA/ATEX model), ∞ sec (for digital/analog channels in Repeaters and analog channels in Mobiles/Portables (excludes Portable CSA/ATEX model))
Minimum	15 sec
Increment	15 sec

Notes

- Infinity (∞)is not a valid setting for Time-Out Timer (TOT) on digital TDMA channels in mobiles and portables because digital TDMA transmissions made by mobile and portables are susceptible to timing drift wherein the mobiles' and portables' transmissions may drift out of the intended timeslot and into the other timeslot when the radio has been keyed up continuously for an extended period of time. Timing drift affects radio transmission in digital channel and not in analog channels.
- Time-out timer for this channel will be disabled if the ∞ option is selected.
- The **RX Only** feature must be disabled.
- The range is 15 to 60 sec when the Dual Capacity Direct Mode (DCDM) feature is enabled.
- This feature is applicable to MOTOTRBO Conventional radios, MOTOTRBO SLR Series repeaters, and 3600 Trunking capable radios in Conventional mode only.

Caution

- Chassis may get warm to touch if Time-Out Timer for the current channel is set to ∞ and continuous PTT for more than 15 minutes.

TOT Rekey Delay (sec)

Description

Sets the amount of time that the radio waits on a channel after the Time-Out Timer (**TOT**) expires (which stops the radio transmission) before allowing the user to transmit again. This is a channel-wide feature.

Range	
Maximum	255 sec, ∞ sec
Minimum	0 sec
Increment	1 sec

Notes

- This feature is available when the **TOT** is not set to *Infinity (*∞).
- The **RX Only** feature must be disabled.

TOT Type

Description

Selects the type of timer per transmission on a 5 Tone channel. This is a channel-wide feature.

Option	**Functionality**
Non-cumulative	If the PTT is pressed continually for the time out timer (**TOT**) period, this option will then cause the radio to de-key after expiration of the timer and a button/keypad error alert will sound for the duration the PTT button remains pressed. The user is not able to re-key the radio until expiration of the transmitter TOT Rekey Delay.
Cumulative	A radio is not allowed to transmit after the cumulative total of transmissions has exceeded the time out timer (**TOT**) period unless reset by a receive period, with muted speaker, greater than the cumulative TOT reset duration. If the radio is PL squelched, the TOT will be reset if the radio is receiving carrier for longer than the cumulative reset duration time but does not detect its own PL in this period.

Note

- This feature is enabled if the **TOT** feature is not set to Infinity(∞).
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Cumulative TOT Reset Duration (sec)

Description

Specifies the duration after which a radio is not allowed to transmit after reaching this cumulative total for transmissions, unless reset by a receive period with muted speaker is greater than this duration. This is a channel-wide feature.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is enabled if the TOT Type feature is set to *Cumulative*.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Allow Interruption

Description

This feature enables the radio to be interrupted during voice transmissions by radios that are Transmit Interrupt capable. After the radio has been dekeyed, a voice, emergency, or data transmission can follow. In order to configure a radio to be Transmit Interrupt capable, see the TX Interrupt Remote Dekey programmable button option, the *TX Interrupt* option under In Call Criteria, and Emergency TX Interrupt.

Note

- The **RX Only** feature must be disabled.

Admit Criteria

Description

Determines when voice or data is allowed to be transmitted on the channel. This is used to prevent a radio from transmitting on channels that are already being used. If the radio has different transmit and receive frequencies, only the receive frequency is monitored for activity. If no activity is found on the receive frequency, the radio allows the user to transmit on the transmit frequency even if it is being used. This is a channel-wide feature.

Option	Functionality
Always	The radio will always transmit when the Push-to-Talk (PTT) button is pressed. This option is also referred to as "Impolite" channel access (not available in a Capacity Plus - Single Site Personality and Capacity Plus - Multi Site Personality channel).

Channel Free	The radio will check for an idle channel prior to allowing a transmission. This option is also referred to as "Polite to All" channel access.
Correct PL	The radio will check for a PL match prior to allowing a transmission. This option is available only when Rx Squelch Type is set to *TPL* or *DPL* (for Analog channels only).
Color Code Free	The radio will check if the specified Color Code is not in use prior to allowing transmission (except for Group Calls that are already in progress). This option is also referred to as "Polite to Own Digital System" channel access (for Digital channels only).
Past TPL/DPL Lockout	Transmission is allowed when there is no carrier, or the correct PL has been detected since the latest carrier presence (for 5 Tone channels only).
TPL/DPL Lockout	Transmission is allowed when there is no carrier, or the correct PL has been detected (for 5 Tone channels only).
Carrier Gone Timer Expired	Transmission is allowed when there is no carrier and the Carrier Gone Timer has expired. (for 5 Tone channels only).
TPL/DPL Not Detected	Transmission is allowed if the correct PL is not detected. (for 5 Tone channels only).
No TPL/DPL or Past TPL/DPL	Transmission is allowed when there is no carrier, or the correct PL has not been detected since the latest carrier presence. (for 5 Tone channels only).
Channel Free or No TPL/DPL but Past TPL/DPL	Transmission is allowed when there is no carrier, or the correct PL has been detected since the latest carrier presence but not detected now (for 5 Tone channels only).

Note

- Not all transmission types utilize these settings. For example, emergency voice always operates impolitely whereas data and control messages always operates politely. An exceptional case is the emergency alarm that is sent with a mix of impolite and polite channel access.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode and 3600 Trunking capable radios in Conventional mode only.

PTT Keyup Mode

Description

Defines when, if at all, a telegram will be sent when the PTT is pressed. This is a channel-wide feature.

Option	Functionality
Disabled	No telegrams will be sent on PTT press.
Every PTT	A telegram will be sent out every time the radio is keyup with PTT pressed.
Once Only	A telegram will be sent when the radio starts a call.
Periodic	A telegram will be sent periodically when the radio is transmitting.
Smart PTT	Dedicated telegrams will be sent periodically when the radio is transmitting.

Note

- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

PTT Keyup Encode

Description

Selects what is transmitted when the PTT is pressed. It can be any available telegram or *Address Send*. If any available telegram is selected, PTT is a fixed telegram button. If *Address Send* is selected, different types of telegram will be sent depending on the radio operation. For example, if the radio is in the home screen, previously selected telegram will be sent. If the radio is In the Contacts list, the highlighted entry telegram will be sent. This is a channel-wide feature.

Note

- This feature is disabled if the **PTT Keyup Mode** is set to *Disabled* or *Smart PTT*.
- The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

PTT Dekey Encode

Description

Specifies a telegram to encode upon PTT release. The options are *None* and all available telegrams. No telegram is sent upon PTT release if the *None* option is selected. This is a channel-wide feature.

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Repeater Access and Radio ID Telegram

Description

Specifies the Repeater Access and Radio ID telegram when the **PTT Keyup Mode** is set to *Smart PTT*. The choices are all available telegrams. This is a channel-wide feature.

Note

- The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

ARTS Interval (sec)

Description

Specifies the ARTS time interval for polling transmission in seconds (secs).

Range	
Maximum	55 sec
Minimum	22 sec
Increment	1 sec

Note

- This feature is disabled if RX Only is enabled.
- This feature is enabled if ARTS is set to *TX* or *RX & TX*.
- This feature is supported in Analog mode only.

Radio ID Telegram

Description

Specifies the Radio ID telegram when the **PTT Keyup Mode** is set to *Smart PTT*. The choices are all available telegrams. This is a channel-wide feature.

Note

- The value of this feature is set to one of the available telegrams if the selected value is deleted or the pasted value does not exist in the available choices.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

Encoder Hold Time (ms)

Description

Specifies the duration in milliseconds (ms) for which the radio remains keyed up after a telegram is sent. This is a channel-wide feature.

Range	
Maximum	2550 ms
Minimum	0 ms
Increment	10 ms

Note

- The **RX Only** feature must be disabled.
- In Scan mode, this feature must be configured to more than twice of tone durations.
- This feature is supported in Analog mode only.

Admit Criteria Not Applied in Auto Reset Mode

Description

When enabled, the radio is always allowed to transmit during the Auto Reset Mode, overriding the **Admit Criteria** feature. This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

MDC Repeater Access ID

Description

Allows the user to configure the MDC Repeater Access ID.

Range	
Maximum	FFFF
Minimum	0
Increment	1 (Hex)

Note

- This feature is enabled when **TX Signaling System** is set to a *MDC Signaling System*.
- The **RX Only** feature must be disabled.
- This feature is supported in Analog mode only.

In Call Criteria

Description

Determines when voice is allowed to be transmitted on the channel while in a call. This criteria is used to allow or prevent a radio from transmitting on the channel while it is currently in a call and unmuted. This is a channel-wide feature.

Option	Functionality
Always	The radio will be allowed to transmit impolitely while in a call.
Follow Admit Criteria	The radio will follow the polite Admit Criteria rules while in a call.
TX Interrupt	The radio will follow the Transmitter Interrupt rules while in a call. Radios which are Transmitter Interrupt capable are able to dekey another radio, which is currently transmitting a voice call, in order to place their own calls.

Note

- This feature must be disabled if **RX Only** feature is enabled.
- This feature is supported in Digital mode only.
- This feature is applicable for Digital, Capacity Plus - Single Site System, and Capacity Plus - Multi Site System Personalities only.
- This feature supports the following choices in the Capacity Plus - Single Site and Capacity Plus - Multi Site personality: *Follow Admit Criteria* and *TX Interrupt*.

RSSI Threshold (dBm)

Description

This feature allows the user to set the RSSI (Received Signal Strength Indication) Threshold. The radio is allowed to initiate a call if the Received Signal Strength is less than the configured RSSI threshold. This is a channel-wide feature.

Range	
Maximum	-80 dBm
Minimum	-124 dBm
Increment	1 dBm

Note

- This feature is enabled when Admit Criteria is set to *Channel Free* or *Correct PL*.
- It is recommended to increase the threshold in order to avoid channel busy as a result of RF interference.
- The **RX Only** feature must be disabled.

GNSS Revert

Description

This feature assigns an available single site digital channel as the GNSS Revert channel for the current selected channel. A GNSS revert channel is the designated channel on which automatic GNSS updates are transmitted when GNSS and ARS are enabled on the radio. This reduces traffic on a channel and allows the channel to accommodate more voice transmissions. The radio performs this action by automatically switching to the GNSS revert channel before transmitting a GNSS update, and switching back when the update is completed.

By default, the GNSS revert channel is the selected (Home) channel. An applicable digital channel can be used as GNSS Revert for multiple channels. GNSS updates are then sent on the GNSS Revert channel if the target address is a server (Network ID = CAI Network + 1); otherwise GNSS updates are sent on the selected channel. Voice traffic is discouraged on revert channels. This is a channel-wide feature.

Option	Functionality
None	No revert channel or the GNSS update transmission is disabled.
Selected	GNSS updates transmitted on the current channel.
All	Select from a list of all applicable transmit digital channels.

Note

- This feature is disabled when **GNSS** is disabled (unchecked).
- This feature is disabled when **ARS** is disabled (unchecked).
- This feature cannot be set to *Selected* and the channel cannot be a revert channel when **Receive (RX) Only** is enabled.
- This feature is not available in Capacity Plus - Single Site System channel.
- This feature is set to *None* if the channel that is referenced as the GNSS Revert Channel has Dual Capacity Direct Mode (DCDM) enabled.
- The value *Selected* is a choice if Dual Capacity Direct Mode (DCDM) is enabled for the current channel.
- This feature is greyed out when Dual Slot Data Operation is set to *GNSS.*
- This feature is supported in Digital mode only.

VOX (Conventional Channel)

Description

This feature enables the VOX (Voice Operated Transmit) feature on a selected channel. VOX provides a convenient means of hands-free voice activated communication, removing the need to press the Push-to-Talk (PTT) button. This feature enables the radio to automatically assume the Push-to-Talk (PTT) button is pressed whenever its microphone on the VOX-capable accessory detects voice.
To avoid truncation at the beginning of the VOX call, **Talk Permit** tone (TPT) should be disabled. If TPT is enabled, the radio user shall use a trigger word to key-up the radio. This trigger word will not, in most cases, be transmitted. After uttering the trigger word, the radio user should begin speaking only after the TPT is heard. Channels may have their VOX feature toggled on/off via a short or long programmable button press (*VOX On/Off*) or **VOX** (Utilities Menu). This is a radio-wide feature.

Notes

- This feature is disabled if **RX Only**, Option Board Trunking or **Allow Interruption** is enabled.
- It is recommended to disable the **Talk Permit** tone.
- VOX operates with a “Channel Free” admit criteria regardless of the selected channel Admit Criteria.

Private Call Confirmed

Description

The feature allows you to select either the PATCS (unconfirmed) or OASCU (confirmed) individual call for both single and multi-site digital channels.This feature sets Private Individual calls on the current digital channel as confirmed. By default, Private Individual calls are unconfirmed. This is a channel-wide feature.

Notes

- This feature is disabled if **RX Only** is enabled.
- This feature is supported in Digital mode only.
- This feature is only applicable to radios and archives starting from the codeplug structure defined for MOTOTRBO.

Data Call Confirmed

Description

This feature enables individual packets in data calls (ARS, GNSS, and Text Message) on the current digital channel or personality to be confirmed (i.e. acknowledged) on the current digital channel to be confirmed on the Data Link level. The transmitting radio resends data packets in the data call if the receiving radio does not respond with Data Link level acknowledgements or confirmations upon receiving the data packets. By default, data calls are unconfirmed. This is a channel-wide feature.

For Location Data Delivery Mode, when the GNSS revert channel is IPSC channel, the Location Data will be sent as unconfirmed data mandatorily. At Capacity Plus - Multi Site trunked or data revert channel, the Location Data will be sent as unconfirmed data mandatorily.

Note

- This feature is disabled if **RX Only** and Enhanced GNSS are enabled.

Location Data Delivery Mode

Description

This feature provides a separate way to configure delivery mode of location data as confirmed or unconfirmed data; while other data will follow the definition in the Data Call Confirmed field. Location Data refers to the Location Request and Response Protocol (LRRP) answer and report from the radio's internal application or from Option Board and Non-IP Peripheral devices (refer to Route Type [Digital Call] or Route Type [Capacity Plus - Single Site]). A confirmed data has higher reliability than unconfirmed data. However, the layer 2 retry may cause the radio to be away from home channel for a longer time and miss the home channel activities. Location Data are usually triggered periodically. Therefore, the data is sent over-the-air more often than other type of data.

This droplist allows the user to select whether or not to confirm location data transmissions. Available choices are *Unconfirmed*, *Confirmed*, *Follow Data Call Confirmed*.

Option	Functionality
Unconfirmed	If set to *Unconfirmed*, the data delivery mode for Location Data will be sent as unconfirmed data.
Confirmed	If set to *Confirmed*, the data delivery mode of Location Data will be sent as confirmed data.
Follow Data Call Confirmed	If set to *Follow Data Call Confirmed*, the confirmed or unconfirmed data delivery mode of Location Data will follow the definition in the Data Call Confirmed field.

CPC Emergency System

Description

Associates any available Capacity Plus - Single Site emergency system to this Capacity Plus - Single Site channel for use during an emergency. Selecting the *None* option disables the user from transmitting an emergency call from this Capacity Plus - Single Site channel. This is a channel-wide feature.

Note

- Configure the Capacity Plus - Single Site Emergency system under the signaling systems folder before selecting it or the default will be used.
- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

See Also

- Adding Capacity Plus - Single SiteEmergency Systems.

Receive Tone (Conventional Channel)

Description

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call. This is to notify the user that the radio is unmuting. This feature is set on a per-call basis.

Note

- The **RX Only** feature must be disabled.
- This feature is applicable to MOTOTRBO Conventional radios in Digital mode only.

Quick Key Override

Description

Allows the user to override the conventional channel access rule (when configured for polite operation) so that they can transmit on a busy channel in an impolite fashion. This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is applicable to 3600 Trunking capable radios in Conventional mode only.

Hot Keypad

Description

Allows the user to dial DTMF digits by using the radio's keypad on an analog channel, even when the radio is not in Phone mode. This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is applicable to 3600 Trunking capable radios only.

TX Interruptible Frequencies

Description

This feature needs to be enabled if the frequency supports interruptible voice transmissions. For frequencies supporting direct mode (talkaround) interruptible transmissions, there is no over the air definition of slotting. Therefore this is a frequency and not a channel (slot) consideration.

Enabling this parameter adds a slight increase to channel access times in certain situations but reduces the probability of collisions on the frequency.
Since GNSS and Data Revert Channels do not support voice calls, this feature should not be enabled on those channels.

This is a channel-wide feature.

Note

- The **RX Only** feature must be disabled.
- This feature is supported in Digital mode only.

CSBK Data

Description

The field defines whether or not the CSBK data feature is enabled. When this field is enabled, the ARS, Location report without location information will be sent as CSBK. When this field is enabled and the LRRP request meets the requirement of Location CSBK, the location report with location information will be sent as CSBK. When this field is enabled and the XCMP command meets the requirement of XCMP device to server CSBK, the raw data from the XCMP device to server will be sent as CSBK. This is a channel-wide feature.

Notes

- This feature is supported in Digital, Capacity Plus - Single Site and Capacity Plus - Multi Site mode.
- This feature shall be disabled when the RX Only (Conventional Channel) is enabled.

5 Tone Encode

Call (5 Tone Channel)

Description

Configures one to six Call buttons to be associated with a preprogrammed telegram(s). For the display model, the choices are *None*, *Address Send* and all available telegrams. For the non display model, the choices are *None* and all available telegrams. This is a channel-wide feature.

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Disconnect Telegram

Description

Specifies a telegram to be sent when the radio is going to exit the auto reset mode for any reasons, e,g mode change, **Auto Reset Timer** expired or clear down decoded. The disconnect telegram is to indicate to the peer(s) of a call that a radio will no longer be in the session (i.e. no longer decoding any voice from the call). The choices are *None* and all available telegrams. No disconnect telegram is sent in the above scenario if *None* is selected. This is a channel-wide feature.

Note

- The value of this feature is reset to *None* if the selected value is deleted or the pasted value does not exist in the available choices.
- This feature is supported in Analog mode only.

Sidetone (5 Tone Channel)

Description

When enabled, this feature enables the transmitted 5 Tone telegram to be heard as a sidetone in the transmitting radio speaker. This can act as a comfort feature to the user in knowing that the radio has transmitted. This is a channel-wide feature.

Note

- This feature is supported in Analog mode only.

5 Tone Decode

Adding Decode Telegrams

Description

Adds the highlighted decoder definitions from the **Available** list into the **Decode Telegrams** list. This is a channel-wide feature.

Note

- This feature is not supported in multiple selection.
- This feature is disabled if the list is empty or no selection is highlighted in the **Available** list.
- This feature is disabled if the **Available** list or the **Decode Telegrams** list are invisible.
- This feature is supported in Analog mode only.

Available (5 Tone Channel)

Description

Displays the available decoder definitions.

Note

- This feature does not support multiple selection.
- This feature only lists 5 Tone decoder definition that has the same value of the 5 Tone Signaling System feature to the definition on the **Decode Telegrams** feature.
- This feature is supported in Analog mode only.

Decode Telegrams

Description

Displays the available decoder definitions.

Note

- This feature does not support multiple selection.
- Only the definition that has the same **5 Tone Signaling System** can be added here.
- This feature is supported in Analog mode only.

Removing Decode Telegrams

Description

Removes the highlighted selection from the **Decode Telegrams** list to the Available list. This is a channel-wide feature.

Note

- This feature is not supported in multiple selection.
- This feature is disabled if the list is empty or no selection is highlighted in the **Decode Telegrams** list.
- This feature is disabled if the **Available** list or the **Decode Telegrams** list are invisible.
- This feature is supported in Analog mode only.

Authorization

Description

Prevents the user from monitoring or transmitting until authorized. This is a channel-wide feature.

Option	Functionality
Disabled	The radio has normal transmit capabilities.
Enabled	The radio will only have transmit capabilities when it is called and until the **Auto Reset Timer** expires, or it decodes a clear down sequence.
Enabled with Request	Allows the user to request a call. Initially, the only call allowed by this option, is a call telegram, sent to the controller from a pre-programmed button. The telegram contains the address (ID) of the sender and the transmit request sequence. If this is acknowledged and approved by the controller, the radio will decode the authorization sequence that enables transmission and all normal transmit timers will apply. When the request is sent, the authorization timer is started. This can be set from 0 to 32 seconds. This is the time the radio remains unsquelched while the user awaits confirmation. At time out, or if clear down is decoded, the radio reverts to normal operation and the user knows the request was not granted.

Note

- This feature is supported in Analog mode only.

Auto Reset Deauthorization

Description

When enabled, the radio will revert to its programmed operation and authorization will be revoked when the **Auto Reset Timer** expires. This is a channel-wide feature.

Note

- This feature is disabled if the **Authorization** feature is set to *Disabled*.
- This feature is supported in Analog mode only.

CB Zone

CB Zone

Description

Citizens Band (CB) Zone displays the selected zone names as title.

Note

- This feature is not editable.

Trunking Personality

Individual ID (Hex) (Trunking Personality)

Description

Displays the Individual ID set in the trunking system Individual ID parameter. This ID is a unique identification number that identifies the radio for the current trunking system. This information is used by other radio's when attempting transmit private calls or pages to this radio. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is disabled if **System ID** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

System

Description

Associates any available valid trunking system to the personality. This is a personality-wide feature.

Note

- The value of this feature will be set to the next valid available system, i.e. system with valid software system key when the currently selected trunking system is deleted.
- This feature is disabled if **System ID** of the currently selected trunking system becomes invalid. This can be the case when the software system key becomes invalid after assignment of this personality to this trunking system or if there is no valid system after this system is deleted.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Time-Out Timer (sec) (Trunking Personality)

Description

The Time-Out Timer (TOT) is the duration that the radio can continuously transmit before transmission is automatically terminated. This feature is used to ensure the personality is not monopolized by any one radio. The user may set smaller time-outs for busier channels. This is a personality-wide feature.

Range	
Maximum	495, ∞ sec
Minimum	15 sec
Increment	15 sec

Note

- Time-out timer for this personality is disabled if the Infinity(∞) option is selected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Caution

- Chassis may get warm to touch if Time-Out Timer for the current channel is set to Infinity (∞) and continuous PTT for more than 15 minutes.

Scan List (Trunking Personality)

Description

Associates a Scan List to this trunking personality. All the members on this list will be scanned during a scan operation. Any available Scan List can be selected. Selecting the *None* option disables scanning (including **Auto Scan**) on this personality. This is a personality-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Adding Scan Lists.

Auto Scan (Trunking Personality)

Description

Allows the radio to automatically begin scanning when the user selects the current trunking personality. When disabled, the user is still able to invoke the scan operation, via a short or long programmable button press (*Scan On/Off*) or **Scan** (Scan Menu) feature. This is a personality-wide feature.

Note

- This feature is disabled when the **Scan List** feature is set to *None*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Phone Interconnect (Trunking Personality)

Description

Selects the type of phone interconnect support enabled for the trunking personality. The Phone Interconnect feature supports the Phone feature that allows the radio to initiate and receive a simplex telephone call. For radios capable of receiving an incoming phone call, the landline caller enters the radio number and the user is made aware of the incoming call with a unique ring. To receive an incoming phone call on a talkgroup, the landline caller enters the talkgroup number and all radios affiliated with the talkgroup hear and respond to the call as they would a normal talkgroup call. This is a personality-wide feature.

Option	Functionality
Disabled	The radio is not capable of initiating or receiving phone interconnect calls.
Answer Only	The radio is only capable of receiving phone interconnect calls and not initiating phone interconnect calls.

List Only	The radio is capable of receiving phone interconnect calls and initiating phone interconnect calls to phone numbers in the radio's phone list. (applicable to Display model only).
Unlimited	The radio is capable of receiving phone interconnect calls and initiating phone interconnect calls without restriction. (applicable to Display model only).

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Private Call Type

Description

Selects the type of private call that will be used for the personality. This is a personality-wide feature.

Option	Functionality
Disabled	The Private Call feature is disabled.
Private Call II	Allows the user to have a one-to-one conversation with another user (radio or dispatcher) and sends the initiator's radio ID (PTT ID) as part of the private call so that the receiver is aware of who is calling.
Enhanced Private Call	Allows the user to have a one-to-one conversation with another user (radio or dispatcher) and sends the initiator's radio ID (PTT ID) as part of the private call so that the receiver is aware of who is calling. In addition, it notifies the initiating radio if the target radio has received the "Enhanced Private Call" request. The target radio is required to respond to the "Enhanced Private Call" request before starting the one-to-one conversation.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Private Call Operation

Description

Selects the operation of the private call feature for the personality. This is a personality-wide feature.

Option	Functionality
Answer Only	The radio is only capable of receiving private calls and not initiating private calls.
List Only	The radio is capable of receiving and initiating private calls to users in the radio's trunking Analog Universal Call List (AUCL) list (applicable to Display model only).

Unlimited	The radio is capable of receiving and initiating private calls without restriction (applicable to Display model only).

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Call Alert / Page Operation 

Description

Allows the user to select the Call Alert / Page Operation feature for Trunking. Call Alert is a simplex page between two radios where the page is acknowledged by the target radio. This is a personality-wide feature.

Option	Functionality
Disabled	The radio is not capable of initiating or receiving call alert / pages.
Answer Only	The radio is only capable of receiving pages. The radio is not capable of initiating call alerts
List Only	The radio is capable of receiving pages and initiating call alerts to users in the radio's trunking Analog Universal Call List (AUCL) list (applicable to Display model only).
Unlimited	The radio is capable of receiving pages and initiating call alerts without restriction.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Conversation Type 

Description

Selects the trunking communication mode for the current personality. This is a personality-wide feature.

Option	Functionality
Message Trunking	The system assigns a traffic channel for the duration of a single transmission by one radio. When the radio dekeys, all radios remain on the traffic channel until the traffic channel hang time expires. Once the hang time expires the radios return to the control channel. Any radio involved in the call may PTT while it is on the traffic channel without returning to the control channel.
Transmission Trunking	The system assigns a traffic channel for the duration of a single transmission by one radio. When the radio dekeys, the traffic channel is deallocated and all radios involved in the call return to the control channel. Any subsequent traffic channel requests will be sent in on the control channel by the requesting radio.

PTT-ID Message Trunking	The procedure is the same as message trunking with the addition that any involved radios in the call must return to the control channel when PTT during channel hang time is running. It provides the sending of PTT-ID of the transmitting radio.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Ignore Site Resources

Description

Enables the radio to ignore site resources information received in adjacent control channel OSWs in SmartZone operation. This could be useful if the site has ASTRO, SecureNet, or analog clear repeaters. This is a personality-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Talk Permit Tone (3600 Trunking capable radios - Trunking Personality)

Description

This alert tone sounds after the control channel access grant has been received from the system and the radio is able to transmit on the personality. This is to prompt the user to begin speaking. This is a personality-wide feature.

Note

- The Disable All feature must be disabled.
- Disabling this feature does not disable the radio-wide Talk Permit tone and other tones as this is used in the trunking system operation only.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

DTMF Hot Keypad

Description

When enabled, the user is able to transmit DTMF tones using the radio's keypad. This is a personality-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Message Update

Description

Enables the radio user to select and transmit a message update. This is a personality-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Status Update

Description

Enables the radio to send data messages indicating the current activity of the User, e.g. En Route, At Site or In Repair. The messages can be predefined statuses. This is a personality-wide feature.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

RF AGC (Trunking Personality)

Description

Selects the type of Receive Frequency (RF) Automatic Gain Control (AGC) used for the personality. This is a personality-wide feature.

Option	Functionality
Disabled	Even when *Disabled*, the radio uses a basic form of AGC built in to the radio's receiver. This built-in protection helps to avoid signal clipping and receiver saturation that may damage radio components.
Standard	Enables an advanced form of RF AGC, which attempts to protect against IM (Intermediation) interference by detecting and removing any received interference due to external sources.
Enhanced	Enables the radio to use additional schemes to reduce IM (Intermediation) interference, thus cleaning up the signal.

Note

- *Standard* and *Enhanced* RF AGC may degrade performance on channels that do **not** experience any IM (Intermediation) interference. Therefore, **only** enable these selections on channels known to experience IM (Intermediation) interference.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Announcement Group ID

Description

Sets an ID for an announcement group. This ID is used to identify and communicate with a target radio or group of radios within the same group for the current personality. This is a personality-wide feature.

Range	
Maximum	FFE
Minimum	001
Increment	1 (Hex)

Note

- This feature is software system key protected.
- This feature is disabled if **System** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Type

Description

Selects the Failsoft type from the available choices. This is a personality-wide feature.

Option	Functionality
Disable	The radio will not perform the Failsoft operation. All the Failsoft related configurations for Personality, Talkgroup and Announcement Talkgroup are not applicable.
Personality	The radio uses the personality Failsoft frequency for all Talkgroups within the Personality. All the Failsoft related configurations for Talkgroup and Annoucement Talkgroup are not applicable.
Talkgroup	The rradio uses the talkgroup failsoft frequency. All the Failsoft related configurations for Personality are not applicable.

Note

- This feature is software system key protected.
- This feature is disabled if **System** is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

Emergency

Alarm Mode 

Description

Specifies the behavior of the radio's alarm when the emergency button is pressed. This is a personality-wide feature.

Option	Functionality
Disable	The radio is unable to transmit an alarm signal.
Alarm Only	The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.
Call Only	Once the "Emergency" button is pressed, no emergency alarm is sent but the user can make an emergency call by pressing the Push-To-Talk (PTT) button.
Alarm w/ Call	Once the "Emergency" button is pressed, an emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Alarm Retry Counter 

Description

Determines the maximum number of times the emergency alarm is transmitted when an emergency alarm acknowledge has not been received. This is a personality-wide feature.

Range	
Maximum	255, ∞ sec
Minimum	0
Increment	1

Note

- When this feature is set to *Infinity (∞)*, the radio will keep sending Emergency Alarm until it exits the Emergency mode (e.g. by the radio powering down or the user long pressing the Emergency button).
- This feature is disabled if Alarm Mode is set to *Disabled*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Tactical Emergency

Description

Causes the emergency alarm and emergency calls to be transmitted on the currently selected talkgroup. When it is disabled, the emergency alarm and emergency call are transmitted on the emergency revert talkgroup defined for the current personality. This is a personality-wide feature.

Note

- This feature is disabled if Alarm Mode is set to *Disabled*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Console Ack Required

Description

When an emergency alarm has been sent, the radio always requires an emergency alarm acknowledge from the Fixed Network Equipment (FNE). This feature requires an additional emergency alarm acknowledge from the dispatch application. This is a personality-wide feature.

Note

- This feature is disabled if **Alarm Mode** is set to *Disabled* or *Call Only.*
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Revert PTT ID

Description

When enabled, this feature forces the radio to use “PTT-ID Message Trunking” while operating in emergency call mode. It is not applicable to emergency alarms. In PTT-ID message trunking, the procedure is the same as message trunking with the addition of the currently transmitting subscriber radio’s ID.

In message trunking, the system assigns a traffic channel for the duration of a single transmission by one subscriber radio. When the subscriber radio dekeys, all subscriber radios remain on the traffic channel until the traffic channel hang time expires. Once the hang time expires the subscriber radios return to the control channel. Any subscriber radio involved in the call may PTT while it is on the traffic channel without returning to the control channel. This is a personality-wide feature.

Note

- This feature is disabled if Alarm Mode is set to *Disabled*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Transmission Trunking (Glossary)

Hot Mic

Description

When enabled, enabled the Emergency With Voice to Follow (Emergency Hot Mic) feature. The Hot Mic feature allows for the programming of the Hot Mic related features, i.e. Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button. This is a personality-wide feature.

Note

- This feature is enabled only if Alarm Mode is set to *Alarm & Call* and **Console Ack Required** is disabled (unchecked).
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Hot Mic Duration (sec) (Trunking Personality)

Description

If Hot Mic is enabled, after the radio transmits an emergency alarm, the Hot Mic feature is activated whereby the radio automatically begins transmitting voice for the duration indicated by the **Hot Mic Duration**. There is no need to press the Push-To-Talk (PTT) button during this time in order to transmit voice. Once this duration expires, the radio automatically dekeys. The call made during this duration is an emergency call. This is a personality-wide feature.

Range	
Maximum	120 sec
Minimum	10 sec
Increment	10 sec

Note

- This feature is enabled only if **Hot Mic** is enabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Revert Talkgroup

Description

Selects the talkgroup ID that will be used in the emergency mode. Emergency alarms and emergency calls revert and transmit on this talkgroup ID during non-tactical emergency operation. This is a personality-wide feature.

Range	
Maximum	FFE
Minimum	001
Increment	1

Note

- This feature is software system key protected.
- This feature is disabled if Alarm Mode is set to *Disabled*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Frequency

Secondary Failsoft

Description

When enabled, allows the user to enable Secondary Talkgroup Failsoft operation. This is a personality-wide feature.

Note

- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Personality*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

RX Primary Frequency (MHz)

Description

Configures the Primary Failsoft Receive (RX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.

- This feature is enabled only when Failsoft Type is set to *Personality*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also
- Failsoft (Glossary)

TX Primary Frequency (MHz)

Description

Configures the Primary Failsoft Transmit (TX) Frequency. This is a personality-wide feature.

Note
- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Personality*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also
- Failsoft (Glossary)

RX Secondary Frequency (MHz)

Description

Configures the Secondary Failsoft Receive (RX) Frequency. This is a personality-wide feature.

Note
- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Personality*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also
- Failsoft (Glossary)

TX Secondary Frequency (MHz)

Description

Configures the Secondary Failsoft Transmit (TX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Personality*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

Announcement Group (ATG) Failsoft Frequency

Failsoft Operation

Description

Selects the Failsoft Operation from the available choices. This is a personality-wide feature.

Option	Functionality
Disabled	All the Announcement Group (ATG) Failsoft Frequency parameters for the current personality are disabled.
Primary & Secondary	All the Announcement Group (ATG) Failsoft Frequency parameters for the current personality are enabled.
Primary Only	Only the RX Primary Frequency and TX Primary Frequency are enabled for the current personality.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Talkgroup*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

RX Primary Frequency (MHz)

Description

Configures the Primary Announcement Group (AG) Receive (RX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when **Failsoft Type** is set to *Talkgroup*.
- This feature is enabled only when **Failsoft Operation** is set to *Primary Only* or *Primary & Secondary*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

TX Primary Frequency (MHz)

Description

Configures the Primary Announcement Group (AG) Transmit (TX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is enabled only when Failsoft is checked.
- This feature is disabled if System is disabled.
- This feature is enabled only when **Failsoft Type** is set to *Talkgroup*.
- This feature is enabled only when **Failsoft Operation** is set to *Primary Only* or *Primary & Secondary*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

RX Secondary Frequency (MHz)

Description

Configures the Secondary Announcement Group (AG) Receive (RX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is enabled only when Failsoft is checked.
- This feature is disabled if System is disabled.
- This feature is enabled only when **Failsoft Type** is set to *Talkgroup*.
- This feature is disabled when **Failsoft Operation** is set to *Primary Only*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

TX Secondary Frequency (MHz)

Description

Configures the Secondary Announcement Group (AG) Transmit (TX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- This feature is enabled only when Failsoft is checked.
- This feature is disabled if System is disabled.
- This feature is enabled only when **Failsoft Type** is set to *Talkgroup*.
- This feature is enabled only when **Failsoft Operation** is set to *Primary Only*.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Failsoft (Glossary)

Preferred Site

Adding Preferred Sites

Description

This feature allows the user to add a new preferred site to the preferred site list. The user can view or define the list for SmartZone and OmniLink operation for the current personality. SmartZone operation allows the radio to determine the best trunking site available through RSSI sampling. This is a personality-wide feature.

To add a preferred site:

1. Click the **Add** button.
2. A new row will be inserted at the end of the table. Select the Site ID and Site status from the respective column dropdownlist.

Note

- This feature is software system key protected.
- This feature is disabled if the **System** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Deleting Preferred Sites.

Deleting Preferred Sites

Description

Preferred site may be deleted if they are no longer in use. This is a personality-wide feature.

To delete a Preferred Site:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is software system key protected.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

- Adding Preferred Sites.

Site ID

Description

This is an 8-bit Site ID that the radio uses to identity a site. The site ID is unique within a zone. This is a personality-wide feature.

Range	
Maximum	64
Minimum	1
Increment	1

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Site Status

Description

Defines the site preference statuses for up to 32 sites per personality on an OmniLink system and 8 sites per personality on a SmartZone system. This is a personality-wide feature.

Option	Functionality
No Preference	Sites with “No Preference” are selected solely on the basis of the site’s RSSI level.
Least Preferred	This option is chosen if the site is the only usable site for operation.
Preferred	This option is chosen if the site is available, the RSSI level is not poor and the site is not in site trunking.
Always Preferred	This option is chosen if the site is available and the RSSI level is not poor, even if the site is in site trunking. The user has the opportunity to keep the radio operating at a site even if it may not have a dedicated control channel or may not be in the wide area trunking operation.

Note

- If the site is not listed in the preferred site list, the radio automatically assign it to *No Preference*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Talkgroup

Adding Talkgroup

Description

This feature allows the user to add a new Talkgroup to the Talkgroup list. This is a personality-wide feature.

To add a Talkgroup:

1. Click the **Add** button.
2. A new row will be inserted at the end of the table. Enter a name and configure the remaining parameters related to the Talkgroup.

Note

- This feature is software system key protected.
- This feature is disabled if the **System** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

Deleting Talkgroup.

Deleting Talkgroup

Description

Talkgroup may be deleted if they are no longer in use. This is a personality-wide feature.

To delete a Talkgroup:

1. Click the row to be deleted in the Configuration View.
2. Click the **Delete** button.

Note

- This feature is software system key protected.
- This feature is disabled if the **System** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

Adding Talkgroup.

Talkgroup

Description

Selects the Talkgroup from the choices of all the available Talkgroups in the Talkgroup List configured for the current trunking personality. This is a personality-wide feature.

Note

- This feature is disabled if the **System** is disabled.
- This feature is disabled for multiple selection.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

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Talkgroup Name

Description

This displays the Talkgroup alias and allows the user to edit the alias.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Talkgroup ID (Hex)

Description

Sets an ID for a Talkgroup in Hexadecimal format. This ID is used to identify and communicate with a target radio or group of radios within the same group for the current personality. When the user enters this value, the Talkgroup ID (Dec) column will be automatically calculated and displayed in the CPS. This is a personality-wide feature.

Range	
Maximum	FFE
Minimum	1
Increment	1 (Hex)

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Talkgroup ID (Dec)

Description

Sets an ID for a Talkgroup in Decimal format. This ID is used to identify and communicate with a target radio or group of radios within the same group for the current personality. When the user enters this value, the Talkgroup ID (Hex) column will be automatically calculated and displayed in the CPS. This is a personality-wide feature.

Range	
Maximum	4094
Minimum	1
Increment	1

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Operation

Description

Selects the Failsoft Operation from the available choices. This is a personality-wide feature.

Option	Functionality
Disabled	All the Failsoft Frequency parameters for the current personality are disabled.
Primary & Secondary	All the Failsoft Frequency parameters for the current personality are enabled.
Primary Only	Only the RX Primary Frequency and TX Primary Frequency are enabled for the current personality.

Note

- This feature is software system key protected.
- This feature is disabled if System is disabled.
- This feature is enabled only when Failsoft Type is set to *Talkgroup*.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

Failsoft (Glossary)

RX Primary Failsoft Frequency (MHz)

Description

Configures the Primary Talkgroup Failsoft Receive (RX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

Failsoft (Glossary)

TX Primary Failsoft Frequency (MHz)

Description

Configures the Primary Talkgroup Failsoft Transmit (TX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also

Failsoft (Glossary)

RX Secondary Failsoft Frequency (MHz)

Description

Configures the Secondary Talkgroup Failsoft Receive (RX) Frequency. This is a personality-wide feature.

Note

- This feature is software system key protected.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature

is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also
Failsoft (Glossary)

TX Secondary Failsoft Frequency (MHz)

Description

Configures the Secondary Talkgroup Failsoft Transmit (TX) Frequency. This is a personality-wide feature.

Note
- This feature is software system key protected.
- When the Canada Full Frequency Range feature is enabled in the application, this feature accepts all the values in the NPSPAC channels (i.e. 806-809 MHz, 821-824 MHz, 851-854 MHz, 866-869 MHz) for all radio models. When the Canada Full Frequency Range feature is disabled in the application, this feature will not accept any values in NPSPAC channel except for the mutual aid channel frequencies.
- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

See Also
Failsoft (Glossary)

Scan

Analog Vote Scan

Description

Sets the value in which the RSSI value of carrier present on a channel is measured to determine whether to qualify for Fast Vote or Start Vote scanning operation for all the available vote scan lists. If the measured RSSI exceeds the provisioned Fast Vote RSSI Threshold value, the subscriber attempts to qualify the signal on the current channel further. If the measured RSSI does not exceed, the radio checks for the next vote scan member. If all the RSSI values of Vote Scan members do not exceed this threshold value, the radio performs the Start Vote operation. After the carrier activity is qualified and landed, the subscriber remains on that voted channel and the Vote Scan process stops for the duration of the call and until after the Vote Scan Hang Time has expired. After the Vote Scan Hang Time timer expires, the subscriber resumes scanning and begin the Fast Vote and Start Vote process again when the carrier is present on a member of the Vote Scan List.

Adding Scan Lists

Description

A Scan List is a grouping of conventional channel/trunking personality to be monitored for transmission activity. When this list is attached to a channel/personality (Channels->Conventional Channel->Scan List/Channels->Trunking Personality/Scan List), the radio searches the list for an eligible channel/personality to receive or unmute during a scan operation.

For 3600 Trunking capable radios, the Talk Group Scan List feature allows the user to choose only from five unique Trunking Systems, with up to 50 talkgroups in one unique system, and may include up to ten Conventional channels. Therefore, the maximum number of members in the Talkgroup Scan list is 250 members, made up of conventional channels and trunking personalities (talkgroup).

To add a Scan List:

1. Right-click the **Scan** folder of the Tree View.
2. Select **Add->Conventional Scan List/Priority Monitor Scan List/Talk Group Scan List/Vote Scan List**. A new list is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- For MOTOTRBO Conventional radios, adding members to lists (call members, scan lists, group lists, channels, zones, etc.) is limited by the radio memory space.
- For MOTOTRBO Conventional radios, this feature is disabled when the Option Board Trunking feature is enabled.
- This feature is not available in the Capacity Plus - Single Site system.
- For 3600 Trunking capable radios, if more than five Trunking Systems are included in the Talk Group Scan List, only the first five will be scanned. Additional members from the sixth system onwards will not be scanned. In the case where more than 50 talkgroups in one unique system are included in the Talk Group scan list, only the first fifty talkgroups will be scanned. Additional talkgroups of the same system will not be scanned.
- For 3600 Trunking capable radios, a maximum of ten Conventional channels can be added into the Talk Group Scan List.
- Vote Scan list and Conventional scan list is mutually exclusive.
- Vote Scan list must only contain Analog or 5 Tone channels belonging to the same signaling system.

See Also

- Adding Scan Members.
- Adding Zones and Channels.
- Deleting Scan Lists.
- Adding Items, for more ways of adding Scan Lists.
- Renaming Items, for more ways of renaming Scan Lists.

Deleting Scan Lists

Description

A Scan List may be deleted if it is no longer in use.

To delete a Scan List:

1. Right-click an individual Scan List of the Tree View.
2. Select **Delete**.

See Also

- Adding Scan Lists.
- Deleting Items, for more ways of deleting Scan Lists.

Hang Time (ms)

Description

Sets the time the radio will remain on a scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the channel during the hang time.

For MOTOTRBO Conventional radios:

Range	
Maximum	10000 ms
Minimum	500 ms
Increment	500 ms

For 3600 Trunking capable radios:

Range	
Maximum	10000 ms
Minimum	1000 ms
Increment	1000 ms

Note

- The scan hang timer should be set to a higher value than the longest Hang Time of any repeater in the scan list.

Digital Hang Time (ms)

Description

Sets the time the radio will remain on a digital scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the digital channel during the hang time.

Range	
Maximum	10000 ms
Minimum	500 ms
Increment	500 ms

Notes

- For firmware R01.07.00 and above, the scan hang time timer starts after the Repeater Digital Call Hang Time has expired in the Digital Repeater Mode.
- For firmware R01.07.00 and above, the scan hang time timer starts after the Talkaround Call Hang Time has expired in the Digital Direct Mode.
- For firmware R01.07.00 and above, this feature value should be set to the minimum (non-zero) value if no additional scan hang is needed after the call has ended.
- For firmware earlier than R01.07.00, the scan timer runs concurrently with the Repeater Digital Call Hang Time and should be set to a higher value than the longest Hang Time of any repeater in the scan list.
- This feature is supported in Digital mode only.

Analog Hang Time (ms)

Description

Sets the time the radio will remain on an analog scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the analog channel during the hang time.

Range	
Maximum	10000 ms
Minimum	0 ms
Increment	500 ms

Note

- Analog Repeater Mode, the scan hang time timer starts after the Repeater Analog Call Hang Time has expired.
- In Analog Direct Mode, the scan hang time timer starts after the end of transmission since the Call Hang time is not applicable in this mode.

- For analog features that use an Auto Reset Timer, the Auto Reset Timer serves as an additional Call Hang Time. Therefore, the Analog Hang Time will be started after the Auto Reset Timer expired plus any other Call Hang Time (depending on whether Repeater or Direct Mode is used).
- This feature value should be set to the minimum (non-zero) value if no additional scan hang is needed after the call has ended.

Priority Alert

Description

This is an alert tone that the radio emits when it unmutes to a priority channel during a scan operation.

Note

- This feature is disabled if there is no Priority 1 member set to a scan list.
- This feature is disabled if the **Disable All Tones** feature is enabled.
- This feature is applicable to MOTOTRBO Conventional radios only and 3600 Trunking capable radios in Trunked mode only.

Vote Scan Hang Time (sec)

Description

Sets the duration that the radio remains on a Vote Scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the channel during the hang time.

Range	
Maximum	63.75 sec
Minimum	0 sec
Increment	0.25 sec

Note

- It is recommended to increase the hang time value if the call hang timer in the radio increases.

Fast Vote RSSI Threshold (dB)

Description

Sets the value in which the RSSI value of carrier present on a channel is measured to determine whether to qualify for Fast Vote or Start Vote scanning operation for all the available vote scan lists. If the measured RSSI exceeds the provisioned Fast Vote RSSI Threshold value, the radio remains on the channel and attempt to further qualify the signal. If the measured RSSI does not exceed, the radio checks for the next vote scan member. If all the RSSI values of Vote Scan members do not exceed this threshold value, the radio performs the Start Vote operation.

Range	
Maximum	-70 dB
Minimum	-120 dB
Increment	1 dB

Note

- The value of this feature must be greater or equal to the value of Start Vote RSSI Threshold (dB).

See Also

- Vote Scan (Glossary)

Start Vote RSSI Threshold (dB)

Description

Configures the start vote RSSI threshold for all the available Vote Scan lists.

Range	
Maximum	-70 dB
Minimum	-120 dB
Increment	1 dB

Note

- The value of this feature must be less than **Fast Vote RSSI Threshold (dB)**.

See Also

- Scan (Glossary)

Scan Sweep Time (sec)

Description

Defines the duration that a radio takes to scan a list of channels during idle period. This timer starts when a call is over and resume scan when this timer expires.

Range	
Maximum	255 sec
Minimum	0 sec
Increment	1 sec

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Off-Hook Suspends

Description

Defines the radio's scan behavior when the microphone is off the hook.

Option	Functionality
Disabled	Scan is not affected.
Non-Priority	The radio only scans for priority channels.
All	All scanning is suspended.

Off-Hook Suspends (3600 Trunking capable radios)

Description

Defines the radio's scan behavior when the microphone is off the hook. When enabled, all scanning is suspended when the microphone is off the hook. When disabled, scan is not affected when the microphone is off the hook.

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

System Search Time (sec)

Description

Sets the amount of time that the radio remains muted on an eligible scan control channel when scanning for scan list members. During this period of time, the radio is decoding trunking system channel grants looking for grants to its talkgroup scan list members.

Range	
Maximum	255 sec
Minimum	1 sec
Increment	1 sec

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

Failsoft Hold Time (sec)

Description

Sets the amount of time the radio remains unmuted on an eligible scan list member once failsoft has occurred. During this period of time, the radio is unmuted to the failsoft channel, listening to a silent failsoft carrier or voice transmission.

Range	
Maximum	255 sec
Minimum	0 sec
Increment	1 sec

Note

- This feature is applicable to 3600 Trunking capable radios in Trunked mode only.

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Scan List Features

Adding Scan Members

Description

This paragraph is applicable to MOTOTRBO Conventional radios. This feature adds channel(s) from the **Available** list into the **Members** list. Channel(s) in the **Members** list will be scanned for transmission activity during a scan operation. Channel(s) added to the **Members** list will be removed from the **Available** list. A maximum of 16 channels (including the *Selected* channel) may be added to a **Members** list. The Scan List can contain both the Analog or Digital channels. During a scan operation, if the radio detects any activity on the scanned channel, the scanned channel configuration will be used.

This paragraph is applicable to 3600 Trunking capable radios for a Conventional Scan List (Conventional mode) This feature adds conventional channel(s) from the **Available** list into the **Members** list. Channel(s) in the **Members** list will be scanned for transmission activity during a scan operation. Channel(s) added to the **Members** list will be removed from the **Available** list. A maximum of 16 channels (including the *Selected* channel) may be added to a **Members** list. During a scan operation, if the radio detects any activity on the scanned channel, the scanned channel configuration will be used.

This paragraph is applicable to 3600 Trunking capable radios for a Priority Monitor Scan List (Trunked mode). This feature adds trunking personality or personalities from the **Available** list into the **Members** list. Personalities in the **Members** list will be scanned for transmission activity during a scan operation. Personalities added to the **Members** list will be removed from the **Available** list. A maximum of 16 personalities (including the *Selected* personalities) may be added to a **Members** list. During a scan operation, if the radio detects any activity on the scanned personality, the scanned personality configuration will be used.

This paragraph is applicable to 3600 Trunking capable radios for a Talk Group Scan List (Trunked mode), this feature adds conventional channel(s) or trunking personalities from the **Available** list into the **Members** list. Channel(s) or trunking personalities added to the **Members** list will be removed from the **Available** list. During a scan operation, the radio scans every member in the **Members** list for transmission activity and switches to the channel or personality accordingly. A maximum of 10 conventional channels or 50 trunking personalities (including the *Selected* channel) may be added to a **Members** list. During a scan operation, if the radio detects any activity on the scanned channel, the scanned channel configuration will be used.

To add a scan member:

1. Select a channel/personality to be added from the **Available** list.
2. Click the **Add** button.

Note

- This feature is disabled if no channel/personality is selected in the **Available** list or if the list is empty.
- This feature is disabled when multiple scan lists are selected.
- For MOTOTRBO Conventional radios, Single site or Multisite channels/personalities can be members of the scan lists.
- For 3600 Trunking capable radios Talk Group Scan List feature, channels/personalities can be members of the scan lists.

- It is not recommended to assign select 5 decode to a priority channel. Any 5 tone decodes on the priority channel will most likely be missed because of the period between priority channel checks.
- For Vote Scan list, if a channel to be added to a Vote Scan Members list is an Analog channel with Quik-Call II signaling system and Signaling Squelch set to *And*, or is a 5 Tone channel with **Squelch Mode** set to *Tone*, this channel **cannot be added** to the Vote Scan Members list as it may not work properly.
- Channel(s) with Option Board Trunking enabled is removed from the scan list.

See Also

- Scan Members.
- Adding Scan Lists.

Available (Scan List)

Description

Displays all available conventional channels/trunking personalities that can be added to a particular scan list.

Members (Scan List)

Description

Displays all the conventional channels/trunking personalities of the scan list. These channels/personalities will be scanned for transmission activity during a scan operation.

Removing Scan Members

Description

Removes the selected conventional channel(s)/trunking personalities from the **Members** list. The channel/personality will return to the **Available** list. The *Selected* channel is the channel indicated by the radio's channel selector and cannot be removed.

To remove a scan member:

1. Select a channel/personality to be removed from the **Members** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no channel/personality is selected in the **Members** list.

See Also

- Adding Scan Members.

Set/Clear Priority 1

Description

Toggles the Priority 1 scanning status of the highlighted conventional channel/trunking personality in the **Members** list. When the Priority 1 status is set to the highlighted channel/personality, the Priority 1 status on another channel/personality (if any) is cleared. During scan, 50% of a radio's scans are on the Priority 1 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority or Priority 2 member, the radio continues to periodically scan for transmission activity on a Priority 1 member. If the radio discovers activity on the Priority 1 member, it drops the current transmission, and unmutes to the Priority 1 member.

To set the priority:

1. Select a channel/personality from the **Members** list.
2. Click on the **Set/Clear Priority 1** button.

Note

- This feature is disabled if no channel/personality is selected in the **Members** list.
- It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.
- This feature is applicable to MOTOTRBO Conventional radios only and 3600 Trunking capable radios in Trunked mode only.

See Also

- Set/Clear Priority 2.

Set/Clear Priority 2

Description

Toggles the Priority 2 scanning status of the highlighted conventional channel/trunking personality in the **Members** list. When the Priority 2 status is set to the highlighted channel/personality, the Priority 2 status on another channel/personality (if any) is cleared. During scan, 25% of a radio's scans are on the Priority 2 member. If a Priority 2 member exists, scans for the Priority 1 member are reduced from 50% to 25%. Even after landing on a non-priority channel, the radio continues to periodically scan for transmission activity on a Priority 2 member. If the radio discovers activity on the Priority 2 member, it drops the current transmission, and unmutes to the Priority 2 member. Activity on a Priority 2 member will be dropped in the event of any valid activity on a Priority 1 member.

To set the priority:

1. Select a channel/personality from the **Members** list.
2. Click on the **Set/Clear Priority 2** button.

Note

- This feature is disabled if no channel/personality is selected in the **Members** list.
- This feature is enabled when there is a Priority 1 member in the **Members** list.
- It is not recommended to assign any 5 Tone decodes to a priority channel as the decodes will most likely be missed because of the period between priority channel checks.

- This feature is applicable to MOTOTRBO Conventional radios only and 3600 Trunking capable radios in Trunked mode only.

See Also

- Set/Clear Priority 2.

Trunking System

Description

Allows the user to select a trunking system from all the available trunking systems regardless of whether it is valid or not, i.e. with or without a software system key for the current scan list.

Note

- The first available trunking system is set by default until the user changes the selection.
- When the user changes to another trunking system, all the personalities from the current trunking system is removed from the **Available** list and replaced by the Trunking personalities of which the newly selected trunking system is assigned to, all the members is removed from the **Members** list and all the priority settings are also removed.
- When the user changes to another trunking system and the newly selected trunking system has no trunking personalities at which it is assigned to, the **Available** list will be empty.
- This feature is applicable to 3600 Trunking capable radios only.

Talkback

Description

Determines if the user is able to transmit on the channel it unmutes during scan. If this feature is disabled, the radio transmits on the channel indicated by the **TX Designated Channel** feature.

PL Type 

Description

This feature indicates if Private Line (PL) decoding is required to unmute to a channel with activity during a scan operation. Disabling the need for PL decoding increases the scanning speed.

Option	Functionality
Disabled	PL decoding not required.
Non-Priority Channel	PL decoding required on non-priority scan list member channels.
Priority Channel	PL decoding required only on a Priority 1 or a Priority 2 scan list member channel.
Priority and Non-Priority Channel	PL decoding required on all current scan list member channels.

Note

- Ensure that there are priority members on the scan list before selecting the *Priority Channel* option.
- Enabling this feature overrides the PL associated with the scan list member channel.
- This feature is applicable to MOTOTRBO Conventional radios only.

See Also

- Set/Clear Priority 1.
- Set/Clear Priority 2.

Channel Marker 

Description

During priority monitoring, the radio will sample higher priority members while unmuted to lower priority members. As the radio is transmitting voice to the user, leaving the current member to scan for higher priority members will cause audio holes in the transmission played out of the radio's speaker. The Channel Marker feature can be used to reduce the audio holes experienced during priority monitoring.

This feature assumes that if a transmission was recently identified as 'not of interest' (in Analog Mode, it is identified by matching the PL code, whereas in Digital mode, it is identified by matching the ID), there is no need to fully qualify it at every priority sampling interval. The radio only needs to identify the type of transmission (e.g. DPL, TPL, etc) taking place. If the type of transmission is the same as the transmission identified as 'not of interest', the radio will ignore the activity. This assumption is made for a predetermined number of times, after which, the scan member is fully qualified again. However, this assumption may not be correct every time.

The tradeoff is between the audio quality of non-priority scan members versus the reliability of detecting the activity of interest of priority members. If audio quality is very important, it is recommended to

enable channel marking, but note that priority scanning reliability is decreased. This feature is also known as PL Lockout.

Note

- For Vote Scan, if this feature is enabled, the channel(s) will be marked if there is no match PL when qualifying Vote Scan member.

See Also

- Vote Scan (Glossary)

TX Designated Channel

Description

This feature defines the conventional channel/trunking personality on which the radio will transmit if the user presses the Push-to-Talk (PTT) button while the radio is scanning.

This paragraph is applicable to MOTOTRBO Conventional radios. If the Talkback option is disabled, this feature also defines the channel/personality where the radio will transmit if the user presses the PTT when the radio has stopped scanning to unmute to an eligible scan list member. Any channel can be selected as the **TX Designated Channel**. Alternatively, *Selected* or *Last Active Channel* may be chosen.

This paragraph is applicable to 3600 Trunking capable radios. This feature is disabled if the **Talkback** feature is enabled. When enabled, any scan member or *Selected* may be chosen as the **TX Designated Channel** in Conventional scanning (Conventional mode). This feature is fixed at *Selected* and not CPS configurable in Priority Monitor scanning (Trunked mode).

For MOTOTRBO Conventional radios:

Option	Functionality
Selected	The channel indicated by the channel selector.
Last Free Channel	The channel where the radio detects no signal on it.
Last Active Channel	The last channel where the radio in scan mode stopped and unmuted to receive audio.
Voted	The last voted channel where the radio in scan mode stopped and unmuted to receive audio.

For 3600 Trunking capable radios:

Option	Functionality
Selected	The scan member indicated by the channel selector.

Note

- For MOTOTRBO Conventional radios, during a scan operation, if this feature is set to *Last Active Channel*, when the radio stops and unmutes to an eligible channel and the user presses the PTT, the radio talks back to the Group that initiated the transmission on the channel during the scan hang time. After the scan hang time expires and the user presses the PTT, the user is

now transmitting to the TX Contact Name specified for the last active channel. This is because the radio only remembers the last active channel, not the Group that it talked back. Therefore, during a scan operation, if the user wishes to always talk back to the same Group when this feature is set to *Last Active Channel*, it is suggested that the channel be attached to a RX Group List that has only one Group and that Group be set to the TX Contact Name of the channel. This essentially makes the last active channel the same as the last active Group.

- For MOTOTRBO Conventional radios, the **TX Designated Channel** can be an Analog or a Digital channel.
- For MOTOTRBO Conventional radios, when there are non-analog channels in the Scan List and the **Tx Designated Channel** is set to *Last Free Channel*, the radio will transmit on the current selected channel rather than the last free channel.
- The **TX Designated Channel** must not be set to **RX Only**.
- This feature is applicable to MOTOTRBO Conventional radios and 3600 Trunking capable radios in Conventional mode only.

Pre-time Delay (ms)

Description

Sets the duration that the radio waits when it detects carrier on Vote Scan list member before continuing the scan sequence.

Range	
Maximum	1500 ms
Minimum	0 ms
Increment	25 ms

See Also

- Vote Scan (Glossary)

Rx Unconf Grp Data All Scan Members

Description

This field allows the user to receive unconfirmed group data on other non-home channels in the Scan list. Any reply or transmission of text message or data still happens on the home channel. Enable this feature only if this is the desired behavior.

Note

- If the current home channel is an analog channel, the non-home digital channels cannot receive group data; even though this field is enabled.
- Motorola Solutions recommends getting expert advice before configuring this field because changing this field impacts the behavior of data transmission.

Voice Scan Hang Time

Description

When enabled, the radio uses the programmed scan hang time for voice, data, and control signaling block (CSBK). The radio remains active following the end of channel activity for the duration of the scan hang time. When disabled, Voice Scan Hang Time is disabled on the radio; however, scan hang time is still enabled for voice, data, and CSBK.

Note

- For the full Scan Hang Time features, refer to Scan feature in the CPS.
- Motorola Solutions recommends getting expert advice before configuring this field because changing this field impacts the performance of ongoing calls.

Early Unmute

Description

If enabled, the radio unmutes in Vote Scan mode before confirming the correct PL. If the PL has been qualified, the radio remains unmuted, or else the radio will mute and continue the scan sequence.

Note

- This is performed only when the radio is attempting on Fast Vote mode.

See Also

- Vote Scan (Glossary)

Display Voted Channel on RX

Description

If enabled, when the radio has stopped scanning to unmute to an eligible Vote Scan list member, the Vote Scan channel is displayed on the radio. If disabled, the selected channel is displayed instead in that event.

See Also

- Vote Scan (Glossary)

Display on TX Channel

Description

If enabled, during scanning or in Vote Scan hang time (if talkback is disabled), the TX Designated Channel is displayed on the radio when the user presses PTT to transmit; or the Vote Scan channel that the radio unmutes to is displayed on the radio (if talkback is enabled) when the user presses the PTT. If disabled, the selected channel is displayed instead in those events.

See Also

- Vote Scan (Glossary)

Signaling Hold Time (ms)

Description

Sets the amount of time that the radio waits on an analog scan list channel when a carrier signal of sufficient amplitude is detected on the channel. This pause allows the radio time to decode the analog system signaling data. If the decoded information is incorrect, the radio reverts to scan.

Range	
Maximum	6375 ms
Minimum	50 ms
Increment	25 ms

Note

- This feature must be equal to or greater than the amount of time it takes the radio to transmit the signaling data packet plus the channel's Signaling Systems **Pretime**.
- For 5 Tone channel scanning, the recommended value of this feature is calculated as such: Pretime + N x tone duration, where N is five or greater. A greater value of N improves the landing rate.
- This feature is applicable to MOTOTRBO Conventional radios in Analog mode only.

Priority Sample Time (ms)

Description

Sets the duration that the radio waits, when in a call, before scanning the priority channels. If the call is taking place on a Priority 1 Channel, no scanning will take place. When scanning priority channels, the radio briefly mutes the current transmission. Increasing this interval improves the audio quality of the current transmission as fewer checks are done, but this also increases the chance of the radio missing out priority channel activity.

Range	
Maximum	7750 ms
Minimum	750 ms
Increment	250 ms

Note

- A priority member must be present in the scan list.

See Also

- Set/Clear Priority 1.
- Set/Clear Priority 2.

Auto Acknowledgement

Description

Allows the user to enable or disable "Auto Acknowledgement" in a conventional scan list and a Vote Scan list.

See Also

- Vote Scan (Glossary)

Security

Fixed Privacy Key Decryption

Description

When enabled, privacy key decryption is automatically applied to all fix privacy key field on personality.

Ignore Rx Clear Voice/Packet Data

Description

When enabled, all clear signal field on an encrypted channel will be ignored automatically.

Privacy

Privacy Type

Description

This feature allows privacy on selected digital channels. Privacy is a software-based scrambling solution that is not robust, and is only meant to prevent eavesdropping. The signaling and user identification portions of a transmission are not scrambled. Receiving radio(s) must have the same **Basic Privacy Key** (for Basic Privacy) or the same **Key Value** and **Key ID** (for Enhanced Privacy) as the transmitting radio in order to unscramble the privacy-enabled voice call or to receive the privacy-enabled data transmission.

Channels may have their privacy enabled or disabled via a short or long programmable button press (Privacy On/Off) or Privacy (Utilities Menu). A radio must have privacy enabled on the channel to transmit a privacy-enabled transmission, but this is not necessary for receiving radio(s). Privacy-enabled channels are still able to receive clear (unscrambled) transmissions. A visual indication appears on all display radios if the channel is privacy-enabled. The radio LED lights up green when transmitting and blinks rapidly when receiving an ongoing privacy-enabled transmission. The same behavior will be observed during scan operations.

This is a radio-wide feature.

This feature is not available on certain radio models.

Option	Functionality
None	Radio will not support any privacy feature.
Basic	Basic Privacy is allowed on selected digital channels. Each radio must have one Basic Privacy Key selected from a pre-defined list. Garbled voice is heard on receiving radios with Basic Privacy Keys which do not match that of the radio transmitting a privacy-enabled voice transmission.
Enhanced	Enhanced Privacy is allowed on selected digital channels. Each privacy-enabled channel must have a securely-configured Key Value associated with it. Garbled voice is heard on receiving radios with Key Values which do not match that of the radio transmitting a privacy-enabled voice transmission. Nothing is heard on the receiving radio if the Key ID of the transmitting radio does not match with all the Key IDs in the list of receiving radios.

Note

- The **Privacy**, **Basic Privacy Key**, **Privacy Alias**, **Key Alias**, **Key ID**, **Key Value**, and **Privacy** (Utilities Menu) features are disabled if this feature is set to *None*.
- The **Privacy Alias**, **Key Alias**, **Key ID**, and **Key Value** features are disabled if this feature is set to *Basic*.
- The **Basic Privacy Key** feature is disabled if this feature is set to *Enhanced*.
- This feature is supported in Digital mode only.

Basic Privacy Key

Description

The Basic Privacy Key is the index key that is mapped to a particular encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when **Privacy Type** is set to *Basic*. A radio can only have one Basic Privacy Key. Select the Basic Privacy Key from the list of 255 index keys. The values mapped to each index key provide strong scrambling protection. For security reasons, if the codeplug is read from a radio, its Basic Privacy Key is shown as blank.

Receiving radio(s) must have the same Basic Privacy Key as the transmitting radio in order to unscramble the privacy-enabled voice call or to receive the privacy-enabled data transmission. This is a radio-wide feature.

This feature is not available on certain radio models.

Range	
Maximum	255
Minimum	1
Increment	1

Note

- This feature is disabled if **Privacy Type** is set to *None* or *Enhanced*.
- For security reasons when reading a radio, Basic Privacy Key is shown as blank. Basic Privacy Key needs to be set prior to cloning if the destination radio key needs to be changed.
- This feature is supported in Digital mode only.

See Also

- Vote Scan (Glossary)

Adding Enhanced Privacy Keys

Description

This feature allows the addition of up to 16 rows that hold the three components that make up an Enhanced Privacy key. The three components are Key ID, Key Alias, and Key Value. Click on each individual cell to adjust the values.

To add a row:

1. Click the **Add** button OR right-click a row header and select **Add** from the drop-down list.
2. A new row will be inserted at the end of the table.

Note

- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- This feature is supported in Digital mode only.

Deleting Enhanced Privacy Keys

Description

Enhanced Privacy Keys may be deleted if they are no longer needed.

To delete a row:

1. Click the row header to select the text message to be deleted.
2. Click the **Delete** button. The highlighted row will be removed from the table.

Note

- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- This feature is supported in Digital mode only.

Key ID

Description

This feature allows a Key ID to be assigned to each **Key Value** when **Privacy Type** is set to *Enhanced*. The Key ID is an index key that is mapped to the encryption key used for scrambling. Every Key Value can only have one Key ID. Each Key ID must be unique and cannot be a duplicate of another. The Key ID is preserved during cloning a device when Clone Radio Identity is disabled. If the Key ID is out of range, the first available ID will be used. This is a radio-wide feature.

Range	
Maximum	255
Minimum	1
Increment	1

Note

- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- This feature is supported in Digital mode only.

Key Alias

Description

This feature provides a 16-character Key Alias to be assigned to a **Key ID** when **Privacy Type** is set to *Enhanced*. Every Key ID can only have one Key Alias. Each Key Alias must be unique and cannot be a duplicate of another. If duplicate Alias is entered, the value shall be updated to be the previous value and display a message. The Key Alias is preserved during cloning of the device when Clone Radio Identity is disabled.

Notes

- This feature is hidden when the Symmetric Keys is disabled.
- This feature is supported Digital mode only.

Key Value

Description

The Key Value is the encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when **Privacy Type** is set to *Enhanced*. Selecting a larger, multiple-digit value provides stronger scrambling protection. Each Key Value can be assigned a **Key ID** and **Key Alias** for easier recognition. A radio that has Privacy Type set to *Enhanced* supports a minimum of 1 to a maximum of 16 Keys. For security reasons, if the codeplug is read from a radio, the Key Value is shown as Ø. This is a radio-wide feature.

Range	
Maximum	FFFFFFFFFE
Minimum	1
Increment	1

Note

- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- For security reasons when reading a radio, Key Value is shown as Ø. Key Value needs to be set prior to cloning if the destination radio key needs to be changed.
- When a Report is generated based on a saved archive file, the Key Value will be displayed. It is recommended to set a password on the archive to ensure that only authorized users can view the Key Value within the archive file as well as while generating the Reports.
- This feature is supported in Digital mode only.

Symmetric Keys

Symmetric Keys

Description

This is the container control that displays Key ID, Key Alias, and Key Value fields in the table format. It allows the user to configure Symmetric Keys.

Notes

- Vote Scan (Glossary)

User is allowed to add or delete row(s).
This field is hidden when the Symmetric Keys is disabled.

Adding Symmetric Keys

Description

This feature allows the addition of up to 16 rows that hold the three components that make up a Symmetric Key. The three components are Key ID, Key Alias, and Key Value. Click on each individual cell to adjust the values.

Range	
Maximum	16
Minimum	0
Increment	1

To add a row:

1.Click the **Add** button OR right-click a row header and select **Add** from the drop-down list.

2. A new row will be inserted at the end of the table.

Notes

- Only applicable to the archives and radios which have the Symmetric Key supported.
- When the keys are programmed to the radio, the actual key value shall be un-retrievable from the radio via the application. Key ID and Alias can be read from the radio and displayed in the application.
- User can perform Write and Clone operations only if the Key values are not blank.
- Key ID, Key Alias, and Key Value are stored in the CPS archive.
- This feature is supported in Digital mode only.

Deleting Symmetric Keys

Description

Allows user to delete Symmetric Key. This application shall have at least one key left and this key cannot be deleted.

To delete a row:

1. Click the row that contains the key to be deleted.
2. Click the **Delete** button or right-click and select **Add** from the drop-down list.

Note

- This feature is supported in Digital mode only.

Key ID

Description

This feature allows user to select a Key ID for Symmetric Keys in decimal format. The Key ID is an index key that is mapped to the encryption key used for scrambling. Every Key Value can only have one Key ID. Each Key ID must be unique and cannot be a duplicate of another. The Key ID is preserved during cloning a device when Clone Radio Identity is disabled. If the Key ID is out of range, the first available ID will be used. This is a radio-wide feature.

Range	
Maximum	255
Minimum	1
Increment	1

Notes

- Duplicate IDs shall not be allowed. If duplicate ID is entered, the value shall be updated to be the previous value and display a message.
- If the ID is out of range, it shall update the value to be the first available ID.
- This field shall be hidden when the Symmetric Keys is disabled.
- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- This feature is supported in Digital mode only.

Key Alias

Description

This feature allows the user to select Key Alias for Symmetric Keys. It provides a 16-character Key Alias to be assigned to a **Key ID** when **Privacy Type** is set to *Enhanced*. Every Key ID can only have one Key Alias. Each Key Alias must be unique and cannot be a duplicate of another. The Key Alias is preserved during cloning of the device when Clone Radio Identity is disabled.

Notes

- Duplicate key alias is not allowed. If duplicate key alias is entered, the value shall be updated to be the previous value and display a message.
- This field shall be hidden when the Symmetric Keys is disabled.
- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.
- This feature is supported Digital mode only.

Key Value

Description

This feature allows user to select Key Value for Symmetric Keys in hexadecimal format. The Key Value is the encryption value used to scramble and unscramble voice calls and data transmissions on privacy-enabled channels when **Privacy Type** is set to *Enhanced*. Selecting a larger, multiple-digit value provides stronger scrambling protection. Each Key Value can be assigned a **Key ID** and **Key Alias** for easier recognition. A radio that has Privacy Type set to *Enhanced* supports a minimum of 1 to a maximum of 16 Keys. For security reasons, if the codeplug is read from a radio, the Key Value is shown as Ø. This is a radio-wide feature.

Range	
Maximum	0xF(63)E
Minimum	1
Increment	1

Note

- The field value shall display 0x20e0 symbol when the radio is read.
- If the user enters 64F's and leaves this field, the value shall be put to the minimum value. This dependency is only applicable when the existing value is not 0x20e0 symbol.
- If this field has a value of 0x20e0 symbol, an error message shall be prompted and the user shall not be allowed to write or clone. If Security Node is not selected in the treeview, it shall go to this node so the user can change the value.
- When copy/paste/drag/drop operation is performed on the Security Node, if the value in the source is 0x20e0 symbol, it shall change the value to be 1 in the target archive.
- This field shall be hidden when the Symmetric Keys is disabled.
- This feature is disabled if **Privacy Type** is set to *None* or *Basic*.

- For security reasons when reading a radio, Key Value is shown as Ø. Key Value needs to be set prior to cloning if the destination radio key needs to be changed.
- When a Report is generated based on a saved archive file, the Key Value will be displayed. It is recommended to set a password on the archive to ensure that only authorized users can view the Key Value within the archive file as well as while generating the Reports.
- This feature is supported in Digital mode only.

Restricted Access to System

Add (RAS Alias)

Description

The Restricted Access to System (RAS) feature provides the capability of preventing invalid subscriber users from using the repeater to transmit in a system. This includes all the voice, data and signaling transmissions of repeater mode in any system configurations (i.e. Conventional Single Site, IP Site Connect, Capacity Plus - Single Site , and Capacity Plus - Multi Site). The first level of protection is via a password-like protection using RAS ID. This button allows the user to add Key Alias and **Key Value** (i.e. RAS ID) on subscribers. Up to a maximum of 16 RAS IDs can be added.

Notes

- Each system uses only one RAS ID.
- This feature is supported in Digital mode only.

Delete (Restricted Access to System)

Description

Key Alias and **Key Value** may be deleted if they are no longer in use.

Note

- This feature is supported in Digital mode only.

Authentication Key Alias

Description

This feature allows user to choose the alias that will be used in Radio Management for the RAS Key for this repeater.

Range	
Maximum	1
Minimum	1
Increment	1

Notes

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is only applicable if the Authentication is set to *Enabled* or *Migration.*
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- If the user enters a blank value and leaves this field, the value will be changed to the default value.
- This feature is only available for conventional single-site repeaters and intermediary repeaters.

Key Alias

Description

Configures an alias for the respective Restricted Access to System (RAS) ID to easily identify the ID. All radios and repeaters have default RAS Key Alias and Key Value. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000.

Note

- Duplicate Alias is not allowed.
- This feature is supported in Digital mode only.

Key Value

Description

Configures a Restricted Access to System (RAS) ID on subscribers. RAS ID is 6-24 unicode characters including 0-9, A-Z, a-z, hyphen'-', underscore'_', dollar '$' and pound '#'. All radios and repeaters have default RAS Key Alias and Key Value. All digital channels (both initial and added channels) are defaulted to the default keys. The default key is 000000.

Note

- This feature value is reset to the default value if less than six characters are entered.
- This feature is supported in Digital mode only.

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Authentication (RAS)

Description

Configures the Restricted Access to System (RAS) mode that the system will operation on.

Option	Functionality
Disabled	In this mode, the system only support RAS disabled subscriber radios including the legacy ones.
Enabled	In this mode, the system only supports RAS enabled subscriber radios that use the same RAS ID as the repeaters. RAS is enabled by default.
Migration	In this mode, the system support both RAS enabled subscriber radios and RAS disabled subscriber radios including legacy ones. This mode is recommended to be used only during the migration.

Notes

- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.
- RAS is disabled in Connect Plus mode and Capacity Max mode.

Authentication Key (RAS)

Description

Configures the Restricted Access System (RAS) ID on repeater. RAS ID is 6-24 unicode characters including 0-9, A-Z, a-z, hyphen'-', underscore'_', dollar '$' and pound '#'.

Notes

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled if Authentication is set to *Enabled* or *Migration*.
- When Authentication is set to *Disabled*, the value of this feature changes to default value.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.
- This feature displays 0x20e0 symbol when the radio is read.
- If you type a value that is less than six characters and leave this feature, the value changes to the default value.
- If this feature displays 0x20e0 symbol, an error message is prompted and you are not allowed to write or clone. If the Security Node is not selected in the tree view, the field brings you to this node to enable you to change the value.
- When you operate copy, paste, drag or drop on the Security Node, and if the source value displays 0x20e0 symbol, the value changes to the default value in the target archive.
- When this feature becomes editable and no longer grayed-out, and the previous value is 0x20e0 symbol, the value of this feature changes to the default value.
- When writing backward, this feature resets to 0x20e0 symbol.

Radio ID Range Check

Description

The Restricted Access to System (RAS) feature provides the capability of preventing invalid subscriber users from using the repeater to transmit in a system. This includes all the voice, data and signaling transmissions of repeater mode in any system configurations (i.e. Conventional Single Site, IP Site Connect, Capacity Plus - Single Site , and Capacity Plus - Multi Site). Besides a password-like protection using RAS ID, the Radio ID Range Check provides additional protection for system access. It allows the CPS user to configure whether a subscriber radio can use the system's repeaters as specified in the subscriber ID ranges.

Note

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Add (Radio ID Range)

Description

Adds a Radio ID range and choose whether or not to allow access to that range. Up to a maximum of 64 ranges can be added.

Note

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled when Radio ID Range Check is enabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Delete (Radio ID Range)

Description

Radio ID Ranges may be deleted if they are no longer needed.

Note

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled when Radio ID Range Check is enabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Min Radio ID

Description

Defines the start value of a range of Radio IDs to be used in the Radio ID Range Check method of system access protection.

Range	
Maximum	16776415
Minimum	1
Increment	1

Notes

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled when **Radio ID Range Check** is enabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Max Radio ID

Description

Defines the end value of a range of Radio IDs to be used in the Radio ID Range Check method of system access protection.

Range	
Maximum	16776415
Minimum	1
Increment	1

Note

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled when **Radio ID Range Check** is enabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Allow 

Description

Configures whether or not to allow the given range of Radio IDs to access the system, if the ID checking is enabled.

Note

- This feature is hidden when the Restricted Access to System feature is disabled.
- This feature is enabled when Radio ID Range Check is enabled.
- This feature is only applicable if the Link Type is set to *None* or *Master.*
- This feature is supported in Digital mode only.

Roam

Adding Roam Lists 

Description

A Roam List is a grouping of channels to be monitored to locate the site with the strongest signal strength. When this list is attached to a channel (Channels->Scan/Roam List), the radio searches the list during the roam operation to locate the site with the strongest RSSI value.

To add a Roam List:

1. Right-click the **Roam** folder of the Tree View.
2. Select **Add**->**Roam List**. A new list is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.
- Adding members to lists (call members, scan lists, group lists, channels, zones, etc.) is limited by the radio memory space.

See Also

- Adding Items, for more ways of adding Roam Lists.
- Renaming Items, for more ways of renaming Roam Lists.

Active Site Search

Description

This feature enables Active Site Search triggered by a transmission request. When this feature is used, the radio automatically looks for the nearest available site by waking up each repeater in the roam list until an available site is found. The next available site is not necessarily the site with the strongest RSSI value among the members of the Roam List. This is a channel-wide feature.

Note

- This feature is supported in Digital mode only.

Site Search Timer (sec)

Description

This feature is used to adjust the value of the Site Search Timer. The timer begins immediately after an Active Site Search has identified the nearest available site, and allows a period of time for the radio user to use the **Site Lock** feature, or to repeat the Active Site Search to find the next available site. When the timer expires, the radio reverts back to auto roam if the Site Lock feature is disabled. This is a radio-wide feature.

Range	
Maximum	255 sec
Minimum	0 sec
Increment	1 sec

Note

- This feature is supported in Digital mode only.

Roam List Features

Adding Roam Members

Description

Adds channel(s) from the **Available** list into the **Members** list. Channel(s) in the **Members** list will be roamed during the roam operation to locate the site with the strongest RSSI value. **Site Lock** should be toggled Off to enable this feature to run continuously in the background. Channel(s) added to the **Members** list will be removed from the **Available** list. A maximum of 16 channels (including the *Selected* channel) may be added to a **Members** list. The Roam List can contain only Digital channels with IP Site Connect enabled. This is a radio-wide feature.

To add a roam member:

1. Select a channel to be added from the **Available** list.
2. Click the **Add** button.

Note

- This feature is disabled if no channel is selected in the **Available** list or if the list is empty.
- This feature is supported in Digital mode only.

Available (Roam List)

Description

Displays all available channels that can be added to a particular roam list.

Note

- This feature is supported in Digital mode only.

Members (Roam List)

Description

Displays all the channels of the roam list. These channels will be roamed until a channel is found that satisfies the RSSI Threshold during the roam operation.

Note

- This feature is supported in Digital mode only.

Removing Roam Members

Description

Removes the selected channel(s) from the **Members** list. The channel will return to the **Available** list. The *Selected* channel is the channel indicated by the radio's channel selector and cannot be removed.

To remove a roam member:

1. Select a channel to be removed from the **Members** list.

2.Click the **Remove** button.

Note

- This feature is disabled if no channel is selected in the **Members** list.
- This feature is supported in Digital mode only.

Use Per-Site RSSI Threshold (Roam List)

Description

This feature allows you to enable or disable the use of the Per-Site RSSI Threshold in IP Site Connect system. This feature allows the radio to get sites with maximum relative signal strength (difference between RSSI detected and RSSI threshold). Sites in the roam list will be sorted according to relative signal strength. When this feature is enabled, the radio performs checks to verify the following:

(1) if the site with maximum relative signal strength is local Dynamically Determined Home (DDH),
(2) if the maximum relative signal strength (RSSI threshold) is smaller than relative signal strength (RSSI threshold) of the local DDH + signal strength tolerance.).

Notes

- This feature is hidden when the **IP Site Connect** feature is disabled (unchecked).
- This feature is supported in Digital mode only.

RSSI Threshold (dBm) (Roam List)

Description

This feature allows the user to set the RSSI (Received Signal Strength Indication) Threshold. If the current site has an RSSI value that exceeds this threshold, the site is assumed to have good coverage and the radio suspends roaming. This is a channel-wide feature.

Range	
Maximum	-80 dBm
Minimum	-120 dBm
Increment	-1 dBm

Notes

- This feature is greyed out when Use Per-Site RSSI Threshold is checked.
- This feature is supported in Digital mode only.

Use Per-Site RSSI Threshold (Linked Capacity Plus)

Description

This feature allows you to enable or disable the use of the Per-Site RSSI Threshold in Capacity Plus - Multi-Site Site List system. This feature allows the radio to get sites with maximum relative signal strength (difference between RSSI detected and RSSI threshold). Sorting like IPSC Roam list is not needed as new site will be chosen immediately if the site has the maximum relative signal strength and

its relative signal strength is better than the local site's relative signal strength. When this feature is enabled, the radio ignores the existing global RSSI Threshold (dBm) (Capacity Plus - Multi-Site Site List Site List) and uses the RSSI Threshold (dBm) in each LCP site in the table list.

Notes

- This feature is hidden when you disable Capacity Plus - Multi-Site Site List.

Capacity Plus

Voice Channel List

Capacity Plus Voice Channel

Description

Allows the user to add a new Capacity Plus - Single Site Voice Channel under the selected tree node.

Note

- This menu is only enabled when Channel Pool tree node is selected. Enabling Channel Pool allows the user to add a voice channel in Capacity Plus - Single Site.
- If the user tries to add more than the maximum allowable limits for a model/feature, an error message will be prompted.
- A message box will be displayed to notify the user that they must set the Repeater Mode to IP Site Connect Master or Peer in order for Capacity Plus - Single Site to work in repeater's model.
- This menu is disabled if the Capacity Plus - Single Site, Capacity Plus - Multi Site, and Satellite Receiver features are disabled. This applies to portable and mobile radios only.
- This menu is disabled if the Capacity Plus - Single Site and Satellite Receiver features are disabled. This applies to Repeater only.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

See Also

- Adding Capacity Plus - Single Site Voice Channel Members
- Removing Capacity Plus - Single Site Voice Channel Members

Adding Capacity Plus Voice Channel Members

Description

Adds channel(s) from the Available list into the Members list. Channel(s) added to the **Members** list will be removed from the **Available** list. As channels are added, frequency pair slots are sequentially assigned to each channel (i.e. if Ch1, Ch3, Ch2 are added in that order, the channel IDs would be 1-2, 3-4, 5-6 in that order.). While in Capacity Plus mode, rest channels, channels for voice calls, and channels for transmitting radio-to-radio Text Messaging Service (TMS) data calls are selected from channels on the Members list.

To add a Capacity Plus - Single Site Voice Channel Member:

1. Select a channel to be added from the **Available** list.
2. Click the **Add** button.

Note

- This feature is disabled if no channel is selected in the **Available** list or if the list is empty.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR series repeaters in Digital mode only.

Available

Description

Displays all the available capacity plus voice channels for the selected capacity plus - Single Site voice channels list.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Members

Description

Displays all the capacity plus voice channels of the selected capacity plus voice channels list.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Removing Capacity Plus Voice Channel Members

Description

Removes channel(s) from the Members list to the **Available** list.

To remove a Capacity Plus - Single Site Voice Channel Member:

1. Select a channel to be removed from the **Members** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no channel is selected in the **Members** list or if the list is empty.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Data Channel List

Capacity Plus Data Channel

Description

Allows the user to add a new Capacity Plus - Single Site Data Channel under the selected tree node.

Note

- This menu is only enabled when Channel Pool tree node is selected. Enabling Channel Pool allows the user to add a voice channel in Capacity Plus - Single Site.
- If the user tries to add more than the maximum allowable limits for a model/feature, an error message will be prompted.
- A message box will be displayed to notify the user that they must set the Repeater Mode to IP Site Connect Master or Peer in order for Capacity Plus - Single Site to work in repeater's model.
- This menu is disabled if the Capacity Plus - Single Site, Capacity Plus - Multi Site, and Satellite Receiver features are disabled. This applies to portable and mobile radios only.
- This menu is disabled if the Capacity Plus - Single Site and Satellite Receiver features are disabled. This applies to Repeater only.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.
- This menu is disabled for SL Series Commercial radios.

See Also

- This feature is supported in Digital mode onl**Adding Capacity Plus Data Channel Members**
Removing Capacity Plus Data Channel Members

Adding Capacity Plus Data Channel Members

Description

Adds channel(s) from the Available list into the Members list. Channel(s) added to the **Members** list will be removed from the **Available** list. While in Capacity Plus - Single Site mode, channels for data calls (except radio-to-radio Text Messaging Service (TMS) data calls) are selected from channels on the Members list.

To add a Capacity Plus - Single Site Data Channel Member:

1. Select a channel to be added from the **Available** list.
2. Click the **Add** button.

Note

- This feature is disabled if no channel is selected in the **Available** list or if the list is empty.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Available (Capacity Plus Data Channel List)

Description

Displays all the available Capacity Plus - Single Site Data channels for the selected Capacity Plus - Single Site data channels list.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Members (Capacity Plus Data Channel List)

Description

Displays all the capacity plus Data channels of the selected Capacity Plus - Single Site data channels list.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series Repeaters in Digital mode only.

Removing Capacity Plus Data Channel Members

Description

Removes channel(s) from the Members list to the **Available** list.

To remove a Capacity Plus Data Channel Member:

1. Select a channel to be removed from the **Members** list.
2. Click the **Remove** button.

Note

- This feature is disabled if no channel is selected in the **Members** list or if the list is empty.
- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Enhanced Channel Access (Capacity Plus)

Description

Allows the user to enable or disable the Enhanced Channel Access feature. When enabled, the Enhanced Channel Access feature improves the reliability of transmissions by minimizing Over The Air (OTA) collisions when two or more radios initiate a call simultaneously. For effective operation, this feature needs to be enabled on all the radios accessing the channel. This is a channel-wide feature.

Notes

- If this feature is enabled on a Capacity Plus - Single Site Data List, members of the list cannot have **Enhanced GNSS** activated. This configuration is invalid.
- This feature is supported in Digital mode only.

Enhanced GNSS Window Size (Capacity Plus)

Description

This feature allows user to configure the Window Size for an Enhanced GNSS channel.

Notes

- This feature is hidden when the Digital or Capacity Plus - Single Site /Capacity Plus - Multi Site or Enhanced GNSS is disabled.
- For MOTOTRBO subscribers, the choices are *5, 6, 7, 8, 9,* and *10.*

Sites List

Adding Capacity Plus Site Lists

Description

The Capacity Plus - Multi Site system is a Trunked multi-site multi-channel configuration of MOTOTRBO, which combines the trunking feature of the Capacity Plus - Single Site and the multi-site feature of the IP Site Connect configurations. A Site List is a grouping of sites within the Capacity Plus - Multi Site system.

To add a Site List:

1. Right-click the **Sites** folder of the Tree View.
2. Select **Add**->**Capacity Plus Site List**. A new list is inserted at the end of the folder list. The user may rename it. Valid characters are alphanumerics, spaces and special characters. An empty string cannot be used for a name.

Note

- This feature is supported in Digital mode only.

See Also

- Add (Capacity Plus - Multi Site)
- Deleting Capacity Plus - Single Site Site Lists.
- Adding Items, for more ways of adding zones and channels.
- Renaming Items, for more ways of renaming zones and channels.

Deleting Capacity Plus Site Lists

Description

A Site List may be deleted if it is no longer in use.

To delete a Site List:

1. Right-click an individual Site List of the Tree View.
2. Select **Delete**.

Note

- This feature is supported in Digital mode only.

See Also

- Adding Capacity Plus Site Lists.
- Deleting Items, for more ways of deleting Site Lists.

GNSS on Revert Channel

Description

This checkbox allows you to enable or disable the GNSS on Revert Channel. When enabled, the GNSS data will not be transmitted on the trunk channel. This setting only applies when Data List is set to *None*.

Note

- This feature is hidden when you disable either the Capacity Plus - Multi Site or GNSS feature.

Use Per-Site RSSI Threshold (Linked Capacity Plus)

Description

This feature allows you to enable or disable the use of the Per-Site RSSI Threshold in Capacity Plus - Multi-Site Site List system. This feature allows the radio to get sites with maximum relative signal strength (difference between RSSI detected and RSSI threshold). Sorting like IPSC Roam list is not needed as new site will be chosen immediately if the site has the maximum relative signal strength and its relative signal strength is better than the local site's relative signal strength. When this feature is enabled, the radio ignores the existing global RSSI Threshold (dBm) (Capacity Plus - Multi-Site Site List Site List) and uses the RSSI Threshold (dBm) in each LCP site in the table list.

Notes

- This feature is hidden when you disable Capacity Plus - Multi-Site Site List.

RSSI Threshold (dBm)

Description

Sets the Received Signal Strength Indication (RSSI) Threshold that triggers the radio to perform a search for the nearest strongest signal.

Range	
Maximum	-80 dBm
Minimum	-120 dBm
Increment	1 dBm

Notes

- This feature is greyed out when Use Per-Site RSSI Threshold is checked.
- This feature is supported in Digital mode only.
- This feature is hidden when you disable Linked Capacity Plus.

Add (Linked Capacity Plus)

Description

Adds site(s) under a Site List. The user can then configure the site parameters like the Site ID, Site Alias, Voice Announcement File, Voice List, Data List, and RX Group List in the Configuration View.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Delete (Linked Capacity Plus)

Description

Removes a highlighted site and all the site parameters from a Site List if the site is no longer in use.

Note

- This feature is applicable to MOTOTRBO Conventional radios and MOTOTRBO SLR Series repeaters in Digital mode only.

Site ID (Subscriber)

Description

Enters the ID of the site that the subscriber radio will connect to.

Note

This ID must match the **Site ID** of the Repeater.
Duplicate IDs are not allowed.
This feature is supported in Digital mode only.

Site Alias

Description

Configures a name for the site that the subscriber radio will connect to.

Note

- Duplicate alias is not allowed.
- This feature must not be empty.
- This feature is supported in Digital mode only.

Voice List

Description

Associates a Capacity Plus Voice Channel List that the subscriber radio will use to make voice calls when on the site. Any available Capacity Plus Voice Channel List can be selected. If the *None* option is selected, no Capacity Plus Voice Channel List is specified to be use when on the site.

Note

- This feature is supported in Digital mode only.

Data List

Description

Associates a Capacity Plus Data Channel List that the subscriber radio will use to make data calls when on the site. Any available Capacity Plus Data Channel List can be selected. If the *None* option is selected, no Capacity Plus Data Channel List is specified to be used when on the site.

Note

- This feature is supported in Digital mode only.

RX Group List

Description

Associates a RX Group List that the subscriber radio will use to make Group Calls when on the site. Any available Capacity Plus - Single Site Group List can be selected. If the *None* option is selected, no RX Group List is specified to be use when on the site.

Note

- This feature is supported in Digital mode only.

RSSI Threshold (dBm)

Description

This feature allows you to configure the RSSI Threshold (Capacity Plus - Multi Site Site List) per site. You are able to set each individual site with different RSSI threshold (dBm). This feature resolves the unequal coverage from different sites due to buildings and terrains. You can specify which RSSI Threshold to use for this site when it is acting as an LCP site. When this feature is enabled, the radio ignores the existing global RSSI Threshold (dBm) (Capacity Plus - Multi Site) and uses the RSSI Threshold (dBm) in each Capacity Plus - Multi Site site in the table list.

Range	
Maximum	-80 dBm
Minimum	-120 dBm
Increment	1 dBm

Notes

- This feature is greyed out when Use Per-Site RSSI Threshold is disabled (unchecked).
- This feature is supported in Digital mode only.
- This feature is hidden when you disable Capacity Plus - Multi Site.

Voice Announcement File

Description

Associates a voice announcement file to this feature. The choices are *None* and all available voice announcement files.

Note

- This feature is disabled if *None* is the only choice.
- This feature is supported in Digital mode only.

Glossary

A

ACK: Acknowledgement of Communication.

Active File: Currently selected file that is opened in the CPS window.

Analog Signal: An RF signal that has a continuous nature rather than a pulsed or discrete nature.

ARS: Automatic Registration Service. Also known as Presence Notifier.

ARTS: Auto-Range Transpond System

ASTRO 25: ASTRO 25 is a signaling protocol that is compliant with the APCO-25 (Association of Public-Safety Communications Officials) Common Air Interface and is used for certain Trunking Systems, and therefore for certain Trunking Personalities. ASTRO 25 Trunking allows you to set up Talkgroups, Announcement Groups, and Dynamic Regroupings as Trunking channels. ASTRO 25 Trunking uses a 9600 baud control channel, with digital FDMA (Frequency Division Multiple Access) and TDMA (Time Division Multiple Access) voice channels, and FDMA data channels

AVC: Automatic Volume Control.

C

CAI: Common Air Interface

Call Alert: Privately page an individual by sending an audible tone.

Call Hang Time: The duration the repeater reserves the channel for the call after the end of a transmission

Call Member: A call entry that belongs to a particular call type (e.g. Group Call)

Carrier Squelch: When the carrier energy exceeds the Squelch threshold

CB: Citizens Band

Channel: A group of characteristics such as transmit/ receive frequency pairs, radio parameters, and encryption encoding.

Channel Hang Time: The duration after the call hang time expired and repeater is still active to receive transmission activity.

Codeplug: Stores information in the radio, i.e tuning information, frequencies, etc. This information can be read, edited and written back to the codeplug using the CPS or Tuning application software. Codeplug files, once read can be archived in the computer.

Console: Software controlled, computer-driven device that receives and generates data for the radios assigned to it. It monitors and directs the operations of the radios.

Contacts: Call Lists.

Control Station: A Mobile that is connected to a computer and serves as a modem for the computer.

Conventional System: In Conventional communications, a CPS-defined frequency is used for each channel. To transmit or receive specific transmissions, the user must have the specific frequency for that channel programmed into the radio. Conventional channels can only communicate with radios operating on Conventional channels. The available Conventional systems supporting the MOTOTRBO subscriber are the MOTOTRBO repeater and 3600 Trunking systems.

CPS: Customer Programming Software. Enables a dealer to program the device's features according to the customer requirements.

CSBK: Control Signaling Block.

CSV File Format: CSV (comma-separated values) represents a plain-text file format that is often used to exchange tabular data between disparate programs. The data typically consists of text and numbers, stored in a plain-text form, where lines in the text file represent rows in a table, and commas separate the columns.

CWID: Continuous Wave Identification. Also known as Base Station Interface (BSI).

D

Digital Signal: An RF signal that has a pulsed, or discrete nature, rather than a continuous nature.

Directory: A location created on a hard disk drive, diskette or USB Flash drive to store a group of files and / or other directories that are similar in content. Also known as a Folder.

Disk Drive: A term that refers generically to several different types of computer data storage devices. Originally, this was a device that reads and writes information to and from a removable magnetic storage medium, known as diskettes. Disk drives also include hard disk drives, removable USB Flash drives and other devices capable of a much larger data storage capacity than diskettes. A disk drive's storage medium is used to store directories and files, made accessible by the computer's operating system.

Dispatcher: An individual who has radio system management duties.

DOS: Data Operated Squelch - causes the radio to automatically mute when receiving MDC Signaling data. This helps to reduce unwanted noise.

DPL: Digital Private Line. A type of coded squelch using data bursts.

F

Failsoft: Failsoft offers two-way conventional operation during a trunking system failure. The subscriber radio automatically returns to the trunking mode once the trunking system is restored. In the event that the site controller(s) or all repeaters capable of being assigned the control channel fail, the site will switch to the failsoft mode of operation. In this mode, the repeaters that are functional will revert to conventional operation. The subscribers that are configured for the same failsoft repeater (frequencies) will be able to communicate with each other in a "community repeater" type of operation.

FCC: Federal Communications Commission.

Firmware: Software that controls the internal hardware components of the device.

FPP: Front Panel Programming - lets the user change certain codeplug settings directly from the radio

G

GNSS: Global Navigation Satellite System

GPIO: General Programmable Input Output.

H

Hang Up: Disconnect.

HLGT ALC: High Level Guard Tone Automatic Level Control.

Hot Mic: Hot microphone - enables the radio to key up automatically when an emergency is received and allows voice transmission without a Push-To-Talk (PTT) press.

HSP: Headset Profile

I

ID: Identification.

Impolite Transmission: A radio will not check for an idle channel prior to allowing a transmission

IP: Internet Protocol - data-oriented protocol used for communicating data across a packet-switched network. IP enables communication between devices via unique global addressing.

IP Address: An IP (Internet Protocol) Address's dotted decimal format facilitates unique identifiers for connectivity purposes on an IP network. The 4 decimal values (separated by decimal points) are known as octets. Example: 140.179.220.200

IP Repeater Programming: Allows a system operator to read, configure, upgrade, or enable CFS features on networked repeaters from a location which is different than where the repeater resides. A networked repeater is a repeater that is connected to a backend IP network.

IP Site Connect System: A system connecting multiple repeaters in different geo locations through an IP network so that voice/data calls can be made across multiple sites. RDAC is also supported through this system.

IP Site Master: A unique functional entity in the IP Site connection system. It is part of one of the repeaters. The Master is needed as the central point for a Repeater/RDAC-IP PC to find other Repeaters/RDAC-IP PC in the same IP Site connection system.

IP Site Peer: A functional entity that is connected to a IP Site connection system. The entity can be a repeater or RDAC IP application.

L

LED: Light-emitting diode.

LLGT: Low Level Guard Tone.

M

MDC: Motorola Data Communication.

Message Trunking: The system assigns a traffic channel for the duration of a single transmission by one subscriber radio. When the subscriber radio dekeys, all subscriber radios remainon the traffic channel until the traffic channel hang time expires. Once the hang time expires the subscriber radios return to the control channel. Any subscriber radio involved in the call may PTT while it is on the traffic channel without returningto the control channel. This is applicable to 3600 Trunking capable radios.

Monitor: Check channel activity by pressing the Monitor button. If the channel is clear, you will hear static. If the channel is in use, you will hear conversation. It also serves as a way to check the volume level of the radio, as the radio will “open the squelch” when pressing the monitor button.

mute: when the radio closes its speaker to received audio

N

NPSPAC: National Public Safety Planning Advisor Committee.

O

OmniLink: OmniLink gives the radio the ability to roam from one SmartZone System to another SmartZone System within the same OmniLink System. OmniLink applies for OmniLink enabled Trunking communications channels.

OTAP: Over The Air Processing

P

PA: Public Announcement.

PC: Personal Computer.

Personality: A set of unique features specific to a radio or channel.

Polite Transmission: The radio will check for an idle or busy channel prior to allowing a transmission

Preprogrammed: A feature that has been assigned in advance by a qualified technician.

Private Call: Allows you to have a private conversation with another radio user in the group.

Private Line (PL): A sub-audible tone that is transmitted such that only receivers decoding this tone will hear the message.

Programmable: A radio control that can have a radio feature assigned to it.

PTT: Push-To-Talk — the PTT button engages the transmitter and puts the radio in transmit (send) operation when pressed.

PTT-ID message trunking: The procedure is the same as message trunking with the addition of the currently transmitting subscriber radio's ID. This is applicable to 3600 Trunking capable radios.

R

Radio Frequency (RF): The part of the general frequency spectrum between the audio and infrared light regions (about 10 kHz to10,000,000 MHz).

Release Squelch State: Creates exceptions to the Signaling Squelch Unmuting Rule. The Release Squelch State begins once the radio unmutes to a Voice Call.When Signaling Squelch is set to "Or"; and once the radio is in the Release Squelch State, only Carrier Squelch Detect is required for unmuting to re-occur, PL and Voice Call are not required.When Signaling Squelch is set to "And"; and once the radio is in the Release Squelch state, then only the current personalities - Unmute Rules must be satisfied for unmuting to re-occur, a Voice Call is no longer required.

Repeater Fallback: Repeater fallback places the station into repeater mode if a PTT is not received from the voting comparator within the "defined" time of a valid receive qualifier. This is a failsafe if the link between the comparator and the station has been compromised.

Repeater Mode: A conventional radio feature, where the user talk through a receive/transmit facility (repeater), that retransmits received signals in order to improve communications range and coverage.

RSSI: Received Signal Strength Indication.

RX Group: An organization of radio users who communicate with each other.

S

Save: Transfers the current CPS programming information from the computer's temporary memory (RAM) to a codeplug - file for later retrieval.

SmartZone: A SmartZone Trunking System integrates communications of single or multi-site systems together to provide multi-site wide-area communications over large geographic areas such as a region, county, state, or small geographic areas with as few as two sites. This provides effortless user-roaming, and efficient use of available channels and coverage capabilities. A radio determines, through Received Signal Strength Indication (RSSI) polling samples, the best trunking site to be used for SmartZone-enabled Trunking channels. A SmartZone coverage area can include up to twenty voice channels / sites.

SPL: Sound Pressure Level. This is used to measure audible sound.

SPP: Serial Port Profile

Squelch: Special electronic circuitry added to the receiver of a radio which reduces, or squelches, unwanted signals before they are heard in the speaker.

Standby: An operating condition whereby the radio's speaker is muted but still continues to receive data.

SUID: Subscriber Unit ID.

T

Talkaround Mode: Bypass a repeater and talk directly to another unit for easy local unit-to-unit communications.

TMS: Text Messaging Service

TOC: Turn-Off Code.

TOT: Time-Out Timer.

TPL: Tone Private Line.

Transmission trunking: The system assigns a traffic channel for the duration of a single transmission by one subscriber radio. When the subscriber radio dekeys, the traffic channel is deallocatedand all subscriber radios involved in the call return to the control channel. Any subsequent traffic channel requests will be sent in on the control channel by the requesting subscriber radio. This is applicable to 3600 Trunking capable radios.

Trill Enhance: Trill Enhancement improves the voice quality for languages that have an alveolar trill sound (also known as a 'Rolling R')

Trunking Channel Type: In 3600 Trunking capable radios, this includes Talkgroup, Announcement Group and Dynamic Regroupings.

Trunking Coverage Type: In 3600 Trunking capable radios, this includes Type II and ASTRO25.

Trunking Methods: In 3600 Trunking capable radios, this includes basic Motorola Trunking, Motorola SmartZone Trunking, and SmartZone OmniLink Trunking.

Trunking Personality: Uniquely defines a personality that may then be assigned to the desired position of the radio's channel selector with the Zone Channel Assignment feature. This is applicable to 3600 Trunking capable radios.

Trunking System: In a Trunking radio system, radios are always listening to the control channel of the radio’s current Trunking System for channel assignment instructions. Trunking channels can only communicate with radios operating on Trunking channels. The available trunking systems supporting the MOTOTRBO subscriber are the MOTOTRBO Capacity Plus and 3600 Trunking systems.

Type II: Type II is a signaling protocol that is used by certain Trunking Systems, and therefore for certain Trunking Personalities. Type II is an enhanced version of the original Motorola Trunking Type I protocol type. Type II Trunking allows you to set up Talkgroups, Announcement Groups, and Dynamic Regroupings as Trunking channels. Type II provides additional management flexibility (Announcement Groups) for a given System via an expanded signaling format.

U

UCL: Unified Call List.

UDP: User Datagram Protocol.

unmute: when the radio opens its speaker to received audio

USB: Universal Serial Bus - Hardware interface for peripherals devices such as the Ribless Programming Cable. The USB Port's hot swap capability allows everything to be plugged in and unplugged without turning the PC off.

V

VIO: Virtual Input Output.

Vote Scan: Vote Scan is an additional mode of the Conventional Scan feature for providing wide area repeater coverage in applications where frequency spectrum is readily available. It is essentially a multi-frequency simulcast system which has the advantage of significant cost savings over a single frequency simulcast system. It is mutually exclusive with the Conventional Scan feature.

VOX: Voice Activated Transmit.

W

Window: A Window is one more than the minimum number of contiguous bursts of a logical channel that is required for transmitting a data message. The first burst of a Window is used by the Repeater for announcement. A subscriber unit uses the remaining bursts of a Window to transmit a data message.

Wireline: The MTR3000 Wireline board is used to connect an analog audio source and sink (such as a console) to the MTR3000 base radio/repeater. The Wireline board supports Tone and DC Remote Control modes that allow for channel selection and PTT signaling from compatibleconsoles. Local PTT operation is also supported. The Wireline can be configured for either 2-wireor 4-wire operation as needed.

Z

Zone: A grouping of channels.