



PROFESSIONAL DIGITAL TWO-WAY RADIO

MOTOTRBO™

DP4600/DP4600e, DP4601/DP4601e
LIMITED KEYPAD PORTABLE RADIO

USER GUIDE

en-US



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Important Safety Information

RF Energy Exposure and Product Safety Guide for Portable Two-Way Radios



CAUTION:

This radio is restricted to Occupational use only.

Before using the radio, read the RF Energy Exposure and Product Safety Guide for Portable Two-Way Radios which contains important operating instructions for safe usage and RF energy awareness and control for Compliance with applicable standards and Regulations.

Software Version

All the features described in the following sections are supported by the software version **R02.21.01.0000** or later.

See [Checking Firmware and Codeplug Versions on page 190](#) to determine the software version of your radio.

Contact your dealer or administrator for more information.

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European Union (EU) Waste of Electrical and Electronic Equipment (WEEE) directive



■ The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases).

As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries should not dispose of electronic and electrical equipment or accessories in household waste.

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U.S. Pat. Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

Radio Care

This section describes the basic handling precaution of the radio.

Table 1: IP Specification

IP Specification	Description
IP67	Allows your radio to withstand adverse field conditions such as being submersed in water.



CAUTION:

Do not disassemble your radio. This could damage radio seals and result in leak paths into the radio. Radio maintenance should only be done in service depot that is equipped to test and replace the seal on the radio.

- If your radio has been submersed in water, shake your radio well to remove any water that may be trapped inside the speaker grille and microphone port. Trapped water could cause decreased audio performance.
- If your radio's battery contact area has been exposed to water, clean and dry battery contacts on both your radio

and the battery before attaching the battery to radio. The residual water could short-circuit the radio.

- If your radio has been submersed in a corrosive substance (for example, saltwater), rinse radio and battery in fresh water then dry radio and battery.
- To clean the exterior surfaces of your radio, use a diluted solution of mild dishwashing detergent and fresh water (for example, one teaspoon of detergent to one gallon of water).
- Never poke the vent (hole) located on the radio chassis below the battery contact. This vent allows for pressure equalization in the radio. Doing so may create a leak path into radio and your radio's submersibility may be lost.
- Never obstruct or cover the vent, even with a label.
- Ensure that no oily substances come in contact with the vent.
- Your radio with antenna attached properly is designed to be submersible to a maximum depth of 1 m (3.28 ft) and a maximum submersion time of 30 minutes. Exceeding either maximum limit or use without antenna may result in damage to your radio.

- When cleaning your radio, do not use a high pressure jet spray on radio as this will exceed the 1 m depth pressure and may cause water to leak into your radio.

Introduction

This user guide covers the operation of your radios.

Your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

You can consult your dealer or system administrator about the following:

- Is your radio programmed with any preset conventional channels?
- Which buttons have been programmed to access other features?
- What optional accessories may suit your needs?
- What are the best radio usage practices for effective communication?
- What maintenance procedures that helps promote longer radio life?

1.1

Icon Information

Throughout this publication, the icons described are used to indicate features supported in either the conventional analog or conventional digital mode.



Indicates a conventional **Analog Mode-Only** feature.



Indicates a conventional **Digital Mode-Only** feature.

For features that are available in **both** conventional analog and digital modes, both icons are **not** shown.

1.2

Conventional Analog and Digital Modes

Each channel in your radio can be configured as a conventional analog or conventional digital channel.

1 : Channel Selector Knob

Certain features are unavailable when switching from digital to analog mode. The icons for digital features reflect this change by appearing “grayed out”. The disabled features are hidden in the menu.

Your radio also has features available in both analog and digital modes. The minor differences in the way each feature works do **not** affect the performance of your radio.

**NOTICE:**

Your radio also switches between digital and analog modes during a dual mode scan. See [Scan on page 369](#) for more information.

1.3

IP Site Connect

This feature allows your radio to extend conventional communication beyond the reach of a single site by connecting to different available sites by using an Internet Protocol (IP) network. This is a conventional multi-site mode.

When the radio moves out of range from one site and into the range of another, the radio connects to the repeater of the new site to send or receive calls or data transmissions. This is done either automatically or manually depending on your settings.

In an automatic site search, the radio scans through all available sites when the signal from the current site is weak or when the radio is unable to detect any signal from the current site. The radio then locks on to the repeater with the strongest Received Signal Strength Indicator (RSSI) value.

In a manual site search, the radio searches for the next site in the roam list that is currently in range but which may not have the strongest signal and locks on to the repeater.

**NOTICE:**

Each channel can only have either Scan or Roam enabled, not both at the same time.

Channels with this feature enabled can be added to a particular roam list. The radio searches the channels in the roam list during the automatic roam operation to locate the best site. A roam list supports a maximum of 16 channels, including the selected channel.

**NOTICE:**

You cannot manually add or delete an entry in the roam list. Contact your dealer for more information.

1.4

Capacity Plus

Capacity Plus is an entry-level trunked system for single and multiple sites. The single and multi-site dynamic trunking offers better capacity and coverage.

1.4.1

Capacity Plus–Single-Site

Capacity Plus–Single-Site is a single-site trunking configuration of the MOTOTRBO radio system, which uses a pool of channels to support hundreds of users and up to 254 Groups. This feature allows your radio to efficiently utilize the available number of programmed channels while in Repeater Mode.

You hear a negative indicator tone if you try to access a feature not applicable to Capacity Plus–Single-Site by using a programmable button press.

Your radio also has features that are available in conventional digital mode, IP Site Connect, and Capacity Plus. However, the minor differences in the way each feature works does not affect the performance of your radio.

Check with your dealer or system administrator for more information on this configuration.

1.4.2

Capacity Plus–Multi-Site

Capacity Plus–Multi-Site is a multi-channel trunking configuration of the MOTOTRBO radio system, combining the best of both Capacity Plus and IP Site Connect configurations.

Capacity Plus–Multi-Site allows your radio to extend trunking communication beyond the reach of a single site, by connecting to different available sites which are connected with an IP network. It also provides an increase in capacity by efficiently utilizing the combined available number of programmed channels supported by each of the available sites.

When the radio moves out of range from one site and into the range of another, it connects to the repeater of the new site to send or receive calls/data transmissions. Depending on your settings, this is done automatically or manually.

If the radio is set to do this automatically, it scans through all available sites when the signal from the current site is weak or when the radio is unable to detect any signal from

the current site. It then locks on to the repeater with the strongest RSSI value.

In a manual site search, the radio searches for the next site in the roam list that is currently in range (but which may not have the strongest signal) and locks on to it.

Any channel with Capacity Plus–Multi-Site enabled can be added to a particular roam list. The radio searches these channels during the automatic roam operation to locate the best site.



NOTICE:

You cannot manually add or delete an entry to the roam list. Check with your dealer or system administrator for more information.

Similar to Capacity Plus–Single Site, icons of features not applicable to Capacity Plus–Multi-Site are not available in the menu. You hear a negative indicator tone if you try to access a feature not applicable to Capacity Plus–Multi-Site by using a programmable button press.

Getting Started

Getting Started provides instructions to prepare your radio for use.

2.1

Charging the Battery

Your radio is powered by a Nickel Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) battery.

Turn off your radio when charging.

- To comply with warranty terms and avoid damages, charge the battery using a Motorola Solutions authorized charger as described in the charger user guide.
- Charge a new battery 14 to 16 hours before initial use for best performance.
Batteries charge best at room temperature.
- Charge your IMPRES™ battery with an IMPRES charger for optimized battery life and valuable battery data. IMPRES batteries charged exclusively with IMPRES chargers receive a 6-month capacity

warranty extension over the standard Motorola Solutions Premium battery warranty duration.

2.2

Attaching the Battery

Follow the procedure to attach the battery to your radio.

This battery mismatch alert feature is only applicable for IMPRES battery and Non-IMPRES battery with kit number programmed in Erasable Programmable Read Only Memory (EPROM).

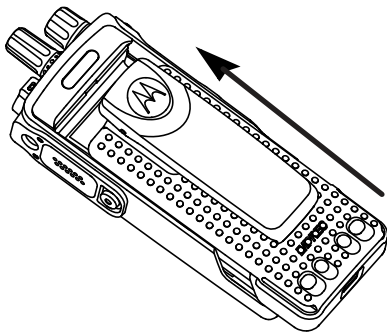
When the radio is attached with the wrong battery, a low pitched warning tone sounds, the LED blinks in red, display shows `Wrong Battery`, and the Voice Announcement/Text-to-Speech sounds `Wrong Battery` if the Voice Announcement/Text-to-Speech is loaded by using CPS.

When the radio is attached with a non-supported battery, an alert tone sounds, display shows `Unknown Battery`, and battery icon is disabled.

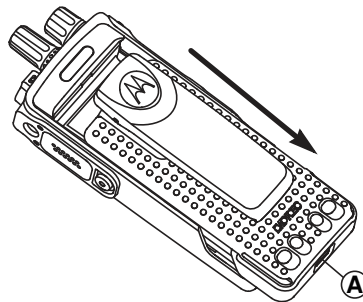
The certification of the radio is voided if you attach a UL battery to an FM approved radio or vice versa. Your radio can be preprogrammed in CPS to alert you if this battery mismatch occurs. Check with your dealer or system

administrator to determine how your radio has been programmed.

- 1 Align the battery with the rails on the back of the radio.
-
- 2 Press the battery firmly, and slide upwards until the latch snaps into place.



-
- 3 Slide battery latch into lock position.
-
- 4 To remove the battery, turn the radio off. Move the battery latch marked **A** into unlock position and hold, and slide the battery down and off the rails.



2.3

Attaching the Antenna

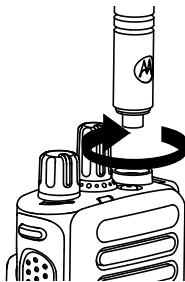
Turn off your radio.

Set the antenna in the receptacle and turn clockwise.



NOTICE:

To protect best against water and dust, ensure that antenna is tightly fitted.

**NOTICE:**

To remove the antenna, turn the antenna counterclockwise.

**CAUTION:**

To prevent damages, replace the faulty antenna with only MOTOTRBO antennas.

2.4

Attaching the Carry Holster

- 1 Align the rails on the carry holster with the grooves on the battery.
-
- 2 Press downwards until you hear a click.

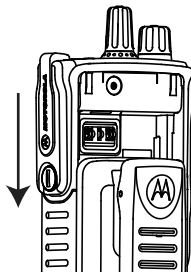
2.5

Attaching the Universal Connector Cover

The universal connector is located on the antenna side of the radio. It is used to connect MOTOTRBO accessories to the radio.

Replace the universal connector cover or dust cover when the universal connector is not in use.

- 1 Insert the slanted end of the cover into the slots above the universal connector.
-
- 2 Press downwards on the cover to seat the dust cover properly on the universal connector.



- 3 Secure the connector cover to the radio by turning the thumbscrew clockwise.
-

2.6

Cleaning the Universal Connector Cover

If the radio is exposed to water, dry the universal connector before attaching an accessory or replacing the dust cover. If the radio is exposed to salt water or contaminants, perform the following cleaning procedure.

- 1 Mix one tablespoon of mild dishwashing detergent with one gallon of water to produce a 0.5% solution.
 - 2 Clean only the external surfaces of the radio with the solution. Apply the solution sparingly with a stiff, nonmetallic, short-bristled brush.
 - 3 Dry the radio thoroughly with a soft and lint-free cloth. Ensure the contact surface of the universal connector is clean and dry.
-

- 4 Apply Deoxit Gold Cleaner or Lubricant Pen (Manufacturer CAIG Labs, Part number G100P) on the contact surface of the universal connector.
-

- 5 Attach an accessory to the universal connector to test the connectivity.
-



NOTICE:

Do not submerge the radio in water. Ensure excess detergent does not get trapped in between the universal connector, controls, or crevices.

Clean the radio once a month for maintenance. For a harsher environment such as in petrochemical plants or in a high salt density marine environment, clean the radio more often.

2.7

Removing the Universal Connector Cover (Dust Cover)

- 1 Push the latch downwards.
 - 2 Lift the cover up and slide down the dust cover from the universal connector to remove it.
-

Replace the dust cover when the universal connector is not in use.

2.8

Turning the Radio On

Rotate the **On/Off/Volume Control** knob clockwise until it clicks.

If successful, your radio shows the following indications:

- A tone sounds.



NOTICE:

If the Tones/Alerts function is disabled, there is no tone upon powering up.

- The green LED lights up.
- The display shows **MOTOTRBO (TM)**, followed by a welcome message or image.
- The Home screen lights up.



NOTICE:

During the initial power-up after a software version update to **R02.07.00.0000** or later, a GNSS firmware upgrade takes place for 20 seconds. After the upgrade, the radio resets and turns on. This firmware upgrade is only applicable for portable models with the latest software and hardware.

If your radio does not power up, check your battery. Make sure that the battery is charged and properly attached. Contact your dealer if your radio still does not power up.

2.9

Turning the Radio Off

Rotate the **On/Off/Volume Control** knob counterclockwise until it clicks.

The display shows **Powering Down**.

2.10

Adjusting the Volume

To adjust the volume of your radio, perform one of the following actions:

- To increase the volume, turn the **On/Off/Volume Control** knob clockwise.
- To decrease the volume, turn the **On/Off/Volume Control** knob counterclockwise.

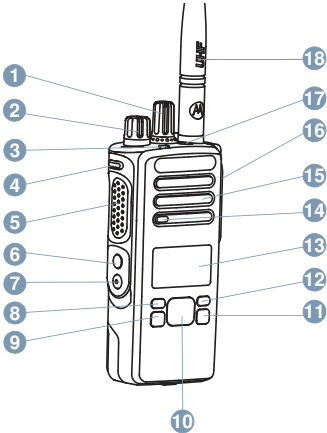


NOTICE:

Your radio can be programmed to have a minimum volume offset where the volume level cannot be lowered past the programmed minimum volume.

Radio Controls

This chapter explains the buttons and functions to control the radio.




- 1 Channel Selector Knob
- 2 On/Off/Volume Control Knob
- 3 LED Indicator
- 4 Side Button 1¹





- 5 Push-to-Talk (PTT) Button
- 6 Side Button 2¹
- 7 Side Button 3¹
- 8 Front Button P1¹
- 9 Menu/OK Button
- 10 4-Way Navigation Button
- 11 Back/Home Button
- 12 Front Button P2¹
- 13 Display
- 14 Microphone
- 15 Speaker
- 16 Universal Connector for Accessories
- 17 Emergency Button¹
- 18 Antenna


¹ These buttons are programmable.

3.1

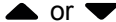



Using the 4-Way Navigation Button

You can use the 4-way navigation button, , to scroll through options, increase/decrease values, and navigate vertically.

Category	Direction	
	 or 	 or 
Menu	Vertical Navigation	-
Lists	Vertical Navigation	-
View Details	Vertical Navigation	Previous/Next Item

You can use the 4-way navigation button, , as a number, alias, or free form text editor.

Editor Category	Direction
-----------------	-----------

	 or 	 or 
Number	-	Left : Delete last digit Right : -
Alias	-	-
Free Form Text	Move cursor up/down	Move cursor one character right/left
Numeric Values	Increase/Decrease	Move cursor one character right/left

WAVE

Wide Area Voice Environment (WAVE™) provides a new method of making calls between two or more radios.

WAVE allows you to communicate across different networks and devices using Wi-Fi. WAVE calls are made when the radio is connected to an IP network through Wi-Fi.



Your radio supports different system configurations:

- WAVE OnCloud/OnPremise

The method to initiate a WAVE Call is different for each system type. Refer to the appropriate section depending on the system configuration of your radio.

Table 2: WAVE Display Icons

The following icons appear momentarily on the display when WAVE is enabled.

	WAVE Connected WAVE is connected.
	WAVE Disconnected WAVE is disconnected.



NOTICE:


This feature is applicable to specific models only.

4.1

WAVE OnCloud/OnPremise

4.1.1

Switching from Radio Mode to WAVE Mode

- 1 Do one of the following:
 - Press the programmed **WAVE** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press  or  to WAVE. Press  to select.

The yellow LED double blinks.

The display shows a momentary notice of **Switching to WAVE**, then shows **Preparing WAVE**.



NOTICE:

Your radio automatically enables Wi-Fi after you switch to WAVE mode.

If successful:

- The blinking yellow LED turns off.
- The display shows the WAVE connected icon, <Talkgroup Alias>, and <Channel Index>.

If unsuccessful:

- A negative tone sounds.
- The red LED blinks.
- The display shows the WAVE disconnected icon and **No Connection or Activation: Fail**, depending on the error type.



NOTICE:

Synchronization occurs when new settings are updated to your radio. When you enter the WAVE mode, your radio displays **Syncing...** When the synchronization completes, your radio returns to the home screen.

4.1.2

Making WAVE Group Calls

- 1 Use the channel selector knob or buttons to select a WAVE talkgroup.

- 2 To call, press the **PTT** button.

If the call is successful, the display shows the Group Call icon and the WAVE talkgroup alias.

If the call is unsuccessful:

- A negative indicator tone sounds.
- The display shows a momentary notice of **Call Failed** or **No Participants**.

4.1.3

Receiving and Responding to WAVE Group Calls

When you receive a WAVE group call:

- A tone sounds.
- The display shows the group call icon, WAVE talkgroup alias, and caller alias.

- Your radio unmutes and the incoming call sounds through the speaker.

1 To call, press the **PTT** button.

2 To listen, release the **PTT** button.

4.1.4

Receiving and Responding to WAVE Private Calls

When you receive a WAVE private call:

- A tone sounds.
- The display shows the private call icon and caller alias.
- Your radio unmutes and the incoming call sounds through the speaker.


1 To call, press the **PTT** button.

2 To listen, release the **PTT** button.

4.1.5

Switching from WAVE Mode to Radio Mode

1 Do one of the following:

- Press the programmed **Radio Mode** button. Skip the following steps.
 - Press  to access the menu.
-

2

Press  or  to Radio Mode. Press  to select.

The yellow LED double blinks.

The display shows a momentary notice of Switching to Radio and then shows Preparing Radio.

When successful:

- The blinking yellow LED turns off.
- The WAVE connected icon disappears on the status bar. The display shows <Talkgroup Alias> and <Channel Index>.

Capacity Max

Capacity Max is MOTOTRBO control channel based trunked radio system.

MOTOTRBO digital radio products are marketed by Motorola Solutions primarily to business and industrial users. MOTOTRBO uses the European Telecommunications Standards Institute (ETSI) Digital Mobile Radio (DMR) standard, that is, two-slot Time Division Multiple Access (TDMA), to pack simultaneous voice or data in a 12.5 kHz channel (6.25 kHz equivalent).

5.1

Push-To-Talk Button

The Push-to-Talk (**PTT**) button serves two basic purposes:

- While a call is in progress, the **PTT** button allows the radio to transmit to other radios in the call. The microphone is activated when the **PTT** button is pressed.
- While a call is not in progress, the **PTT** button is used to make a new call.

Long press the **PTT** button to talk. Release the **PTT** button to listen.

If the Talk Permit Tone is enabled, wait until the short alert tone ends before talking.

5.2

Programmable Buttons

Depending on the duration of a button press, your dealer can program the programmable buttons as shortcuts to radio functions.

Short press

Pressing and releasing rapidly.

Long press

Pressing and holding for the programmed duration.



NOTICE:

See [Emergency Operation on page 390](#) for more information on the programmed duration of the **Emergency** button.

5.2.1

Assignable Radio Functions

The following radio functions can be assigned to the programmable buttons by your dealer or system administrator.

Audio Profiles

Allows the user to select the preferred audio profile.

Audio Routing

Toggles audio routing between internal and external speakers.

Audio Toggle

Toggles audio routing between the internal radio speaker and the speaker of a wired accessory.

Bluetooth® Audio Switch

Toggles audio routing between internal radio speaker and external Bluetooth-enabled accessory.

Bluetooth Connect

Initiates a Bluetooth find-and-connect operation.

Bluetooth Disconnect

Terminates all existing Bluetooth connections between your radio and any Bluetooth-enabled devices.

Bluetooth Discoverable

Enables your radio to enter Bluetooth Discoverable Mode.

Contacts

Provides direct access to the Contacts list.

Call Alert

Provides direct access to the contacts list for you to select a contact to whom a Call Alert can be sent.

Call Log

Selects the call log list.

Emergency

Depending on the programming, initiates or cancels an emergency.

Indoor Location

Toggles Indoor Location on or off.

Intelligent Audio

Toggles intelligent audio on or off.

Manual Dial

Initiates a Private Call by keying in any subscriber ID.

Manual Site Roam

Starts the manual site search.

Mic AGC

Toggles the internal microphone automatic gain control (AGC) on or off.

Notifications

Provides direct access to the Notifications list.

One Touch Access

Directly initiates a predefined Broadcast, Private, Phone or Group Call, a Call Alert, or a Quick Text message.

Option Board Feature

Toggles option board feature(s) on or off for option board-enabled channels.

Phone

Provides direct access to the Phone Contacts list.

Privacy

Toggles privacy on or off.

Radio Alias and ID

Provides radio alias and ID.

Remote Monitor

Turns on the microphone of a target radio without it giving any indicators.

Reset Home Channel

Sets a new home channel.

Silence Home Channel Reminder

Mutes the Home Channel Reminder.

Site Info

Displays the current Capacity Max site name and ID.

Plays site announcement voice messages for the current site when Voice Announcement is enabled.

Site Lock

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Status

Selects the status list menu.

Telemetry Control

Controls the Output Pin on a local or remote radio.

Text Message

Selects the text message menu.

Toggle Call Priority Level

Enables your radio to enter Call Priority Level High/Normal.

Trill Enhancement

Toggles trill enhancement on or off.

Voice Announcement On/Off

Toggles voice announcement on or off.

Wi-Fi

Toggles Wi-Fi on or off.

Zone Selection

Allows selection from a list of zones.

5.2.2

Assignable Settings or Utility Functions

The following radio settings or utility functions can be assigned to the programmable buttons.

Tones/Alerts

Toggles all tones and alerts on or off.

Backlight

Toggles display backlight on or off.

Backlight Brightness

Adjusts the brightness level.

Power Level


Toggles transmit power level between high and low.




5.2.3

Accessing Programmed Functions



Follow the procedure to access programmed functions in your radio.

- 1 Do one of the following:
 - Press the programmed button. Proceed to [step 3](#).

- Press  to access the menu.

-
- 2 Press  or  to the menu function, and press  to select a function or enter a sub-menu.

-
- 3 Do one of the following:

- Press  to return to the previous screen.
- Long press  to return to the Home screen.

Your radio automatically exits the menu after a period of inactivity and returns to the Home screen.

5.3

Status Indicators

This chapter explains the status indicators and audio tones used in the radio.

5.3.1

Icons







The radio display shows radio status, text entries, and menu entries. The following are the icons that appear on the radio display.







Table 3: Display Icons

The following icons appear on the status bar at the top of the radio display. The icons are arranged left most in order of appearance or usage, and are channel-specific.









	<p>Battery</p> <p>The number of bars (0–4) shown indicates the charge remaining in the battery. The icon blinks when the battery is low.</p>
	<p>Bluetooth Connected</p> <p>The Bluetooth feature is enabled. The icon stays lit when a remote Bluetooth device is connected.</p>







	<p>Bluetooth Not Connected</p> <p>The Bluetooth feature is enabled but there is no remote Bluetooth device connected.</p>
	<p>DGNA</p> <p>Radio is in DGNA Talkgroup.</p>
	<p>Emergency</p> <p>Radio is in Emergency mode.</p>
	<p>GNSS Available</p> <p>GNSS feature is enabled. The icon stays lit when a position fix is available.</p>
	<p>GNSS Not Available</p> <p>GNSS feature is enabled but is not receiving data from the satellite.</p>
	<p>High Volume Data</p> <p>Radio is receiving high volume data and channel is busy.</p>

	Indoor Location Available ² Indoor location status is on and available.
	Indoor Location Unavailable² Indoor location status is on but unavailable due to Bluetooth disabled or Beacons Scan suspended by Bluetooth.
	Mute Mode Mute Mode is enabled and speaker is muted.
	Notification Notification List has one or more missed events.
	Option Board The Option Board is enabled. (Option board enabled models only)
	Option Board Non-Function The Option Board is disabled.

	Over-the-Air Programming Delay Timer Indicates time left before automatic restart of radio.
	Power Level Radio is set at Low power or Radio is set at High power.
	Priority 1 Indicates Priority Talkgroup 1.
	Priority 2 Indicates Priority Talkgroup 2.
	Received Signal Strength Indicator (RSSI) The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.
	Response Inhibit Response Inhibit is enabled.

² Only applicable for models with the latest software and hardware.

	Ring Only Ringing mode is enabled.
	Shared Frequency Indicates radio is locking to shared control channel.
	Secure The Privacy feature is enabled.
	Silent Ring Silent ring mode is enabled.
	Site Roaming The site roaming feature is enabled.
	Status Indicates a new status message.
	Tones Disable Tones are turned off.
	Unsecure The Privacy feature is disabled.

	Vibrate Vibrate mode is enabled.
	Vibrate and Ring Vibrate and Ring mode is enabled.
	Wi-Fi Excellent³ Wi-Fi signal is excellent.
	Wi-Fi Good³ Wi-Fi signal is good.
	Wi-Fi Average³ Wi-Fi signal is average
	Wi-Fi Poor³ Wi-Fi signal is poor.

³ Only applicable for DP4601e

	<p>Wi-Fi Unavailable³ Wi-Fi signal is unavailable.</p>
--	--

Table 4: Advance Menu Icons

The following icons appear beside menu items that offer a choice between two options or as an indication that there is a sub-menu offering two options.

	<p>Checkbox (Checked) Indicates that the option is selected.</p>
	<p>Checkbox (Empty) Indicates that the option is not selected.</p>
	<p>Solid Black Box Indicates that the option selected for the menu item with a sub-menu.</p>

Table 5: Bluetooth Device Icons










The following icons appear next to items in the list of Bluetooth-enabled devices available to indicate the device type.

	<p>Bluetooth Audio Device Bluetooth-enabled audio device, such as a headset.</p>
	<p>Bluetooth Data Device Bluetooth-enabled data device, such as a scanner.</p>
	<p>Bluetooth PTT Device Bluetooth-enabled PTT device, such as a PTT-Only Device (POD).</p>
	<p>Bluetooth Sensor Device³ Bluetooth-enabled sensor device, such as gas sensor.</p>

Table 6: Call Icons

The following icons appear on the display during a call. These icons also appear in the Contacts list to indicate alias or ID type.

	<p>Bluetooth PC Call Indicates a Bluetooth PC Call in progress.</p>
--	--

<p>In the Contacts list, it indicates a Bluetooth PC Call alias (name) or ID (number).</p>	<p>In the Contacts list, it indicates a subscriber alias (name) or ID (number).</p>
<p> Call Priority High Indicating Call Priority Level High is enabled.</p>	<p> Non-IP Peripheral Group call Indicates a Non-IP Peripheral group call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>
<p> DGNA Call Indicates a DGNA Call is in progress.</p>	<p> Option Board Individual Call Indicates an Option Board individual call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).</p>
<p> Dispatch Call The Dispatch Call contact type is used to send a text message to a dispatcher PC through a third-party Text Message Server.</p>	<p> Option Board Group Call Indicates an Option Board group call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>
<p> Group Call/All Call Indicates a Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>	<p> Phone Call as Group/All Call Indicates a Phone Call as Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>
<p> Non-IP Peripheral Individual call Indicates a Non-IP Peripheral individual call in progress.</p>	



Phone Call as Private Call

Indicates a Phone Call as Private Call in progress. In the Contacts list, it indicates a phone alias (name) or ID (number).



Private Call

Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).



Transmission in Progress (Transitional)

Transmitting. This is seen before indication for Successful Transmission or Failed Transmission.

Table 8: Sent Items Icons

The following icons appear at the top right corner of the display in the Sent Items folder.



or



In Progress

The text message to a subscriber alias or ID is pending transmission, followed by waiting for acknowledgment. The text message to a group alias or ID is pending transmission.



or



Individual or Group Message Read

The text message has been read.

Table 7: Mini Notice Icons

The following icons appear momentarily on the display after an action to perform a task is taken.









Failed Transmission (Negative)

Failed action taken.



Successful Transmission (Positive)

Successful action taken.

 or 	<p>Individual or Group Message Unread The text message has not been read.</p>
 or 	<p>Send Failed The text message cannot be sent.</p>
 or 	<p>Sent Successfully The text message has been successfully sent.</p>

5.3.2

LED Indicator

The LED indicator shows the operational status of your radio.

Blinking Red

- Radio has failed the self-test upon powering up.
- Radio is receiving an emergency transmission.
- Radio is transmitting in low battery state.

Radio has moved out of range if Auto-Range Transponder System is configured.

Mute Mode is enabled.

Solid Green

Radio is powering up.

Radio is transmitting.

Radio is sending a Call Alert or an emergency transmission.

Blinking Green

Radio is receiving a call or data.

Radio is retrieving Over-the-Air Programming transmissions over the air.

Radio is detecting activity over the air.

**NOTICE:**

This activity may or may not affect the programmed channel of the radio due to the nature of the digital protocol.

Double Blinking Green

Radio is receiving a privacy-enabled call or data.

Solid Yellow

Radio is in Bluetooth Discoverable Mode.

Blinking Yellow

Radio has yet to respond to a Call Alert.

Double Blinking Yellow

Radio has Auto Roaming enabled.

Radio is actively searching for a new site.

Radio has yet to respond to a Group Call Alert.

Radio is locked.

5.3.3

Tones

The following are the tones that sound through on the radio speaker.



High Pitched Tone



Low Pitched Tone

5.3.3.1

Audio Tones

Audio tones provide you with audible indications of the status, or response to data received on the radio.



Continuous Tone

A monotone sound. Sounds continuously until termination.



Periodic Tone

Sounds periodically depending on the duration set by the radio. Tone starts, stops, and repeats itself.



Repetitive Tone

A single tone that repeats itself until it is terminated by the user.



Momentary Tone

Sounds once for a short duration set by the radio.

5.3.3.2

Indicator Tones

Indicator tones provide you with audible indications of the status after an action to perform a task is taken.



Positive Indicator Tone



Negative Indicator Tone

5.4

Registration

There are a number of registration-related messages that you may receive.

Registering

Typically, registration is sent to the system during power-up, Talkgroup change, or during site roaming. If a radio fails registration on a site, the radio automatically attempts to roam to another site. The radio temporarily removes the site where registration was attempted from the roaming list.

The indication means that the radio is busy searching for a site to roam, or that the radio has found a site successfully but is waiting for a response to the registration messages from the radio.

When `Registering` is displayed on the radio, a tone sounds and the yellow LED double flashes to indicate a site search.

If the indications persist, the user should change locations or if allowed, manually roam to another site.

Out of Range

A radio is deemed to be out of range when the radio is unable to detect a signal from the system or from the current site. Typically, this indication means that the radio is outside of the geographic outbound radio frequency (RF) coverage range.

When `Out of Range` is displayed on the radio, a repetitive tone sounds and the red LED flashes.

Contact your dealer or system administrator if the radio still receives out of range indications while being in an area with good RF coverage.

Talkgroup Affiliation Failed

A radio tries to affiliate to the Talkgroup specified in the channels or Unified Knob Position (UKP) during registration.

A radio that is in affiliation fail state is unable to make or receive calls from the Talkgroup that the radio is trying to affiliate to.

When a radio fails to affiliate with a Talkgroup, `UKP Alias` is displayed in the home screen with a highlighted background.

Contact your dealer or system administrator if the radio receives affiliation failure indications.

Register Denied

Registration denied indicators are received when the registration with the system is not accepted.

The radio does not indicate to the radio user the specific reason the registration was denied. Normally, a registration is denied when the system operator has disabled the access of the radio to the system.

When a radio is denied registration, Register Denied is displayed on the radio and the yellow LED double flashes to indicate a site search.

5.5

Zone and Channel Selections

This chapter explains the operations to select a zone or channel on your radio.


The radio can be programmed with a maximum of 250 Capacity Max Zones with a maximum of 160 Channels per zone. Each Capacity Max zone contains a maximum of 16





assignable positions. Each Capacity Max zone contains a maximum of 16 assignable positions.

5.5.1


Selecting Zones

Follow the procedure to select the required zone on your radio.

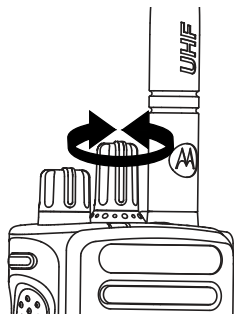
- 1 Do one of the following:
 - Press the programmed **Zone Selection** button. Proceed to [step 3](#).
 - Press  to access the menu.

 - 2 Press  or  to Zone. Press  to select. The display shows  and the current zone.
-

3

Press ▲ or ▼ to the required zone. Press  to select.

The display shows <Zone> Selected momentarily and returns to the selected zone screen.



Once the required zone is displayed (if you have multiple zones in your radio), turn the programmed Channel Selector Knob to select the call type.

5.5.2

Selecting a Call Type

Use the Channel Selector Knob to select a call type. This can be a Group Call, Broadcast Call, All Call, or Private Call, depending on how your radio is programmed. If you change the Channel Selector Knob to a different position (that has a call type assigned to it), this causes the radio to re-register with the Capacity Max System. The radio registers with the Talkgroup ID that has been programmed for the new Channel Selector Knob position call type.

Your radio does not operate when selected to an unprogrammed channel, use the Channel Selector Knob to select a programmed channel instead.

5.5.3

Selecting a Site

A site provides coverage for a specific area. In a multi-site network, the Capacity Max radio will automatically search for a new site when the signal level from the current site drops to an unacceptable level.

The Capacity Max system can support up to 250 sites.

5.5.4

Roam Request

A Roam Request tells the radio to search for a different site, even if the signal from the current site is acceptable.

If there are no sites available:

- The radio display shows `Searching` and continues to search through the list of sites.
- The radio will return to the previous site, if the previous site is still available.



NOTICE:

This is programmed by your dealer.

Press the programmed **Manual Site Roam** button.

You hear a tone, indicating the radio has switched to a new site. The display shows `Site ID <Site Number>`.

5.5.5

Site Lock On/Off

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Press the programmed **Site Lock** button.

If the **Site Lock** function is toggled on:

- You hear a positive indicator tone, indicating the radio has locked to the current site.
- The display shows `Site Locked`.

If the **Site Lock** function is toggled off:

- You hear a negative indicator tone, indicating the radio is unlocked.
- The display shows `Site Unlocked`.

5.5.6

Site Restriction

In Capacity Max system, your radio administrator has the ability to decide which network sites your radio is and is not allowed to use.

The radio does not have to be reprogrammed to change the list of allowed and disallowed sites. If your radio attempts to register at a disallowed site, your radio receives indication that the site is denied. The radio then searches for a different network site.

When experiencing site restrictions, your radio displays `Register Denied` and the yellow LED double flashes to indicate a site search.

5.5.7 Site Trunking

Site Trunking is only available with Capacity Max system. A site must be able to communicate with the Trunk Controller to be considered as System Trunking.

If the site cannot communicate with the Trunk Controller in the system, a radio enters Site Trunking mode. While in Site Trunking, the radio provides a periodic audible and visual indication to the user to inform the user of their limited functionality.

When a radio is in Site Trunking, the radio displays `Site Trunking` and a repetitive tone sounds.

The radios in Site Trunking are still able to make group and individual voice calls as well as send text messages to other radios within the same site. Voice consoles, logging

recorders, phone gateways, and data applications cannot communicate to the radios at the site.

Once in Site Trunking, a radio that is involved in calls across multiple sites will only be able to communicate with other radios within the same site. Communication to and from other sites would be lost.



NOTICE:

If there are multiple sites that cover the current location of the radio and one of the sites enters Site Trunking, the radio roams to another site if within coverage.

5.6 Calls

This chapter explains the operations to receive, respond to, make, and stop calls.

You can select a subscriber alias or ID, or group alias or ID after you have selected a channel by using one of these features:

Alias Search

This method is used for Group, Private, and All Calls only with a keypad microphone.

Contacts List

This method provides direct access to the Contacts list.

Manual Dial (by using Contacts)

This method is used for Private and Phone Calls only with a keypad microphone.

Programmed Number Keys

This method is used for Group, Private, and All Calls only with a keypad microphone.



NOTICE:

You can only have one alias or ID assigned to a number key, but you can have more than one number key associated to an alias or ID. All the number keys on a keypad microphone can be assigned. See [Assigning Entries to Programmable Number Keys on page 373](#) for more information.

Programmed One Touch Access Button

This method is used for Group, Private, and Phone Calls only.

You can only have one ID assigned to a **One Touch Access** button with a short or long programmable button press. Your radio can have multiple **One Touch Access** buttons programmed.

Programmable Button

This method is used for Phone Calls only.

5.6.1

Group Calls

Your radio must be configured as part of a group to receive a call from or make a call to the group of users.

5.6.1.1

Making Group Calls

To make a call to a group of users, your radio must be configured as part of that group.

- 1 Do one of the following:
 - Select a channel with the active group alias or ID. See [Selecting a Call Type on page 64](#).
 - Press the programmed **One Touch Access** button.

- 2 Press the **PTT** button to make the call.

The green LED lights up. The first text line shows the **Group Call** icon and alias.

- 3 Do one of the following:
 - Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

- 4 Release the **PTT** button to listen.








The green LED lights up when the target radio responds. The display shows the **Group Call** icon, and alias or ID, and the transmitting radio alias or ID.

- 5 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period.

The call initiator can press  to end a Group Call.

Making Group Calls by Using the Contacts List

- 1 Press  to access the menu.
-
- 2 Press  or  to **Contacts**. Press  to select.
-
- 3 Press  or  to the required alias or ID. Press  to select.
-
- 4 Press the **PTT** button to make the call.

The green LED lights up.
The first line displays the subscriber alias or ID. The second line displays **Group Call** and the **Group Call** icon.
-
- 5 Do one of the following:
 - Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

6 Release the **PTT** button to listen.

The green LED lights up when the target radio responds. The display shows the **Group Call** icon, and alias or ID, and the transmitting radio alias or ID.

7 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period.

You hear a short tone. The display shows `Call Ended`.

5.6.1.3

Responding to Group Calls

When you receive a Group Call:

- The green LED blinks.

- The display shows the **Group Call** icon at the top right corner.

- The first text line shows the caller alias.
- The second text line displays the group call alias.
- Your radio unmutes and the incoming call sounds through the speaker.

1 Do one of the following:

- If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
- If the Voice Interrupt feature is enabled, press the **PTT** button to interrupt the audio from the transmitting radio and free the channel for you to respond.

The green LED lights up.

2 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period.

5.6.2

Broadcast Call

A Broadcast Call is a one-way voice call from any user to an entire talkgroup.

The Broadcast Call feature allows only the call initiating user to transmit to the talkgroup, while the recipients of the call cannot respond.

The broadcast initiator can also end the broadcast call. To receive a call from a group of users, or to call a group of users, the radio must be configured as part of a group.

5.6.2.1

Making Broadcast Calls

1 Do one of the following:

- Select a channel with the active group alias or ID. See [Selecting a Call Type on page 64](#).
 - Press the programmed **One Touch Access** button.
-

2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Group Call** icon and alias.


3 Do one of the following:




- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.




The call initiator can press  to end the Broadcast Call.

5.6.2.2

Making Broadcast Calls Using the Contact List

- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.

- 3 Press  or  to the required alias or ID. Press  to select.

- 4 Press the **PTT** button to make the call.
The green LED blinks.
The first line displays the subscriber alias or ID. The second line displays **Group Call** and the **Group Call** icon.

- 5 Do one of the following:
 - Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

The call initiator can press  to end the Broadcast Call.

5.6.2.3

Receiving Broadcast Calls

Follow the procedure to receive a Broadcast Call on your radio.

When you receive a Broadcast Call:

- The green LED blinks.
- The display shows the **Group Call** icon at the top right corner.
- The first text line shows the caller alias.
- The second text line displays the group call alias.

- Your radio unmutes and the incoming call sounds through the speaker.

**NOTICE:**

Recipient users are not allowed to Talkback during a Broadcast Call. The display shows `Talkback Prohibit`. The Talkback Prohibit Tone plays momentarily if the **PTT** button is pressed during a Broadcast Call.

5.6.3

Private Call

A Private Call is a call from an individual radio to another individual radio.

There are two ways to set up a Private Call.

- The first call type is called Off Air Call Set-Up (OACSU). OACSU sets up the call after performing a radio presence check and completes the call automatically.
- The second type is called Full Off Air Call Set-Up (FOACSU). FOACSU also sets up the call after performing a radio presence check. However, FOACSU calls require user acknowledgment to complete the call and allows the user to either Accept or Decline the call.

The type of call is configured by the system administrator.

If the target radio is not available prior to setting up the Private Call, the following occur:

- A tone sounds.
- The display shows a negative mini notice.
- The radio returns to the menu prior to initiating the radio presence check.

**NOTICE:**

Both the call initiator and recipient are able to

terminate an on-going Private Call by pressing .

5.6.3.1

Making Private Calls

Your radio must be programmed for you to initiate a Private Call. If this feature is not enabled, you hear a negative indicator tone when you initiate the call. If the target radio is not available, a short tone sounds and the display show `Party Not Available`.

- 1 Do one of the following:
 - Select a channel with the active subscriber alias or ID. See [Selecting a Call Type on page 64](#).

- Press the programmed **One Touch Access** button.

2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Private Call** icon, the subscriber alias, and call status.

3 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

4 Release the **PTT** button to listen.

The green LED lights up when the target radio responds.

5 The call ends when there is no voice activity for a predetermined period. You will hear a short tone. The display shows `Call Ended`.

Both the call initiator and recipient are able to

terminate an on-going Private Call by pressing .

Making a Private Call with a One Touch Call Button

The One Touch Call feature allows you to easily make a Private Call to a pre-defined Private Call alias or ID. This feature can be assigned to a short or long programmable button press.

You can only have one alias or ID assigned to a One Touch Call button. Your radio can have multiple One Touch Call buttons programmed.

1 Press the programmed **One Touch Call** button to make a Private Call to the pre-defined Private Call alias or ID.

2 Press the **PTT** button to make the call.

The LED lights up solid green.

The display shows the Private Call alias or ID.

3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

4 Release the **PTT** button to listen.

When the target radio responds, the LED blinks green.


If there is no voice activity for a predetermined period of time, the call ends.




Both the call initiator and recipient are able to




terminate an on-going Private Call by pressing .




5.6.3.3

Making Private Calls by Using the Manual Dial



- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.

- 3 Press  or  to **Manual Dial**. Press  to select.

- 4 Press  or  to **Radio Number**. Press  to select.

- 5 Do one of the following:

- Enter the subscriber ID, and press  to proceed.
 - Edit the previously dialed subscriber ID, and press  to proceed.
-

- 6 Press the **PTT** button to make the call.
The green LED lights up. The display shows the destination alias.

- 7 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- 8 Release the **PTT** button to listen.
The green LED lights up when the target radio responds. The display shows the transmitting user alias or ID.

- 9 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows `Call Ended`.

5.6.3.4

Receiving Private Calls

When you receive Private Calls configured as Off Air Call Set-Up (OACSU):

- The green LED blinks.
- The **Private Call** icon appears in the top right corner.
- The first text line shows the caller alias.
- Your radio unmutes and the incoming call sounds through the speaker.



NOTICE:


Depending on how your radio is configured, either OACSU or Full Off Air Call Set-Up (FOACSU), responding to Private Calls may or may not require user acknowledgment.

For the OACSU configuration, your radio unmutes and the call connects automatically.

5.6.3.5

Accepting Private Calls

When you receive Private Calls configured as Full Off Air Call Set-Up (FOACSU):

- The green LED blinks.
 - The **Private Call** icon appears in the top right corner.
 - The first text line shows the caller alias.
- 1 To accept a Private Call configured as FOACSU, do one of the following:
 - Press **▲** or **▼** to Accept and press  to answer a Private Call.

- Press the **PTT** button on any entry.

The green LED lights up.

-
- 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-

- 3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows `Call Ended`.



NOTICE:

Both the call initiator and recipient are able to terminate an on-going Private Call by

pressing .

5.6.3.6





Declining Private Calls

When you receive Private Calls configured as Full Off Air Call Set-Up (FOACSU):

- The green LED blinks.
- The **Private Call** icon appears in the top right corner.

- The first text line shows the caller alias.

To decline a Private Call configured as FOACSU, do one of the following:

- Press  or  to `Reject` and press  to decline a Private Call.
 - Press  to decline a Private Call.
-

5.6.4

All Calls

An All Call is a call from an individual radio to every radio on the site or every radio at a group of sites, depending on system configuration.

An All Call is used to make important announcements, requiring full attention from the user. The users on the system cannot respond to an All Call.

Capacity Max supports Site All Call and Multi-site All Call. The system administrator may configure one or both of these in your radio.



NOTICE:

Subscribers can support System-Wide All Calls but Motorola Solutions infrastructure does not support System-Wide All Calls.

5.6.4.1

Making All Calls

Your radio must be programmed for you to make an All Call.

- 1 Select a channel with the active All Call group alias or ID. See [Selecting a Call Type on page 64](#).
- 2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Group Call** icon and either `All Call`, `Site All Call`, or `Multi Site Call` depending on the type of configuration.

- 3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

Users on the channel cannot respond to an All Call.

The call initiator can press  to end the All Call.

5.6.4.2

Receiving All Calls

When you receive an All Call, the following occur:

- A tone sounds.
- The green LED blinks.
- The display shows the **Group Call** icon at the top right corner.
- The first text line shows the caller alias ID.
- The second text line displays either `All Call`, `Site All Call`, or `Multi Site Call` depending on the type of configuration.
- Your radio unmutes and the incoming call sounds through the speaker.

The radio returns to the screen before receiving the All Call when the call ends.

If the Channel Free Indication feature is enabled, you hear a short alert tone when the transmitting radio releases the **PTT** button, indicating the channel is free for you to use. You cannot respond to an All Call.



NOTICE:

The radio stops receiving the All Call if you switch to a different channel while receiving the call. You are not able to continue with any menu navigation or editing until the call ends during an All Call.

5.6.5

Phone Calls

A Phone Call is a call in between an individual radio or a group of radios and a telephone.

Depending on how the radio is configured, the following features may or may not be made available:

- Access code
- Dual Tone Multi Frequency (DTMF) tone
- De-access code
- Displaying of caller alias or ID on receiving a phone call

- Ability to reject or accept a phone call

The Phone Call capability can be enabled by assigning and setting up phone numbers on the system. Check with your system administrator to determine how your radio has been programmed.

5.6.5.1

Making Phone Calls

Follow the procedure to make Phone Calls on your radio.

5.6.5.2

Making Phone Calls with the Programmable Button

Follow the procedure to make Phone Calls with the programmable button.

- 1 Press the programmed **Phone** button to enter into the Phone Entry list.
-

2 Press ▲ or ▼ to the required alias or ID. Press



to select.

The green LED lights up. The display shows **Phone Call** icon, subscriber alias or ID, and call status.

If the call-setup is successful:

- The DTMF tone sounds.
- You hear the call waiting tone of the telephone user.
- The display shows **Phone Call** icon, subscriber alias or ID, `Phone Call`, and call status.

If call-setup is unsuccessful:

- A tone sounds.
- The display shows `Phone Call Failed`.
- Your radio returns to the Access Code input screen. If the access code was preconfigured in the Contacts list, the radio returns to the screen you were on prior to initiating the call.

3 Press the **PTT** button to talk. Release the **PTT** button to listen.

4



Press to end the call.

The DTMF tone sounds and the display shows `Ending Phone Call`.

If the end-call-setup is successful, a tone sounds and the display shows `Call Ended`.


If the end-call-setup is unsuccessful, your radio returns to the Phone Call screen. Repeat [step 3](#) and [step 4](#) or wait for the telephone user to end the call.

When you press **PTT** button while in the Phone Contacts screen, a tone sounds and the display shows `Press OK to Place Call`.

When the telephone user ends the call, a tone sounds and the display shows `Phone Call Ended`.



NOTICE:


During channel access, press  to dismiss the call attempt and a tone sounds.




During the call, when you press **One Touch Access** button with the deaccess code preconfigured or enter the deaccess code as the input for extra digits, your radio attempts to end the call.




5.6.5.3

Making Phone Calls by Using the Contacts List

Follow the procedure to make Phone Calls on your radio by using the Contacts list.




- 1 Press  to access the menu.


- 2 Press  or  to `Contacts`. Press  to select. The display shows the entries in alphabetical order.

- 3 Press  or  to the required alias or ID. Press  to select.

If the selected entry is empty:

- A negative indicator tone sounds.
- The display shows `Phone Call Invalid #`.

- 4 Press  or  to `Call Phone`. Press  to select. The display shows `Access Code:` if the access code was not preconfigured.

- 5 Enter the access code, and press  to proceed. The display shows `Calling`, subscriber alias or ID, and the **Phone Call** icon. If the call is successful:

- The DTMF Tone sounds.
- You hear the call waiting tone of the telephone user.
- The display shows the subscriber alias or ID, the **Phone Call** icon, and Phone Call.

If the call is unsuccessful:

- A tone sounds.
- The display shows Phone Call Failed and then, Access Code:.
- Your radio returns to the screen you were on prior to initiating the call if the access code has been preconfigured in the Contacts list.

6 Press the **PTT** button to respond to the call.

The **RSSI** icon disappears.

7 Release the **PTT** button to listen.


8 Enter extra digits with the keypad if requested by the

call, and press  to proceed.


If the call ends while you are entering the extra digits requested by the call, your radio returns to the screen you were on prior to initiating the call.

The DTMF Tone sounds. Your radio returns to the previous screen.

9

Press  to end the call.

10 If the deaccess code was not preconfigured, enter the deaccess code when the display shows De-

Access Code:, and press  to proceed.

The radio returns to the previous screen. The DTMF Tone sounds and the display shows Ending Phone Call.

If the call ends successfully:

- A tone sounds.
- The display shows Call Ended.

If the call fails to end, the radio returns to the Phone Call screen. Repeat [step 9](#) and [step 10](#), or wait for the telephone user to end the call. When you press the PTT button while in the Phone Contacts screen,

as tone sounds and the display shows `Press OK to Place Call`.








When the telephone user ends the call, a tone sounds and the display shows `Phone Call Ended`.

If the call ends while you are entering the extra digits requested by the Phone Call, your radio returns to the screen you were on prior to initiating the call.

5.6.5.4


Making Phone Calls by Using the Manual Dial

Follow the procedure to make Phone Calls on your radio by using the manual dial.


- 1 Press  to access the menu.
- 2 Press  or  to `Contacts`. Press  to select.
- 3 Press  or  to `Manual Dial`. Press  to select.

- 4 Press  or  to `Phone Number`. Press  to select.

The display shows `Number:` and a blinking cursor.

- 5 Enter the telephone number, and press  to proceed.

The display shows `Access Code:` and a blinking cursor if the access code was not preconfigured.

- 6 Enter the access code, and press  to proceed. The green LED lights up. The display shows the **Phone Call** icon, subscriber alias, and call status.

If the call is successful:

- The DTMF Tone sounds.
- You hear the call waiting tone of the telephone user.
- The display shows subscriber alias and the **Phone Call** icon.

If the call is unsuccessful:

- A tone sounds.
- The display shows `Phone Call Failed` and then, `Access Code:`.
- Your radio returns to the screen you were on before initiating the call if the access code has been preconfigured in the `Contacts` list.

7 Press the **PTT** button to respond to the call.

8 Release the **PTT** button to listen.


9 Enter extra digits with the keypad if requested by the

call, and press  to proceed.

If the call ends while you are entering the extra digits requested by the call, your radio returns to the screen you were on before initiating the call.


The DTMF Tone sounds. Your radio returns to the previous screen.

10

Press  to end the call.

11 Do one of the following:

- If the deaccess code was not preconfigured, enter the deaccess code when the display shows

`De-Access Code:`, and press  to proceed. The radio returns to the previous screen.

- Press the programmed **One Touch Access** button. If the entry for the **One Touch Access** button is empty, a negative indicator tone sounds.

The DTMF Tone sounds and the display shows `Ending Phone Call`.

If the call ends successfully:

- A tone sounds.
- The display shows `Call Ended`.

If the call fails to end, the radio returns to the `Phone Call` screen. Repeat [step 10](#), or wait for the telephone user to end the call.

5.6.5.5

Responding to Phone Calls as All Calls

When you receive a `Phone Call` as an `All Call`, the receiving radio is unable to talkback or respond. The recipient user is also not allowed to end the `All Call`.

When you receive a Phone Call as an All Call:

- The display shows the **Phone Call** icon at the top right corner.
- The display shows either **All Call**, **Site All Call**, or **Multi Site Call** depending on the type of configuration and **Phone Call**.
- The green LED blinks.
- Your radio unmutes and the incoming call sounds through the speaker.

5.6.5.6

Responding to Phone Calls as Group Calls

Follow the procedure to respond to Phone Calls as Group Calls on your radio.

When you receive a Phone Call as a Group Call:

- The display shows the **Phone Call** icon and **Phone Call**.
- The green LED blinks.

- Your radio unmutes and the incoming call sounds through the speaker.

1 Press the **PTT** button to respond to the call.

2 Release the **PTT** button to listen.

3 Press  to end the call.



NOTICE:

Your radio is not able to terminate a phone call as a group call. The telephone user must end the call. The recipient user is only allowed to talk back during the call.

The display shows **Ending Phone Call**.

If the call ends successfully:

- A tone sounds.
- The display shows **Call Ended**.

If the call fails to end, the radio returns to the **Phone Call** screen. Repeat [step 3](#) or wait for the telephone user to end the call.

5.6.5.7

Responding to Phone Calls as Private Calls

Follow the procedure to respond to Phone Calls as Private Calls on your radio.

When you receive a Phone Call as a Private Call:

- The display shows the **Phone Call** icon and Phone Call.
- The green LED blinks.
- Your radio unmutes and the incoming call sounds through the speaker.

1 Press the **PTT** button to respond to the call.

2 Release the **PTT** button to listen.

3 Press  to end the call.



NOTICE:

Your radio is not able to terminate a phone call as a group call. The telephone user must end the call. The recipient user is only allowed to talk back during the call.

The display shows `Ending Phone Call`.

If the call ends successfully:

- A tone sounds.
- The display shows `Call Ended`.

If the call fails to end, the radio returns to the Phone Call screen. Repeat [step 3](#) or wait for the telephone user to end the call.

5.6.6

Initiating Transmit Interrupt

An ongoing call is interrupted, when you perform the following actions:

- Press the **Voice PTT** button.
- Press the **Emergency** button.

The receiving radio displays `Call Interrupted`.

5.6.7

Call Preemption

Call Preemption allows a radio to stop any in-progress voice transmission and initiate a priority transmission.

With the Call Preemption feature, the system interrupts and preempts ongoing calls in instances where trunked channels are unavailable.

Higher priority calls such as an Emergency Call or an All Call preempt the transmitting radio to accommodate the higher priority call. If no other Radio Frequency (RF) channels are available, an Emergency Call preempts an All Call as well.

5.6.8

Voice Interrupt

Voice Interrupt allows the user to shut down an in-progress voice transmission.

This feature uses reverse channel signaling to stop the in-progress voice transmission of a radio, if the interrupting radio is configured to Voice Interrupt, and the transmitting radio is configured to be Voice Call Interruptible. The interrupting radio is then allowed to make a voice transmission to the participant in the stopped call.

The Voice Interrupt feature significantly improves the probability of successfully delivering a new transmission to the intended parties when a call is in progress.

Voice Interrupt is accessible to the user only if this feature has been set up in the radio. Check with your dealer or system administrator for more information.

5.6.8.1

Enabling Voice Interrupt

Follow the procedure to initiate Voice Interrupt on your radio.

Your radio must be programmed to allow you to use this feature. Check with your dealer or system administrator for more information.

- 1 To interrupt the transmission during an on-going call, press the **PTT** button.

On the interrupted radio, the display shows `Call Interrupted`. The radio sounds a negative indicator tone until the **PTT** button is released.

- 2 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.

If unsuccessful:

- A negative indicator tone sounds.

3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

5.7

Advanced Features

This chapter explains the operations of the features available in your radio.

Your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

5.7.1

Call Queue

When there are no resources available to process a call, Call Queue enables the call request to be placed in the system queue for the next available resources.

You hear a Call Queue Tone after pressing the **PTT** button and radio screen displays `Call In Queue` indicating that the radio has entered Call Queue State. The **PTT** button may be released once the Call Queue Tone is heard.

If the call setup is successful, the following occur:

- The green LED blinks.
- If enabled, the Talk Permit Tone sounds.
- The display shows the call type icon, ID or alias.
- The radio user has up to 4 seconds to press the **PTT** button to begin voice transmission.

If the call setup is unsuccessful, the following occur:

- If enabled, the Reject Tone sounds.
- The display shows the failure notice screen momentarily.
- The call is terminated and the radio exits the call setup.

5.7.2

Priority Call

Priority Call allows the system to preempt one of the ongoing non-priority calls and initiate the requested high priority call when all channels are busy.

With all channels occupied with high priority calls, the system does not preempt any calls, and places the requesting high-priority call into call queue. If the system fails to place the requesting high-priority call into call queue, it declares failure.

The default settings for Priority Call are preconfigured. Press the programmable button to toggle between normal and high priority level. When you use the following features, the call priority level reverts automatically to the preconfigured setting.

- All voice calls
- DMR III Text Message/Text Message
- Job Ticket
- Remote monitor

The following are the types of Priority Call:

High Priority

The radio displays `Next Call: High Priority`.

Call Priority High icon appears at the top of your radio display.

Voice Announcement sounds `Next Call: High Priority`.

Normal Priority

The radio displays `Next Call: Normal Priority`.

Call Priority High icon disappears.

Voice Announcement sounds `Next Call: Normal Priority`.

5.7.3

Talkgroup Scan

This feature allows your radio to monitor and join calls for groups defined by a Receive Group List.


When scan is enabled, your radio unmutes to any member in its Receive Group List.




When scan is disabled, your radio does not receive transmission from any members of the Receive Group List, except for All Call, Permanent Talkgroup, and the selected Talkgroup.







5.7.3.1

Turning Talkgroup Scan On or Off

Follow the procedure to turn Talkgroup Scan on or off on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Scan. Press  to select.

- 3 Do one of the following:
 - Press  or  to Turn On. Press  to select.
 - Press  or  to Turn Off. Press  to select.

If scan is enabled:

- The display shows Scan On and **Scan** icon.
- The yellow LED blinks.
- A positive indicator tone sounds.

If scan is disabled:

- The display shows Scan Off.
- The **Scan** icon disappears.
- The LED turns off.
- A negative indicator tone sounds.

5.7.4

Receive Group List

Receive Group List is a feature that allows you to create and assign members on the talkgroup scan list.

This list is created when your radio is programmed and it determines which groups can be scanned. Your radio can support a maximum of 16 members in this list.

If your radio has been programmed to edit the scan list, you can:

- Add/remove talkgroups.
- Add, remove, and/or edit priority for talkgroups. Refer to [Editing Priority for a Talkgroup on page 91](#).
- Add, remove, and/or edit affiliation talkgroups. Refer to [Adding Talkgroup Affiliation on page 92](#) and [Removing Talkgroup Affiliation on page 93](#).

- Replace the existing scan list with a new scan list.

If a talkgroup is programmed as Permanent Talkgroup, you are unable to edit the talkgroup from the scan list.

**IMPORTANT:**

To add member into the list, the talkgroup must first be configured in the radio.

**NOTICE:**

Receive Group List is programmed by the system administrator. Check with your dealer or system administrator for more information.

5.7.5

Priority Monitor

The Priority Monitor feature allows the radio to automatically receive transmission from talkgroups with higher priority even when radio is in a talkgroup call.

Radio leaves lower priority talkgroup call for higher priority talkgroup call.

**NOTICE:**

This feature can only be accessed when Talkgroup Scan feature is enabled.

Priority Monitor feature applies only to members in the Receive Group List. There are two Priority Talkgroups:

Priority 1 (P1) and Priority 2 (P2). P1 has higher priority than P2. In Capacity Max system, the radio receives transmission according to the priority order below:

- 1 Emergency Call for P1 Talkgroup
- 2 Emergency Call for P2 Talkgroup
- 3 Emergency Call for Non-priority Talkgroups in the Receive Group List
- 4 All Call
- 5 P1 Talkgroup Call
- 6 P2 Talkgroup Call
- 7 Non-priority Talkgroups in the Receive Group List

See [Editing Priority for a Talkgroup on page 91](#) for more information on how to add, remove, and/or edit the priority of the talkgroups in the scan list.


**NOTICE:**




This feature is programmed by the system administrator. Check with your dealer or system administrator for more information.




5.7.5.1




Editing Priority for a Talkgroup




In the Talkgroup Scan Menu, you can view or edit the priority of a talkgroup.




- 1 Press  to access the menu.



- 2 Press  or  to Scan. Press  to select.

- 3 Press  or  to View/Edit List. Press  to select.

- 4 Press  or  to the required talkgroup. Press  to select.
The current priority is indicated by a **Priority 1** or **Priority 2** icon beside the talkgroup.

- 5 Press  or  to Edit Priority. Press  to select.

- 6 Press  or  to the required priority level. Press  to select.

If another talkgroup has been assigned to Priority 1 or Priority 2, you can choose to overwrite the current priority. When the display shows `Overwrite Existing?`, press  or  to the following options:

- No to return to the previous step.
- Yes to overwrite.

The display shows positive mini notice before returning to the previous screen. The priority icon appears beside the talkgroup.

5.7.6

Multi-Talkgroup Affiliation


Your radio can be configured for up to seven talkgroups at a site.




Of the 16 talkgroups in the Receive Group List, up to seven talkgroups can be assigned as affiliation talkgroups. The selected talkgroup and the priority talkgroups are automatically affiliated.




5.7.6.1





Adding Talkgroup Affiliation




Follow the procedure to add a talkgroup affiliation.

- 1 Press  to access the menu.







- 2 Press  or  to Scan. Press  to select.


- 3 Press  or  to View/Edit List. Press  to select.


- 4 Press  or  to the required talkgroup ID or alias. Press  to select.
The affiliation status is displayed at the View/Edit List. The display shows  beside the selected talkgroup ID or alias.


- 5 Press  or  to Edit Affiliation. Press  to select.

6 Do one of the following:

- Press  or  to On. Press  to select.
- Press  or  to Off. Press  to select.

When On is selected,  appears beside the talkgroup ID or alias.

If affiliation is successful, the display shows  beside the selected talkgroup ID or alias.

If affiliation is unsuccessful,  remains beside the talkgroup ID or alias.


**NOTICE:**




The radio displays List Full when a maximum of seven talkgroups are selected for affiliation in the scan list. To select a new talkgroup for affiliation, remove an existing affiliated talkgroup to make way for the new addition. See [Removing Talkgroup Affiliation on page 93](#) for more information.




5.7.6.2





Removing Talkgroup Affiliation




When the affiliation list is full and you want to select a new talkgroup for affiliation, remove an existing affiliated talkgroup to make way for the new addition. Follow the procedure to remove a talkgroup affiliation.





- 1 Press  to access the menu.

- 2 Press  or  to Scan. Press  to select.

- 3 Press  or  to View/Edit List. Press  to select.

- 4 Press  or  to the required talkgroup ID or alias. Press  to select.
 The affiliation status is displayed at the View/Edit List. The display shows  beside the selected talkgroup ID or alias.

- 5 Press  or  to Edit Affiliation. Press  to select.

- 6 Press  or  to Off. Press  to select.
 When Off is selected,  disappears from beside the talkgroup ID or alias.

5.7.7

Talkback

The Talkback feature allows you to respond to a transmission while scanning.

If your radio scans into a call from the selectable group scan list, and if the **PTT** button is pressed during the scanned call, the operation of the radio depends on whether Talkback was enabled or disabled during radio programming. Check with your dealer or system administrator for more information.

Talkback Disabled

The radio leaves the scanned call and attempts to transmit on the contact for the currently selected channel position. After the Call Hang Time on the

currently selected contact expires, the radio returns to the home channel and starts the Scan Hang Time Timer. The radio resumes group scan after its Scan Hang Time Timer expires.

Talkback Enabled

If the **PTT** button is pressed during the Group Hang Time of the scanned call, the radio attempts to transmit to the scanned group.



NOTICE:

If you scan into a call for a group that is not assigned to a channel position in the currently selected zone and the call ends, switch to the proper zone and then select the channel position of the group to talk back to that group.

5.7.8

Bluetooth®

This feature allows you to use your radio with a Bluetooth-enabled device (accessory) through a Bluetooth connection. Your radio supports both Motorola Solutions and Commercially available Off-The-Shelf (COTS) Bluetooth-enabled devices.

Bluetooth operates within a range of 10 m (32ft) line of sight. This is an unobstructed path between your radio and


your Bluetooth-enabled device. For high degree of reliability, Motorola Solutions recommends to not separate the radio and the accessory.

At the fringe areas of reception, both voice and tone quality start to sound "garbled" or "broken". To correct this problem, position your radio and Bluetooth-enabled device closer to each other (within the 10 m defined range) to re-establish clear audio reception. The Bluetooth function of your radio has maximum power of 2.5 mW (4 dBm) at the 10 m range.

Your radio can support up to three simultaneous Bluetooth connections with Bluetooth-enabled devices of unique types. For example, a headset, a scanner, a sensor device, and a PTT-Only Device (POD).

Refer to the user manual of your respective Bluetooth-enabled device for more details on the full capabilities of your Bluetooth-enabled device.


Your radio connects to the Bluetooth-enabled device within range with either the strongest signal strength, or to one which it has connected to before in a prior session. Do not turn off your Bluetooth-enabled device or press the home




back button  during the finding and connecting operation as this cancels the operation.




5.7.8.1







Turning Bluetooth On and Off

Follow the procedure to turn Bluetooth on and off.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth. Press  to select.

- 3 Press  or  to My Status. Press  to select.
The display shows On and Off. The current status is indicated by a ✓.


- 4 Do one of the following:
 - Press  or  to On. Press  to select. The display shows ✓ beside On.
 - Press  or  to Off. Press  to select.
The display shows ✓ beside Off.




5.7.8.2




Connecting to Bluetooth Devices









Follow the procedure to connect to Bluetooth devices.

Turn on your Bluetooth-enabled device and place it in pairing mode.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth. Press  to select.

- 3 Press  or  to Devices. Press  to select.

- 4 Do one of the following:
 - Press  or  to the required device. Press  to select.
 - Press  or  to Find Devices to locate available devices. Press  or  to the required device. Press  to select.

5

Press ▲ or ▼ to Connect. Press  to select.

Your Bluetooth-enabled device may require additional steps to complete the pairing. Refer to the user manual of your Bluetooth-enabled device.

The display shows Connecting to <Device>.

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows <Device> Connected and the **Bluetooth Connected** icon.
- The display shows ✓ beside the connected device.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows Connecting Failed.


5.7.8.3

Connecting to Bluetooth Devices in Discoverable Mode

Follow the procedure to connect to Bluetooth devices in discoverable mode.

Turn on your Bluetooth-enabled device and place it in pairing mode.


1

Press  to access the menu.

2

Press ▲ or ▼ to Bluetooth. Press  to select.

3

Press ▲ or ▼ to Find Me. Press  to select. The radio can now be found by other Bluetooth-enabled devices for a programmed duration. This is called Discoverable Mode.

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows <Device> Connected and the **Bluetooth Connected** icon.

- The display shows ✓ beside the connected device.





If unsuccessful:

- A negative indicator tone sounds.
- The display shows Connecting Failed.

5.7.8.4

Disconnecting from Bluetooth Devices

Follow the procedure to disconnect from Bluetooth devices.

- 1 Press  to access the menu.
- 2 Press ▲ or ▼ to Bluetooth. Press  to select.
- 3 Press ▲ or ▼ to Devices. Press  to select.
- 4 Press ▲ or ▼ to the required device. Press  to select.

5

Press ▲ or ▼ to Disconnect. Press  to select.

The display shows Disconnecting from <Device>.

Wait for acknowledgment.

- A tone sounds.
- The display shows <Device> Disconnected and the **Bluetooth Connected** icon disappears.
- The ✓ disappears beside the connected device.

5.7.8.5

Switching Audio Route between Internal Radio Speaker and Bluetooth Device

Follow the procedure to toggle audio routing between internal radio speaker and external Bluetooth device.

Press the programmed **Bluetooth Audio Switch** button.











The display shows one of the following results:




- A tone sounds. The display shows Route Audio to Radio.
- A tone sounds. The display shows Route Audio to Bluetooth.

5.7.8.6

Viewing Device Details

Follow the procedure to view device details on your radio.











- 1 Press  to access the menu.
- 2 Press  or  to Bluetooth. Press  to select.
- 3 Press  or  to Devices. Press  to select.
- 4 Press  or  to the required device. Press  to select.


- 5 Press  or  to View Details. Press  to select.

5.7.8.7

Deleting Device Name

You can remove a disconnected device from the list of Bluetooth-enabled devices.





- 1 Press  to access the menu.
- 2 Press  or  to Bluetooth. Press  to select.
- 3 Press  or  to Devices. Press  to select.
- 4 Press  or  to the required device. Press  to select.


- 5 Press ▲ or ▼ to Delete. Press  to select.
The display shows Device Deleted.
-

5.7.8.8

Adjusting Bluetooth Mic Gain Values

Allows control of microphone gain value in connected Bluetooth-enabled devices.

- 1 Press  to access the menu.
-
- 2 Press ▲ or ▼ to Bluetooth. Press  to select.
-
- 3 Press ▲ or ▼ to BT Mic Gain. Press  to select.
-
- 4 Press ▲ or ▼ to the BT Mic Gain type and the current values. To edit values, press  to select.
-

- 5 Press ▲ or ▼ to increase or to decrease values.
Press  to select.
-

5.7.8.9

Permanent Bluetooth Discoverable Mode

The Permanent Bluetooth Discoverable Mode must be enabled by the dealer or system administrator.



NOTICE:

If enabled, Bluetooth is **not** displayed in the Menu and you cannot use any Bluetooth programmable button features.

Other Bluetooth-enabled devices can locate your radio, but the devices cannot connect to the radio. The Permanent Bluetooth Discoverable Mode enables dedicated devices to use your radio position in the process of Bluetooth-based location.

5.7.9

Indoor Location



NOTICE:

Indoor Location feature is applicable for models with the latest software and hardware. Check with your dealer or system administrator for more information.





Indoor Location is use to keep track of the location of radio users. When Indoor Location is activated, the radio is in a limited discoverable mode. Dedicated beacons are used to locate the radio and determine its position.




5.7.9.1


Turning Indoor Location On or Off

You can turn on or turn off Indoor Location by performing one of the following actions.

- Access this feature through the menu.

- a. Press  to access the menu.
- b. Press  or  to Bluetooth and press  to select.


- c. Press  or  to Indoor Location and press  to select.

- d. Press  to turn on Indoor Location.

The display shows Indoor Location On. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon appears on the Home screen display.
- If unsuccessful, the display shows Turning On Failed. You hear a negative indicator tone.

- e. Press  to turn off Indoor Location.

The display shows Indoor Location Off. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon disappears on the Home screen display.

- If unsuccessful, the display shows `Turning Off Failed`. You hear a negative indicator tone.
- Access this feature by using the programmed button.
- a. Long press the programmed **Indoor Location** button to turn on Indoor Location.

The display shows `Indoor Location On`. You hear a positive indicator tone. One of the following scenarios occurs.


- If successful, the Indoor Location Available icon appears on the Home screen display.
 - If unsuccessful, the display shows `Turning On Failed`. If unsuccessful, you hear a negative indicator tone.
- b. Press the programmed **Indoor Location** button to turn off Indoor Location.
- The display shows `Indoor Location Off`. You hear a positive indicator tone. One of the following scenarios occurs.
- If successful, the Indoor Location Available icon disappears on the Home screen display.




- If unsuccessful, the display shows `Turning Off Failed`. If unsuccessful, you hear a negative indicator tone.




5.7.9.2


Accessing Indoor Location Beacons Information

Follow the procedure to access Indoor Location beacons information.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth and press  to select.

- 3 Press  or  to Indoor Location and press  to select.

- 4 Press ▲ or ▼ to Beacons and press  to select.
-

The display shows the beacons information.


5.7.10


Multi-Site Controls


These features are applicable when your current radio channel is configured to a Capacity Max system.

5.7.10.1

Enabling Manual Site Search

- 1 Perform one of the following actions:
 - Press the programmed **Manual Site Roam** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press ▲ or ▼ to Utilities. Press  to select.

- 3 Press ▲ or ▼ to Radio Settings. Press  to select.
-

- 4 Press ▲ or ▼ to Site Roaming. Press  to select.
-

- 5 Press ▲ or ▼ to Active Search. Press  to select.

A tone sounds. The green LED blinks. The display shows Finding Site.

If the radio finds a new site, your radio shows the following indications:

- A positive tone sounds.
- The LED extinguishes.
- The display shows Site <Alias> Found.

If the radio fails to find a new site, your radio shows the following indications:

- A negative tone sounds.
- The LED extinguishes.

- The display shows `Out of Range`.

If a new site is within range, but the radio is unable to connect to it, your radio shows the following indications:

- A negative tone sounds.
- The LED turns off.
- The display shows `Channel Busy`.

5.7.10.2

Site Lock On/Off

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Press the programmed **Site Lock** button.

If the **Site Lock** function is toggled on:

- You hear a positive indicator tone, indicating the radio has locked to the current site.
- The display shows `Site Locked`.

If the **Site Lock** function is toggled off:











- You hear a negative indicator tone, indicating the radio is unlocked.

- The display shows `Site Unlocked`.

5.7.10.3

Accessing Neighbor Sites List

This feature allows the user to check the adjacent sites list of the current home site. Follow the procedure to access the Neighbor Sites List:

- 1 Press  to access the menu.
- 2 Press  or  to Utilities. Press  to select.
- 3 Press  or  to Radio Info. Press  to select.
- 4 Press  or  to Neighbor Sites. Press  to select.

5.7.11

Home Channel Reminder

This feature provides a reminder when the radio is not set to the home channel for a period of time.

If this feature is enabled when your radio is not set to the home channel for a period of time, the following occurs periodically:

- The Home Channel Reminder tone and announcement sound.
- The display shows Non Home Channel.

5.7.11.1

Muting the Home Channel Reminder

When the Home Channel Reminder sounds, you can temporarily mute the reminder.


Press the programmed **Silence Home Channel Reminder** button.




The display shows HCR Silenced.




5.7.11.2




Setting New Home Channels


When the Home Channel Reminder occurs, you can set a new home channel.

- 1 Do one of the following:
 - Press the **Reset Home Channel** programmable button to set the current channel as the new Home Channel. Skip the following steps. The first line of the display shows the channel alias and the second line shows New Home Ch.
 - Press  to access the menu.
-

- 2 Press  or  to Utilities. Press  to select.
-

- 3 Press  or  to Radio Settings. Press  to select.
-

- 4 Press  or  to Home Channel. Press  to select.
-

- 5 Press ▲ or ▼ to the desired new home channel alias. Press  to select.

The display shows ✓ beside the selected home channel alias.

5.7.12

Remote Monitor

This feature is used to turn on the microphone of a target radio with a subscriber alias or ID. You can use this feature to remotely monitor any audible activity surrounding the target radio.


Both your radio and the target radio must be programmed to allow you to use this feature.

If initiated, the green LED blinks once on the target radio. This feature automatically stops after a programmed duration or when there is any user operation on the target radio.

5.7.12.1

Initiating Remote Monitor

Follow the procedure to initiate Remote Monitor on your radio.

- 1 Press the programmed **Remote Monitor** button.
- 2 Press ▲ or ▼ to the required alias or ID. Press  to select.

The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

- 3 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows *Rem. Monitor*. Once the timer expires, an alert tone sounds, and the LED turns off.








If unsuccessful:




- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

5.7.12.2

Initiating Remote Monitor by Using the Contacts List

Follow the procedure to initiate Remote Monitor on your radio by using the Contacts list.

- 1 Press  to access the menu.
 - 2 Press  or  to Contacts. Press  to select.
 - 3 Press  or  to the required alias or ID. Press  to select.
-

- 4 Press  or  to Remote Mon.. Press  to select.

The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

- 5 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows Rem. Monitor. Once the timer expires, an alert tone sounds, and the LED turns off.


If unsuccessful:




- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-




5.7.12.3




Initiating Remote Monitors by Using the Manual Dial


Follow the procedure to initiate Remote Monitor on your radio by using the manual dial.


- 1 Press  to access the menu.




- 2 Press  or  to `Contacts`. Press  to select.

- 3 Press  or  to `Manual Dial`. Press  to select.

- 4 Press  or  to `Radio Number`. Press  to select.

- 5 Do one of the following:
 - Enter the subscriber alias or ID, and press  to proceed.

- Edit the previously dialed ID, and press  to proceed.
-

- 6 Press  or  to `Remote Mon.`. Press  to select.

The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

- 7 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows `Rem. Monitor`. Once the timer expires, an alert tone sounds, and the LED turns off.

If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

5.7.13

Contacts Settings

Contacts provides address book capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call. The entries are alphabetically sorted.

Each entry, depending on context, associates with the different call types: Group Call, Private Call, Broadcast Call, Site All Call, Multi-site All Call, PC Call, or Dispatch Call.

PC Call and Dispatch Call are data-related. They are only available with the applications. Refer to the data applications documentation for further details.

Contacts menu allows you to assign each entry to a programmable number key or more on a keypad microphone. If an entry is assigned to a number key, your radio can perform a quick dial on the entry.



NOTICE:

You see a checkmark before each number key that is assigned to an entry. If the checkmark is before Empty, you have not assign a number key to the entry.

Each entry within Contacts displays the following information:

- Call Type

- Call Alias
- Call ID



NOTICE:


If the Privacy feature is enabled on a channel, you can make privacy-enabled Group Calls, Private Calls, All Calls, and Phone Calls on that channel. Only target radios with the same Privacy Key, or the same Key Value and Key ID as your radio are able to decrypt the transmission.

5.7.13.1



Assigning Entries to Programmable Number Keys

Follow the procedure to assign entries to programmable number keys on your radio.

1

Press  to access the menu.

2


Press  or  to Contacts. Press  to select.

3 Press ▲ or ▼ to the required alias or ID. Press



to select.

4

Press ▲ or ▼ to Program Key. Press  to select.

5 Do one of the following:

- If the desired number key has not been assigned to an entry, press ▲ or ▼ to the desired

number key. Press  to select.

- If the desired number key has been assigned to an entry, the display shows `The Key is Already Assigned` and then, the first text line shows `Overwrite?`. Do one of the following:

Press ▲ or ▼ to Yes. Press  to select.

The radio sounds a positive indicator tone and the display shows `Contact Saved` and a positive mini notice.

Press ▲ or ▼ to No to return to the previous step.


5.7.13.2

Removing Associations Between Entries and Programmable Number Keys


Follow the procedure to remove the associations between entries and programmable number keys on your radio.

1 Do one of the following:

- Long press the programmed number key to the required alias or ID. Proceed to [step 4](#).

- Press  to access the menu.
-

2


Press ▲ or ▼ to Contacts. Press  to select.


3 Press ▲ or ▼ to the required alias or ID. Press



to select.

4

Press ▲ or ▼ to Program Key. Press  to select.

- 5 Press ▲ or ▼ to Empty. Press  to select.
The first text line shows Clear from all keys.
-

- 6 Press ▲ or ▼ to Yes. Press  to select.



NOTICE:


When an entry is deleted, the association between the entry and its programmed number key(s) is removed.

A positive indicator tone sounds. The display shows Contact Saved.
The screen automatically returns to the previous menu.


5.7.13.3


Adding New Contacts


Follow the procedure to add new contacts on your radio.


- 1 Press  to access the menu.
-


- 2 Press ▲ or ▼ to Contacts. Press  to select.
-

- 3 Press ▲ or ▼ to New Contact. Press  to select.
-

- 4 Press ▲ or ▼ to select contact type Radio Contact or Phone Contact. Press  to select.
-

- 5 Enter the contact number with the keypad, and press  to proceed.
-

- 6 Enter the contact name with the keypad, and press  to proceed.
-

- 7 Press ▲ or ▼ to the required ringer type. Press  to select.

A positive indicator tone sounds. The display shows a positive mini notice.


5.7.14




Call Indicator Settings




This feature allows you to configure call or text message ringing tones.




5.7.14.1




Activating or Deactivating Call Ringers for Private Calls




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.










- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alerts. Press  to select.

- 5 Press  or  to Call Ringers. Press  to select.


- 6 Press  or  to Private Call. Press  to select.




- 7 Do one of the following:




- Press  or  to the required tone. Press  to select.
The display shows  and the selected tone.
 - Press  or  to Off. Press  to select.
If the ringing tones were earlier enabled, the display shows  beside Off.
If the ringing tones were earlier disabled, the display does not show  beside Off.
-




5.7.14.2




Activating or Deactivating Call Ringers for Text Messages




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.










- 4 Press  or  to Tones/Alerts. Press  to select.

- 5 Press  or  to Call Ringers. Press  to select.

- 6 Press  or  to Text Message. Press  to select.


The display shows  and the current tone.




- 7 Do one of the following:




- Press  or  to the required tone. Press  to select.
The display shows  and the selected tone.
 - Press  or  to Off. Press  to select.
If the ringing tones were earlier enabled, the display shows  beside Off.
If the ringing tones were earlier disabled, the display does not show  beside Off.
-




5.7.14.3




Activating or Deactivating Call Ringers for Call Alerts




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.







- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alert. Press  to select.

- 5 Press  or  to Call Ringers. Press  to select.

- 6 Press  or  to Call Alert. Press  to select.


7 Do one of the following:


- Press  or  to the required tone. Press  to select.
The display shows ✓ and the selected tone.
 - Press  or  to Off. Press  to select.
If the ringing tones were earlier enabled, the display shows ✓ beside Off.
If the ringing tones were earlier disabled, the display does not show ✓ beside Off.
-


5.7.14.4

Activating or Deactivating Call Ringers for Telemetry Status with Text


Follow the procedure to activate or deactivate call ringers for telemetry status with text on your radio.


- 1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.


4 Press ▲ or ▼ to Tones/Alert. Press  to select.

5 Press ▲ or ▼ to Call Ringers. Press  to select.


6 Press ▲ or ▼ to Telemetry. Press  to select.
The current tone is indicated by a ✓.

7 Do one of the following:

- Press ▲ or ▼ to the preferred tone. Press

 to select.

The display shows Tone <Number> Selected and a ✓ appears left of the selected tone.


- Press ▲ or ▼ to Turn Off. Press  to select.


The display shows Telemetry Ringer Off and a ✓ appears left of Turn Off.


5.7.14.5

Assigning Ring Styles


The radio can be programmed to sound one of eleven predefined ringing tones when receiving a Private Call, a Call Alert, or a Text Message from a particular contact. The radio sounds out each ring style as you navigate through the list.


1 Press  to access the menu.

2 Press ▲ or ▼ to Contacts. Press  to select.
The entries are alphabetically sorted.

3 Press ▲ or ▼ to the required alias or ID. Press  to select.

4 Press ▲ or ▼ to View/Edit. Press  to select.

5 Press  until display shows Ringer menu
A ✓ indicates the current selected tone.

6 Press ▲ or ▼ to the required tone. Press  to select.
The display shows a positive mini notice.


displays the All Tone Mute icon. If All Tones status is enabled, the related ring alert type is displayed.

The radio vibrates once if it is a momentary ring style. The radio vibrates repetitively if it is a repetitive ring style. When set to Ring and Vibrate, the radio sounds a specific ring tone if there is any incoming radio transaction (for example, Call Alert or Message). It sounds like a positive indicator tone or missed call.

For radios with batteries that support the vibrate feature and are attached to a vibrating belt clip, the available Ring Alert Type options are Silent, Ring, Vibrate, and Ring and Vibrate.

For radios with batteries that do not support the vibrate feature and are not attached to a vibrating belt clip, Ring Alert Type is automatically set to Ring. The available Ring Alert Type options are Silent and Ring.

You can select a Ring Alert Type by performing one of the following actions.

- Press the programmed **Ring Alert Type** button to access the Ring Alert Type menu.
 - a. Press ▲ or ▼ to Ring, Vibrate, Ring & Vibrate or Silent and press  to select.

5.7.14.6







Selecting a Ring Alert Type



NOTICE:

The programmed **Ring Alert Type** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

You can program the radio calls to one predetermined vibrate call. If All Tones status is disabled, the radio

- Access this feature through the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to `Utilities` and press  to select.
 - c. Press ▲ or ▼ to `Radio Settings` and press  to select.
 - d. Press ▲ or ▼ to `Tones/Alerts` and press  to select.
 - e. Press ▲ or ▼ to `Ring Alert Type` and press  to select.
 - f. Press ▲ or ▼ to `Ring, Vibrate, Ring & Vibrate or Silent` and press  to select.

5.7.14.7

Configuring Vibrate Style










NOTICE:

The programmed **Vibrate Style** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

Vibrate Style is enabled when the Vibrating Belt Clip is attached to the radio with a battery that supports the vibrate feature.

You can configure the vibrate style by performing one of the following actions.

- Press the programmed **Vibrate Style** button to access the Vibrate Style menu.
 - a. Press ▲ or ▼ to `Short, Medium, or Long` and press  to select.
- Access this feature via the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to `Utilities` and press  to select.

- c. Press ▲ or ▼ to Radio Settings and press  to select.
- d. Press ▲ or ▼ to Tones/Alerts and press  to select.
- e. Press ▲ or ▼ to Vibrate Style and press  to select.
- f. Press ▲ or ▼ to Short, Medium, or Long and press  to select.

5.7.14.8

Escalating Alarm Tone Volume

The radio can be programmed to continually alert, when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalart. Follow the procedure to escalate alarm tone volume on your radio.

5.7.15

Call Log Features


Your radio keeps track of all recent outgoing, answered, and missed Private Calls. The call log feature is used to view and manage recent calls.


Missed Call Alerts may be included in the call logs, depending on the system configuration on your radio. You can perform the following tasks in each of your call lists:

- Store Alias or ID to Contacts
- Delete Call
- View Details

5.7.15.1

Viewing Recent Calls

- 1 Press  to access the menu.

- 2 Press ▲ or ▼ to Call Log. Press  to select.

- 3 Press ▲ or ▼ to the preferred list. The options are Missed, Answered, and Outgoing lists.

Press  to select.

The display shows the most recent entry.


4 Press  or  to view the list.




You can start a call with the alias or ID the display is currently showing by pressing the **PTT** button.




5.7.15.2




Storing Aliases or IDs from the Call List




Follow the procedure to store aliases or IDs on your radio from the Call list.


1 Press  to access the menu.

2 Press  or  to Call Log. Press  to select.

3 Press  or  to the required list. Press  to select.

4 Press  or  to the required alias or ID. Press  to select.


5 Press  or  to Store. Press  to select.
The display shows a blinking cursor.


6 Enter the rest of the characters of the required alias.
Press  to select.
You can store an ID without an alias.
The display shows a positive mini notice.


5.7.15.3

Deleting Calls from the Call List

Follow the procedure to delete calls on your radio from the Call list.


1 Press  to access the menu.

2 Press ▲ or ▼ to Call Log. Press  to select.

3 Press ▲ or ▼ to the required list. Press  to select.


If the list is empty:


- A tone sounds.
 - The display shows List Empty.
-

4 Press ▲ or ▼ to the required alias or ID. Press  to select.

5 Press ▲ or ▼ to Delete Entry?. Press  to select.

6 Do one of the following:


- Press  to select Yes to delete the entry. The display shows Entry Deleted.


- Press ▲ or ▼ to No. Press  to select. The radio returns to the previous screen.
-


5.7.15.4


Viewing Details from the Call List

Follow the procedure to view details on your radio from the Call list.


1 Press  to access the menu.

2 Press ▲ or ▼ to Call Log. Press  to select.

3 Press ▲ or ▼ to the required list. Press  to select.

4 Press ▲ or ▼ to the required alias or ID. Press  to select.

5

Press ▲ or ▼ to View Details. Press  to select.

The display shows the details.

5.7.16

Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so.

This feature is applicable for subscriber aliases or IDs only and is accessible through the menu by using Contacts or a programmed **One Touch Access** button.

In Capacity Max, the Call Alert feature allows a radio user or a dispatcher to send an alert to another radio user requesting the radio user to call back the initiating radio user when available. Voice communication is not involved in this feature.

The Call Alert Operation can be configured by the dealer or the system administrator in two ways:

- The radio is configured to allow you to press the **PTT** button to respond directly to the call initiator by making a Private Call.

- The radio is configured to allow you to press the **PTT** button and continue with other Talkgroup communication. Pressing the **PTT** button on the call alert entry will not allow the user to respond to the call initiator. The user must navigate to the Missed Call Log option at the Call Log menu and respond to the Call Alert from there.

An Off Air Call Set-Up (OACSU) private call allows the user to respond immediately while a Full Off Air Call Set-Up (FOACSU) private call requires user acknowledgment for the call. OACSU type calls are therefore, recommended being used for the Call Alert feature. See [Private Call on page 72](#).

5.7.16.1

Making Call Alerts

Follow the procedure to make Call Alerts on your radio.

- 1 Press the programmed **One Touch Access** button.
The display shows Call Alert and the subscriber alias or ID. The green LED lights up.
-


2 Wait for acknowledgment.

If the Call Alert acknowledgment is received, the display shows a positive mini notice.




If the Call Alert acknowledgment is not received, the display shows a negative mini notice.




5.7.16.2

Making Call Alerts by Using the Contacts List

1 Press  to access the menu.

2 Press  or  to **Contacts**. Press  to select.

3 Press  or  to the required alias or ID. Press  to select.

4 Press  or  to **Call Alert**. Press  to select.

The display shows **Call Alert** and the subscriber alias or ID. The green LED lights up.

5 Wait for acknowledgment.

- If the acknowledgment is received, the display shows a positive mini notice.
- If the acknowledgment is not received, the display shows a negative mini notice.

5.7.16.3

Responding to Call Alerts

When you receive a Call Alert:

- A repetitive tone sounds.
- The yellow LED blinks.

- The display shows the notification list listing a Call Alert with the alias or ID of the calling radio.

Depending on the configuration by your dealer or system administrator, you can respond to a Call Alert by doing one of the following:

- Press the **PTT** button and respond with a Private Call directly to the caller.
- Press the **PTT** button to continue normal talkgroup communication. The Call Alert is moved to the Missed Call option at the Call Log menu. You can respond to the caller from the Missed Called log.

See [Notification List on page 159](#) and [Call Log Features on page 117](#) for more information.

5.7.17

Dynamic Caller Alias

This feature allows a Caller Alias to be configured in the radio.


When in a call, the receiving radio displays the Caller Alias of the transmitting radio.




The Caller Aliases list can store up to 500 Caller Aliases of transmitting radio. You can view or make Private Calls from the Caller Aliases list. When you turn off your radio, the history of receiving Caller Aliases is removed from the Caller Aliases list.




5.7.17.1




Viewing the Caller Aliases List

You can access the Caller Aliases list to view the transmitting Caller Alias details.

- 1 Press  to access the menu.

- 2 Press  or  to Caller Aliases. Press  to select.


- 3 Press  or  to the preferred list. Press  to select.


- 4 Press  or  to View Details. Press  to select.

5.7.17.2

Initiating Private Call From the Caller Aliases List

You can access the Caller Aliases list to initiate Private Call.

- 1 Press  to access the menu.

- 2 Press ▲ or ▼ to Caller Aliases. Press  to select.

- 3 Press ▲ or ▼ to the *<required Caller Alias>*.

- 4 To call, press and hold the **PTT** button.

5.7.18

Mute Mode

Mute Mode provides an option to silence all audio indicators on your radio.

When Mute Mode is initiated, all audio indicators are muted except higher priority features such as emergency operations.

When Mute Mode is exited, your radio resumes playing ongoing tones and audio transmissions.



IMPORTANT:

You can only enable either Face Down or Man Down one at a time. Both features cannot be enabled together.

5.7.18.1

Turning On Mute Mode

Follow the procedure to turn on Mute Mode.

Do one of the following:

- Access this feature by using the programmed **Mute Mode** button.
- Access this feature by placing the radio in a face-down position momentarily.

Depending on radio model, the Face Down feature can be enabled either through the radio menu or by

your system administrator. Check with your dealer or system administrator for more information.



IMPORTANT:

User can only enable either Man Down or Face Down at a time. Both features cannot be enabled together.



NOTICE:

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is enabled:

- Positive Indicator Tone sounds.
- Display shows `Mute Mode On`.
- The red LED light starts blinking and remains blinking until Mute Mode is exited.
- Display shows **Mute Mode** icon on home screen.
- Radio is muted.
- Mute Mode Timer begins counting down the duration that is configured.

5.7.18.2

Setting Mute Mode Timer

Mute Mode feature can be enabled for a pre-configured amount of time by setting the Mute Mode Timer. The timer duration is configured in the radio menu and can range between 0.5–6 hours. Mute Mode is exited once the timer expires.


If the timer is left at 0, the radio remains in Mute mode for an indefinite period until the radio is moved to a face-up position or the programmed **Mute Mode** button is pressed.






NOTICE:

Face Down feature is applicable to DP4601e only.




1


Press  to access the menu.


2

Press  or  to Utilities. Press  to select.

3

Press  or  to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Mute Timer. Press  to select.

5 Press ▲ or ▼ to edit the numeric value of each digit, and press .

5.7.18.3

Exiting Mute Mode

This feature can be exited automatically once the Mute Mode Timer expires.

Do one of the following to exit Mute mode manually:

- Press the programmed **Mute Mode** button.
- Press the **PTT** button on any entry.
- Place the radio in a face-up position momentarily.



NOTICE:

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is disabled:

- Negative Indicator Tone sounds.
- Display shows Mute Mode Off.
- The blinking red LED turns off.
- **Mute Mode** icon disappears from home screen.
- Your radio unmutes and speaker state is restored.
- If the timer has not expired, Mute mode timer is stopped.



NOTICE:

Mute Mode is also exited if the user transmits voice or switches to an unprogrammed channel.

5.7.19

Emergency Operation

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an Emergency at any time even when there is activity on the current channel.

In Capacity Max, the receiving radio can only support a single Emergency Alarm at a time. If initiated, a second Emergency Alarm will override the first alarm.

When an Emergency Alarm is received, the recipient may choose to either delete the alarm and exit the Alarm List, or

respond to the Emergency Alarm by pressing the **PTT** button and transmitting non-emergency voice.

Your dealer or system administrator can set the duration of a button press for the programmed **Emergency** button, except for long press, which is similar with all other buttons:

Short Press

Duration between 0.05 seconds and 0.75 seconds.

Long Press

Duration between 1.00 second and 3.75 seconds.

The **Emergency** button is assigned with the Emergency On/Off feature. Check with your dealer for the assigned operation of the **Emergency** button.



NOTICE:

If short press the **Emergency** button is assigned to turn on the Emergency mode, then long press the **Emergency** button is assigned to exit the Emergency mode.

If long press the **Emergency** button is assigned to turn on the Emergency mode, then short press the **Emergency** button is assigned to exit the Emergency mode.

Your radio supports three Emergency Alarms:

- Emergency Alarm

- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow

In addition, each alarm has the following types:

Regular

Radio transmits an alarm signal and shows audio and/or visual indicators.

Silent

Radio transmits an alarm signal without any audio or visual indicators. Radio receives calls without any sound through the speaker, until the programmed *hot mic* transmission period is over and/or you press the **PTT** button.

Silent with Voice

Radio transmits an alarm signal without any audio or visual indicators, but allow incoming calls to sound through the speaker. If *hot mic* is enabled, the incoming calls sound through the speaker after the programmed *hot mic* transmission period is over. The indicators only appear once you press the **PTT** button.



NOTICE:

Only one of the Emergency Alarms above can be assigned to the programmed **Emergency** button.

5.7.19.1

Sending Emergency Alarms

This feature allows you to send an Emergency Alarm, a non-voice signal, which triggers an alert indication on a group of radios. Follow the procedure to send Emergency Alarms on your radio.

Your radio does not display any audio or visual indicators during Emergency mode when it is set to Silent.

- 1 Press the programmed **Emergency On** button.

You see one of these results:

- The display shows Tx Alarms and the destination alias.
- The display shows Tx Telegram and the destination alias.

The green LED lights up. The **Emergency** icon appears.

**NOTICE:**

If programmed, the Emergency Search tone sounds. This tone is muted when the radio transmits or receives voice, and stops when the radio exits Emergency mode. The Emergency Search tone can be programmed by the dealer or system administrator.

-
- 2 Wait for acknowledgment.

If successful:

- The Emergency tone sounds.
- The green LED blinks.
- The display shows Alarm Sent.

If unsuccessful after all retries have been exhausted:

- A tone sounds.
- The display shows Alarm Failed.

The radio exits the Emergency Alarm mode and returns to the Home screen.



NOTICE:

When configured for Emergency Alarm only, the emergency process consists only of the Emergency Alarm delivery. The emergency ends when an acknowledgment is received from the system, or when channel access attempts have been exhausted.

No voice call is associated with the sending of an Emergency Alarm when operating as Emergency Alarm Only.

5.7.19.2

Sending Emergency Alarms with Call

This feature allows you to send an Emergency Alarm with Call to a group of radios or a dispatcher. Upon acknowledgment by the infrastructure within the group, a group of radios can communicate over a programmed Emergency channel.

The radio must be configured for Emergency Alarm and Call to perform an emergency call after the alarm process.

1 Press the programmed **Emergency On** button.

The display shows Tx Alarm and the destination alias. The **Emergency** icon appears. The green LED lights up.



NOTICE:

If your radio is programmed, the Emergency Search tone sounds. This tone is muted when the radio transmits or receives voice, and stops when the radio exits Emergency mode.

If an Emergency Alarm acknowledgment is successfully received:

- The Emergency tone sounds.
- The green LED blinks.
- The display shows Alarm Sent.
- Your radio enters the Emergency call mode when the display shows Emergency and the destination group alias.

If an Emergency Alarm acknowledgment is not successfully received:

- All retries are exhausted.
- A low-pitched tone sounds.

- The display shows `Alarm Failed`.
- The radio exits the Emergency Alarm mode.

2 Press the **PTT** button to initiate a voice transmission.

The green LED lights up. The display shows the **Group Call** icon.

3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

4 Release the **PTT** button to listen.

The display shows the caller and group aliases.

5 Press the **PTT** button to respond to the call.

If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.


6 Press the **Emergency Off** button to exit the Emergency mode.

The radio returns to the Home screen.



NOTICE:

Depending on how your radio is programmed, you may or may not hear a Talk Permit tone. Your radio dealer or system administrator can provide more information on how your radio has been programmed for Emergency.

The Emergency Call initiator may press  to end an on-going emergency call. The radio returns to a call idle state but the emergency call screen remains open.

5.7.19.3

Sending Emergency Alarms with Voice to Follow

This feature allows you to send an Emergency Alarm with Voice to Follow to a group of radios. Your radio microphone is automatically activated, allowing you to communicate

with the group of radios without pressing the **PTT** button. This activated microphone state is also known as *hot mic*.

If your radio has Emergency Cycle Mode enabled, repetitions of *hot mic* and receiving period are made for a programmed duration. During Emergency Cycle Mode, received calls sound through the speaker.

If you press the **PTT** button during the programmed receiving period, you hear a prohibit tone, indicating that you should release the **PTT** button. The radio ignores the **PTT** button press and remains in Emergency mode.

If you press the **PTT** button during *hot mic*, and continue to press it after the *hot mic* duration expires, the radio continues to transmit until you release the **PTT** button.

If the Emergency Alarm request fails, the radio does not retry to send the request, and enters the *hot mic* state directly.



NOTICE:

Some accessories may not support *hot mic*. Check with your dealer or system administrator for more information.

Follow the procedure to send Emergency Alarms with voice to follow on your radio.

1 Press the programmed **Emergency On** button.

You see one of these results:

- The display shows Tx Alarm and the destination alias.
- The display shows Tx Telegram and the destination alias.

The green LED lights up. The **Emergency** icon appears.

2 Once the display shows Alarm Sent, speak clearly into the microphone.

The radio automatically stops transmitting when:

- The cycling duration between *hot mic* and receiving calls expires, if Emergency Cycle Mode is enabled.
 - The *hot mic* duration expires, if Emergency Cycle Mode is disabled.
-

- 3 Press the **Emergency Off** button to exit the Emergency mode.

The radio returns to the Home screen.


5.7.19.4


Receiving Emergency Alarms


The receiving radio can only support a single Emergency Alarm at a time. If initiated, a second Emergency Alarm will override the first alarm. Follow the procedure to receive and view Emergency Alarms on your radio.


When you receive an Emergency Alarm:

- A tone sounds.
- The red LED blinks.
- The display shows the Emergency Alarm List, the Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.

- 1 Press  to view the alarm.
-

- 2 Press  to view the action options and details of the entry in the Alarm List.
-

- 3 Press  and select **Yes** to exit the Alarm list.
The radio returns to the home screen with an **Emergency Icon** displayed at the top, indicating the unresolved Emergency Alarm. The **Emergency Icon** disappears once the entry in the Alarm List is deleted.
-

- 4 Press  to access the menu.
-

- 5 Select **Alarm List** to revisit the Alarm list.
-

5.7.19.5

Responding to Emergency Alarms

When an Emergency Alarm is received, the recipient may choose to either delete the alarm and exit the Alarm List, or respond to the Emergency Alarm by pressing the **PTT** button and transmitting non-emergency voice. Follow the procedure to respond to Emergency Alarms on your radio.

1 If the Emergency Alarm Indication is enabled, the Emergency Alarm List appears when the radio receives an Emergency Alarm. Press ▲ or ▼ to the required alias or ID.

2 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to transmit non-emergency voice to the same group the Emergency Alarm targeted.

The green LED lights up.

3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

4 Release the **PTT** button to listen.

When the emergency initiating radio responds:

- The red LED blinks.

- The display shows the **Emergency Call** icon, the Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.



NOTICE:

If the Emergency Call Indication is not enabled, the display shows the **Group Call** icon, Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.

5.7.19.6

Responding to Emergency Alarms with Call

Follow the procedure to respond to Emergency Alarms with Call on your radio.

When you receive an Emergency Call:

- The Emergency Call Tone sounds if the Emergency Call Indication and Emergency Call Decode Tone is enabled. The Emergency Call Tone will not sound if only the Emergency Call Indication is enabled.
- The display shows the **Emergency Call** icon at the top right corner.

- The text line shows the Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.
 - Your radio unmutes and the incoming call sounds through the speaker.
- 1 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The green LED lights up.

- 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- 3 Release the **PTT** button to listen.

When the emergency initiating radio responds:

- The red LED blinks.
- The display shows the **Emergency Call** icon, the Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.

**NOTICE:**

If the Emergency Call Indication is not enabled, the display shows the **Group Call** icon, Emergency Talkgroup ID or alias, and the ID or alias of the transmitting radio.

5.7.19.7**Exiting Emergency Mode**

Press the programmed **Emergency Off** button.

Your radio shows the following indications:

- The tone ceased.
- The red LED extinguished.
- When acknowledgment is received, the display of the transmitting radio shows `Cancel Emer Success`. If no

acknowledgement is received, the display shows
Cancel Emer Failed.



NOTICE:

If the Cancel Emergency configuration is enabled on the transmitting radio, the emergency alarm in your receiving radio will cease and the status is added to the Alarm List of the receiving radio.

5.7.20

Text Messaging

Your radio is able to receive data, for example a text message, from another radio or a text message application.

There are two types of text messages, Digital Mobile Radio (DMR) Short Text Message and text message. The maximum length of a DMR Short Text Message is 23 characters. The maximum length of a text message is 280 characters, including the subject line. The subject line only appears when you receive messages from e-mail applications.




NOTICE:

The maximum character length is only applicable for models with the latest software and hardware. For radio models with older software and hardware, the maximum length of a text message is 140 characters. Contact your dealer for more information.

5.7.20.1

Text Messages


The text messages are stored in an Inbox, and sorted according to the most recently received.


The radio exits the current screen once the inactivity timer expires. Long press  at any time to return to the Home screen.


5.7.20.1.1

Viewing Text Messages

1


Press  to access the menu.

2 Press ▲ or ▼ to Messages. Press  to select.

3 Press ▲ or ▼ to Inbox. Press  to select.

If the Inbox is empty:

- The display shows List Empty.
 - A tone sounds, if the Keypad Tone is turned on.
-


4 Press ▲ or ▼ to the required message. Press  to select.

The display shows a subject line if the message is from an e-mail application.


5.7.20.1.2


Viewing Telemetry Status Text Messages

Follow the procedure to view a telemetry status text message from the inbox.

1 Press  to access the menu.


2 Press ▲ or ▼ to Messages. Press  to select.

3 Press ▲ or ▼ to Inbox. Press  to select.

4 Press ▲ or ▼ to the required message. Press  to select.

You cannot reply to a Telemetry Status text message.


The display shows Telemetry: <Status Text Message>.




5 Long press  to return to the Home screen.

5.7.20.1.3




Viewing Saved Text Messages

- 1 Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).

- Press  to access the menu.

2 Press  or  to Messages. Press  to select.

3 Press  or  to Drafts. Press  to select.

4 Press  or  to the required message. Press  to select.

5.7.20.1.4

Responding to Text Messages

When you receive a text message:










- The display shows the Notification list with the alias or ID of the sender.
- The display shows the **Message** icon.



NOTICE:

The radio exits the Text Message alert screen and sets up a Private or Group Call to the sender of the message if the **PTT** button is pressed.

1 Do one of the following:


- Press  or  to Read. Press  to select. The display shows the text message. The display shows a subject line if the message is from an e-mail application.
- Press  or  to Read Later. Press  to select. The radio returns to the screen you were on prior to receiving the text message.
- Press  or  to Delete. Press  to select.

2 Press  to return to the Inbox.

5.7.20.1.5

Responding to Text Messages with Quick Text



1 Do one of the following:



- Press the programmed **Text Message** button. Proceed to Step 3.
- Press  to access the menu.

2

Press  or  to Messages. Press  to select.

3

Press  or  to Inbox. Press  to select.

4 Press  or  to the required message. Press









to select.

The display shows a subject line if the message is from an e-mail application.

5

Press  to access the sub-menu.

6 Do one of the following:

- Press  or  to Reply. Press  to select.
- Press  or  to Quick Reply. Press  to select.

A blinking cursor appears. You can write or edit your message, if required.

7

Press  once message is composed.

The display shows a transitional mini notice, confirming the message is being sent.

8 Wait for acknowledgment.

If successful:

- A tone sounds.
- The display shows a positive mini notice.


If unsuccessful:


- A tone sounds.
 - The display shows a negative mini notice.
 - The radio returns to the Resend option screen.
-

5.7.20.1.6

Forwarding Text Messages

When you are at the Resend option screen:

- 1 Press ▲ or ▼ to Forward, and press  to send the same message to another subscriber or group alias or ID.
-

- 2 Press ▲ or ▼ to the required alias or ID. Press  to select.

The display shows a transitional mini notice, confirming your message is being sent.

- 3 Wait for acknowledgment.

If successful:

- A tone sounds.

- The display shows a positive mini notice.


If unsuccessful:

- A tone sounds.
 - The display shows a negative mini notice.
-

5.7.20.1.7

Resending Text Messages

When you are at the Resend option screen:

Press  to resend the same message to the same subscriber or group alias or ID.

If successful:


- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:




- A negative indicator tone sounds.
 - The display shows a negative mini notice.
 - The radio returns to the Resend option screen.
-




5.7.20.1.8




Deleting All Text Messages from the Inbox

- 1 Do one of the following:
 - Press the programmed **Text Message** button.
Proceed to [step 3](#).
 - Press  to access the menu.
-

- 2 Press  or  to Messages. Press  to select.
-


- 3 Press  or  to Inbox. Press  to select.
If the Inbox is empty:
 - The display shows List Empty.
 - A tone sounds.
-

- 4 Press  or  to Delete All. Press  to select.
-

- 5 Press  or  to Yes. Press  to select.
The display shows a positive mini notice.
-




5.7.20.1.9

Deleting Saved Text Messages from the Drafts Folder


- 1 Do one of the following:
 - Press the programmed **Text Message** button.
Proceed to [step 3](#).
 - Press  to access the menu.
-

- 2 Press  or  to Messages. Press  to select.
-

- 3 Press  or  to Drafts. Press  to select.
-

- 4 Press  or  to the required message. Press  to select.
-

5

Press ▲ or ▼ to Delete. Press  to delete the text message.

5.7.20.2

Sent Text Messages


Once a message is sent to another radio, it is saved in Sent Items folder. The most recent sent text message is always added to the top of the Sent Items folder. You can resend, forward or delete a Sent text message.

The Sent Items folder is capable of storing a maximum of 30 last sent messages. When the folder is full, the next sent text message automatically replaces the oldest text message in the folder.

If you exit the message sending screen while the message is being sent, the radio updates the status of the message in the Sent Items folder without providing any indication in the display or via sound.

If the radio changes mode or powers down before the status of the message in Sent Items folder is updated, the radio cannot complete any In-Progress messages and automatically marks it with a **Send Failed** icon.

The radio supports a maximum of five In-Progress messages at one time. During this period, the radio cannot send any new message and automatically marks it with a **Send Failed** icon.

If you long press  at any time, the radio returns to the Home screen.




NOTICE:

If the channel type, for example a conventional digital or Capacity Plus channel, is not a match, you can only edit, forward, or delete a Sent message.


5.7.20.2.1

Viewing Sent Text Messages

- Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).
 - Press  to access the menu.
-


2

Press ▲ or ▼ to Messages. Press  to select.

3 Press ▲ or ▼ to Sent Items. Press  to select.

If the Sent Items folder is empty:

- The display shows List Empty.
- A low tone sounds, if the Keypad Tone is turned on.

4 Press ▲ or ▼ to the required message. Press  to select.

The display shows a subject line if the message is from an e-mail application.

5.7.20.2.2

Sending Sent Text Messages

When you are viewing a Sent message:

1 Press  .

2 Press ▲ or ▼ to Resend. Press  to select.

The display shows a transitional mini notice, confirming your message is being sent.

3 Wait for acknowledgment.

If successful:

- A tone sounds.
- The display shows a positive mini notice.

If unsuccessful:


- A tone sounds.
- The display shows a negative mini notice.
- The radio proceeds to the Resend option screen. See [Resending Text Messages on page 138](#) for more information.

5.7.20.2.3

Deleting All Sent Text Messages from the Sent Items Folder

Follow the procedure to delete all sent text messages from the Sent Items folder on your radio.




1 Do one of the following:

- Press the programmed **Text Message** button. Proceed to [step 3](#).
- Press  to access the menu.

2

Press  or  to `Messages`. Press  to select.




3

Press  or  to `Sent Items`. Press  to select.







If the Sent Items folder is empty:

- The display shows `List Empty`.
- A tone sounds.

4

Press  or  to `Delete All`. Press  to select.

5 Do one of the following:

- Press  or  to `Yes`. Press  to select. The display shows a positive mini notice.
- Press  or  to `No`. Press  to select. The radio returns to the previous screen.

5.7.20.3

Quick Text Messages

5.7.20.3.1

Sending Quick Text Messages

Follow the procedure to send predefined Quick Text messages on your radio to a predefined alias.

1 Press the programmed **One Touch Access** button.

The display shows a transitional mini notice, confirming the message is being sent.

2 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
 - The radio proceeds to the **Resend** option screen. See [Resending Text Messages on page 138](#) for more information.
-

based scrambling solution. The signaling and user identification portions of a transmission are not scrambled.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission, although this is not a necessary requirement for receiving a transmission. While on a privacy-enabled channel, the radio is still able to receive clear or unscrambled transmissions.

Your radio supports Enhanced Privacy.

To unscramble a privacy-enabled call or data transmission, your radio must be programmed to have the same Key Value and Key ID for Privacy as the transmitting radio.

If your radio receives a scrambled call that is of a different Key Value and Key ID, you hear nothing at all for Enhanced Privacy.

On a privacy-enabled channel, your radio is able to receive clear or unscrambled calls, depending on how your radio is programmed. In addition, your radio may play a warning tone or not, depending on how it is programmed.



NOTICE:

This feature is not applicable in Citizens Band channels that are in the same frequency.

5.7.21

Privacy

This feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software-

The green LED lights up when the radio is transmitting, and blinks rapidly when the radio is receiving an ongoing privacy-enabled transmission.



NOTICE:

Some radio models may not offer this Privacy feature, or may have a different configuration. Check with your dealer or system administrator for more information.

5.7.21.1

Status Message

This feature allows the user to send status messages to other radios.

The Quick Status list is configured by using CPS-RM and comprises up to a maximum of 99 statuses.

The maximum length for each status message is 16 characters.




NOTICE:




Every status has a corresponding digital value ranging from 0–99. An alias can be specified to each status for ease of reference.




5.7.21.1.1




Sending Status Messages




Follow the procedure below to send a status message.

- 1 Do one of the following:
 - Press the programmed **One Touch Access** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press  or  to Status. Press  to select.

- 3 Press  or  to Quick Status. Press  to select.

- 4 Press  or  to the required status message. Press  to select.

- 5 Press  or  to the required subscriber alias or ID, or group alias or ID. Press  to select.

If successful:

- A positive indicator tone sounds.
- The LED turns off.
- The display shows a positive mini notice momentarily before returning to the **Quick Status** screen.
- The display shows ✓ beside the sent status message.

If unsuccessful:

- A negative indicator tone sounds.
- The LED turns off.
- The display shows the failure notice momentarily before returning to the **Quick Status** screen.


5.7.21.1.2


Sending Status Message by Using Programmable Button

Follow the procedure to send a status message by using the programmable button.

1 Press the programmed **Status Message** button.

2 Press ▲ or ▼ to the required status message.

Press  to select. The contact list is displayed.

3 Press ▲ or ▼ to the required subscriber alias or ID, or group alias or ID. Press  to select.

If successful:

- A positive indicator tone sounds.
- The LED turns off.
- The display shows a positive mini notice momentarily before returning to the **Quick Status** screen.
- The display shows ✓ beside the sent status message.


If unsuccessful:




- A negative indicator tone sounds.
- The LED turns off.
- The display shows the failure notice momentarily before returning to the **Quick Status** screen.




5.7.21.1.3




Sending a Status Message by Using the Contacts List




Follow the procedure to send a status message by using the contacts list.

- 1 Press  to access the menu.

- 2 Press  or  to `Contacts`. Press  to select.

- 3 Press  or  to the required subscriber alias or ID, or group alias or ID. Press  to select.

- 4 Press  or  to `Send Status`. Press  to select.

- 5 Press  or  to the required status message.
Press  to select.

If successful:

- A positive indicator tone sounds.
- The LED turns off.
- The display shows a positive mini notice momentarily before returning to the `Quick Status` screen.
- The display shows ✓ beside the sent status message.


If unsuccessful:




- A negative indicator tone sounds.
- The LED turns off.
- The display shows the failure notice momentarily before returning to the `Quick Status` screen.




5.7.21.1.4

Sending Status Message by Using Manual Dial

Follow the procedure to send a status message by using the manual dial.


- 1 Press  to access the menu.


- 2 Press  or  to `Contacts`. Press  to select.

- 3 Press  or  to `Manual Dial`. Press  to select.

4 Press ▲ or ▼ to Radio Number. Press  to select.

5 Enter the required subscriber alias or ID, or group alias or ID, and press  to proceed.

6 Press ▲ or ▼ to Send Status. Press  to select.

7 Press ▲ or ▼ to the required status message. Press  to select.

If successful:

- A positive indicator tone sounds.
- The LED turns off.
- The display shows a positive mini notice momentarily before returning to the Quick Status screen.
- The display shows ✓ beside the sent status message.

If unsuccessful:


- A negative indicator tone sounds.

- The LED turns off.
- The display shows the failure notice momentarily before returning to the Quick Status screen.

5.7.21.1.5


Viewing Status Messages

Follow the procedure to view status messages.

1 Press  to access the menu.

2 Press ▲ or ▼ to Status. Press  to select.

3 Press ▲ or ▼ to Inbox. Press  to select.

4 Press ▲ or ▼ to the required status message. Press  to select.


The content of the status message is displayed to the radio user.




Received status messages can also be viewed by accessing the Notification List. See [Notification List on page 159](#) for more information.




5.7.21.1.6




Responding to Status Messages


Follow the procedure to reply status messages.

- 1 Press  to access the menu.




- 2 Press  or  to Status. Press  to select.

- 3 Press  or  to Inbox. Press  to select.

- 4 Press  or  to the required status message.
Press  to select.

- 5 The content of the status is displayed. Press  to select.

- 6 Press  or  to Reply. Press  to select.

- 7 Press  or  to the required status message.
Press  to select.

If successful:

- A positive indicator tone sounds.
- The LED turns off.
- The display shows a positive mini notice before returning to the Inbox screen.
- The display shows ✓ beside the sent status message.


If unsuccessful:




- A negative indicator tone sounds.
- The LED turns off.
- The display shows the failure notice momentarily before returning to the Inbox screen.




5.7.21.1.7




Deleting a Status Message


Follow the procedure to delete a status message from your radio.




- 1 Press  to access the menu.

- 2 Press  or  to Status. Press  to select.




- 3 Press  or  to Inbox. Press  to select.

- 4 Press  or  to the required status message.
Press  to select.

- 5 The content of the status is displayed. Press  to select.

- 6 Press  or  to Delete. Press  to select.

7


Press  or  to Yes. Press  to select.




- The display shows a positive mini notice before returning to the Inbox screen.




5.7.21.1.8




Deleting All Status Messages

Follow the procedure to delete all status messages from your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Status. Press  to select.

- 3 Press  or  to Inbox. Press  to select.

- 4 Press  or  to Delete All. Press  to select.

5 Press ▲ or ▼ to Yes. Press  to select.


- The display shows List Empty.


5.7.21.2


Turning Privacy On or Off


Follow the procedure to turn privacy on or off on your radio.

1 Do one of the following:



- Press the programmed **Privacy** button. Skip the steps below.
 - Press  to access the menu.
-

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Privacy. Press  to select.

5 Do one of the following:

- Press ▲ or ▼ to On. Press  to select. The display shows ✓ beside On.
 - Press ▲ or ▼ to Off. Press  to select. The display shows ✓ beside Off.
-

5.7.22

Response Inhibit

This feature helps prevent your radio from responding to any incoming transmissions.



NOTICE:

Contact your dealer to determine how your radio has been programmed.

If enabled, your radio does not generate any outgoing transmissions in respond to incoming transmissions, such as Radio Check, Call Alert, Radio Disable, Remote Monitor, Automatic Registration Service (ARS), Responding to Private Messages, and Sending GNSS location reports.

Your radio cannot receive Confirmed Private Calls when this feature is enabled. However, your radio is able to manually send transmission.

5.7.22.1

Turning Response Inhibit On or Off

Follow the procedure to enable or disable Response Inhibit on your radio.

Press the programmed **Response Inhibit** button.

If successful:

- A positive indicator tone sounds.
- The display shows a momentary positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a momentary negative mini notice.

5.7.23

Stun/Revive

This feature allows you to enable or disable any radio in the system. For example, the dealer or system administrator

may want to disable a stolen radio to prevent unauthorized users from using it, and enable the radio when it is recovered.

A radio can be disabled (stunned) or enabled (revived) either through the console or through a command initiated by another radio.

Once a radio is disabled, the radio sounds a negative indicator tone and the home screen shows `Channel Denied`.

When a radio is stunned, the radio cannot request nor receive any user initiated services on the system that performed the Stun procedure. However, the radio can switch to another system. The radio continues to send GNSS location reports and can be monitored remotely when it was stunned.



NOTICE:

The dealer or system administrator may permanently disable a radio. See [Radio Kill on page 155](#) for more information.

5.7.23.1

Stunning a Radio

Follow the procedure to disable a radio.

1 Press the programmed **Radio Disable** button.

2 Press ▲ or ▼ to the required alias or ID. Press



to select.

The display shows `Radio Disable: <Subscriber Alias or ID>`. The green LED blinks.

3 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:


- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

5.7.23.2


Stunning a Radio by Using the Contacts List

Follow the procedure to disable a radio by using the Contacts List.


1

Press  to access the menu.


2

Press ▲ or ▼ to `Contacts`. Press  to select.

3

Press ▲ or ▼ to the required alias or ID. Press  to select.

4

Press ▲ or ▼ to `Radio Disable`. Press  to select.

The display shows `Radio Disable: <Subscriber Alias or ID>`. The green LED blinks.

5

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.








If unsuccessful:


- A negative indicator tone sounds.
- The display shows a negative mini notice.




5.7.23.3

Stunning a Radio by Using the Manual Dial

Follow the procedure to disable a radio by using the manual dial.

- 1 Press  to access the menu.
- 2 Press  or  to **Contacts**. Press  to select.
- 3 Press  or  to **Manual Dial**. Press  to select.

- 4 Enter the subscriber ID, and press  to proceed.

- 5 Press  or  to **Radio Disable**. Press  to select.

The display shows a transitional mini notice, indicating the request is in progress. The green LED blinks.

- 6 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a negative mini notice.

5.7.23.4

Reviving a Radio

Follow the procedure to enable a radio.

1 Press the programmed **Radio Enable** button.

2 Press ▲ or ▼ to the required alias or ID. Press



to select.

The display shows Radio Enable: <Subscriber Alias or ID>. The green LED lights up.

3 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:


- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

5.7.23.5


Reviving a Radio by Using the Contacts List

Follow the procedure to enable a radio by using the Contacts List.


1

Press  to access the menu.


2

Press ▲ or ▼ to Contacts. Press  to select.

3

Press ▲ or ▼ to the required alias or ID. Press  to select.

4

Press ▲ or ▼ to Radio Enable. Press  to select.

The display shows Radio Enable: <Subscriber Alias or ID>. The green LED lights up.

5

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.








If unsuccessful:




- A negative indicator tone sounds.
- The display shows a negative mini notice.

5.7.23.6


Reviving a Radio by Using the Manual Dial

Follow the procedure to enable a radio by using the Manual Dial.

- 1 Press  to access the menu.
- 2 Press  or  to `Contacts`. Press  to select.
- 3 Press  or  to `Manual Dial`. Press  to select.

- 4 Press  or  to `Private Call`. Press  to select.

The first text line shows `Radio Number:`.

- 5 Enter the subscriber ID, and press  to proceed.

- 6 Press  or  to `Radio Enable`. Press  to select.

The green LED lights up.

5.7.24

Radio Kill

This feature is an enhanced security measure to restrict unauthorized access to a radio.

Radio Kill causes a radio to be rendered inoperable. For example, the dealer may want to kill a stolen or misplaced radio to prevent unauthorized usage.

When powered on, a killed radio displays `Radio Killed` on the screen momentarily to indicate the killed state.

**NOTICE:**

A killed radio can only be revived at a Motorola Solutions service depot. Contact your dealer for more information.

5.7.25

Lone Worker

This feature prompts an emergency to be raised if there is no user activity, such as any radio button press or activation of the channel selector, for a predefined time.

Following no user activity for a programmed duration, the radio pre-warns you using an audio indicator once the inactivity timer expires.

If there is still no acknowledgment by you before the predefined reminder timer expires, the radio initiates an emergency condition as programmed by the dealer.

5.7.26

Password Lock

You can set a password to restrict access to your radio. Each time you turn on your radio, you are asked to enter the password.

Your radio supports a 4-digit password input.

Your radio is unable to receive calls in locked state.

5.7.26.1

Accessing the Radio by Using Password

Turn on your radio.

- 1 Enter the four-digit password.
 - a To edit the numeric value of each digit, press ▲ or ▼. To enter and move to the next digit, press



-
- 2 Press  to confirm the password.
-

If you enter the password correctly, the radio powers up.

If you enter the wrong password after the first and second attempt, your radio shows the following indications:

- A continuous tone sounds.
- The display shows Wrong Password.

Repeat [step 1](#).

If you enter the wrong password after the third attempt, your radio shows the following indications:

- A tone sounds.
- The yellow LED double blinks.
- The display shows Wrong Password and then, Radio Locked.
- Your radio enters into locked state for 15 minutes.



NOTICE:

In locked state, your radio responds to inputs from the **On/Off/Volume Control Knob** and programmed **Backlight** button only.

Wait for the 15-minute locked state timer to end and then repeat [step 1](#).




NOTICE:




If you turn off and turn your radio on again, the 15-minute timer restarts.




5.7.26.2




Turning Password Lock On or Off




Follow the procedure to turn password lock on or off on your radio.

- 1 Press  to access the menu.


- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Passwd Lock. Press  to select.




- 5 Enter the current four-digit password.
 - Use a keypad microphone.
 - Press  or  to edit the numeric value of each digit, and press  to enter and move to the next digit.

A positive indicator tone sounds for every digit pressed.




6 Press  to enter the password.

If the password is incorrect, the display shows `Wrong Password` and automatically returns to the previous menu.

7 Do one of the following:

- Press  or  to Turn On. Press  to select.

The display shows `✓` beside Turn On.

- Press  or  to Turn Off. Press  to select.

The display shows `✓` beside Turn Off.

5.7.26.3

Unlocking Radios in Locked State

Your radio is unable to receive calls in locked state. Follow the procedure to unlock your radio in locked state.

Do one of the following:


- If the radio is powered on, wait for 15 minutes and then repeat the steps in [Accessing the Radio by Using Password on page 156](#) to access the radio.
- If the radio is powered off, power up the radio. Your radio restarts the 15-minute timer for locked state. A tone sounds. The yellow LED double blinks. The display shows `Radio Locked`.




Wait for 15 minutes and then repeat the steps in [Accessing the Radio by Using Password on page 156](#) to access the radio.


5.7.26.4


Changing Passwords


Follow the procedure to change passwords on your radio.

1 Press  to access the menu.


2 Press  or  to Utilities. Press  to select.


3 Press ▲ or ▼ to Radio Settings. Press  to select.


4 Press ▲ or ▼ to Passwd Lock. Press  to select.

5 Enter the current four-digit password, and press  to proceed.

If the password is incorrect, the display shows Wrong Password and automatically returns to the previous menu.

6 Press ▲ or ▼ to Change PWD. Press  to select.

7 Enter a new four-digit password, and press  to proceed.

8 Re-enter the new four-digit password, and press  to proceed.

If successful, the display shows Password Changed. If unsuccessful, the display shows Passwords Do Not Match.

The screen automatically returns to the previous menu.

5.7.27

Notification List

Your radio has a Notification list that collects all your unread events on the channel, such as unread text messages, telemetry messages, missed calls, and call alerts.

The display shows the **Notification** icon when the Notification list has one or more events.


The list supports a maximum of 40 unread events. When the list is full, the next event automatically replaces the oldest event. After the events are read, they are removed from the Notification list.


For text messages, missed calls, and call alert events, the maximum number of notifications are 30 text messages and 10 missed calls or call alerts. This maximum number depends on individual feature (job tickets or text messages or missed calls or call alerts) list capability.




5.7.27.1

Accessing Notification List




Follow the procedure to access the Notification list on your radio.

- 1 Do one of the following:
 - Press the programmed **Notification** button. Skip the steps below.
 - Press  to access the menu.

- 2 Press  to access the menu.

- 3 Press  or  to Notification. Press  to select.

4

Press  or  to the required event. Press  to select.

Long press  to return to the Home screen.

5.7.28

Over-the-Air Programming

Your dealer can remotely update your radio by using Over-the-Air Programming (OTAP) without physical connection. Additionally, some settings can also be configured by using OTAP.

When your radio undergoes OTAP, the green LED blinks.

When your radio receives high volume data:

- The display shows the **High Volume Data** icon.
- The channel becomes busy.
- A negative tone sounds if you press the **PTT** button.

When OTAP completes, depending on the configuration:

- A tone sounds. The display shows *Updating* *Restarting*. Your radio restarts by powering off and on again.

- You can select **Restart Now** or **Postpone**. When you select **Postpone**, your radio returns to the previous screen. The display shows the **OTAP Delay Timer** icon until the automatic restart occurs.

When your radio powers up after automatic restart:

- If successful, the display shows **Sw Update Completed**.
- If the program update is unsuccessful, a tone sounds, the red LED blinks once, and the display shows **Sw Update Failed**.



NOTICE:

If the programming update is unsuccessful, the software update failure indications appear every time you turn on your radio. Contact your dealer to reprogram your radio with the latest software to eliminate the software update failure indications.

See [Checking Software Update Information on page 191](#) for the updated software version.

5.7.29



Received Signal Strength Indicator

This feature allows you to view the Received Signal Strength Indicator (RSSI) values.

The display shows the **RSSI** icon at the top right corner. See [Display Icons](#) for more information on the **RSSI** icon.

5.7.29.1

Viewing RSSI Values

At the home screen, press  three times and immediately press , all in 5 seconds.

The display shows the current RSSI values.

To return to the home screen, press and hold .

5.7.30

Front Panel Programming

You are able to customize certain feature parameters in Front Panel Programming (FPP) to enhance the use of your radio.

The following buttons are used as required while navigating through the feature parameters.

Up/Down Navigation Button

Press to navigate through options horizontally or vertically, or increase or decrease values.

Menu/OK Button

Press to select the option or enter a sub-menu.


Return/Home Button




Short press to return to the previous menu or exit the selection screen.




Long press at any time to return to the Home screen.

5.7.30.1

Entering Front Panel Programming Mode

- 1 Press  to access the menu.





- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Program Radio. Press  to select.

5.7.30.2

Editing Mode Parameters

Use the following buttons as required while navigating through the feature parameters.

-  ,  – Scroll through options, increase/decrease values, or navigate vertically.
-  – Select the option or enter a sub-menu.
-  – Short-press to return to previous menu or to exit the selection screen. Long-press to return to Home screen.

5.7.31

Wi-Fi Operation

This feature allows you to set up and connect to a Wi-Fi network. Wi-Fi supports updates for radio firmware, codeplug, and resources such as language packs and voice announcement.

**NOTICE:**

This feature is applicable to DP4601e only.

Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

Your radio supports WEP/WPA/WPA2-Personal and WPA/WPA2-Enterprise Wi-Fi networks.

WEP/WPA/WPA2-Personal Wi-Fi network

Uses pre-shared key (password) based authentication.

Pre-shared key can be entered by using the menu or CPS/RM.

WPA/WPA2-Enterprise Wi-Fi network

Uses certificate-based authentication.

Your radio must be pre-configured with a certificate.



NOTICE:

Check with your dealer or system administrator to connect to WPA/WPA2-Enterprise Wi-Fi network.

The programmed **Wi-Fi On or Off** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.


Voice Announcements for the programmed **Wi-Fi On or Off** button can be customized through CPS according to user requirements. Check with your dealer or system administrator for more information.




5.7.31.1




Turning Wi-Fi On or Off


- 1 Press the programmed **Wi-Fi On or Off** button. Voice Announcement sounds Turning On Wi-Fi or Turning Off Wi-Fi.
-

- 2 Access this feature using the menu.

- a Press  to access the menu.

- b Press  or  to WiFi and press  to select.

- c Press  or  to WiFi On and press  to select.

- d Press  to turn on/off Wi-Fi.

If Wi-Fi is on, the display shows ✓ beside Enabled.

If Wi-Fi is off, the ✓ disappears from beside Enabled.







5.7.31.2

Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Individual Control)




You can turn Wi-Fi on or off remotely in Individual Control (One to One).


NOTICE:

Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.

- 1 Do one of the following:
 - Long press the programmable button. Use the  keypad to enter the ID and press  to select. Proceed to [step 3](#).
 - Press  to access the menu.
-
- 2 Press  or  to **Contacts** and press  to select.

3

Press  or  to **WiFi Control** and press  to select.

4

Press  or  to select **On** or **Off**.

5

Press  to select.

If successful, the display shows a positive mini notice.

If unsuccessful, the display shows a negative mini notice.


5.7.31.3




Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Group Control)



You can turn Wi-Fi on or off remotely in Group Control (One to Many).





NOTICE:



Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.


- 1 Press  to access the menu.

- 2 Press  or  to `Contacts` and press  to select.

- 3 Press  or  to select the required subscriber alias or ID.

- 4 Press  or  to `WiFi Control` and press  to select.

- 5 Press  or  to select `On` or `Off`.

- 6 Press  to select.

If successful, the display shows `Sent Successfully`.

If unsuccessful, the display shows a negative mini notice.

5.7.31.4

Connecting to a Network Access Point


When you turn on Wi-Fi, the radio scans and connects to a network access point.









NOTICE:


You can also connect to a network access point using the menu.

The WPA-Enterprise Wi-Fi network access points are pre-configured. Check with your dealer or system administrator to determine how your radio has been programmed.

- 1 Press  to access the menu.

- 2 Press  or  to `WiFi` and press  to select.

- 3 Press  or  to `Networks` and press  to select.

- 4 Press ▲ or ▼ to a network access point and press  to select.

**NOTICE:**

For WPA-Enterprise Wi-Fi, if a network access point is not preconfigured, the `Connect` option is not available.

- 5 Press ▲ or ▼ to `Connect` and press  to select.

- 6 For WPA-Enterprise Wi-Fi, password is configured by using RM.

If the preconfigured password is correct, your radio automatically connects to the selected network access point.

If the preconfigured password is incorrect, the display shows `Authentication Failure`, and automatically returns to the previous menu.

If the connection is successful, the radio displays a notice and the network access point is saved into the profile list.

If the connection is unsuccessful, the radio displays shows the failure notice screen momentarily and automatically returns to the previous menu.

5.7.31.5

Checking Wi-Fi Connection Status

Press the programmed **Wi-Fi Status Query** button for the connection status by using Voice Announcement. Voice Announcement sounds `Wi-Fi is Off`, `Wi-Fi is On but No Connection`, or `Wi-Fi is On with Connection`.

- The display shows `WiFi Off` when the Wi-Fi is turned off.
- The display shows `WiFi On, Connected` when the radio is connected to a network.
- The display shows `WiFi On, Disconnected` when the Wi-Fi is turned on but the radio is not connected to any network.


Voice Announcements for the Wi-Fi status query results can be customized through CPS according to

user requirements. Check with your dealer or system administrator for more information.




NOTICE:

The programmed **Wi-Fi Status Query** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

- c. Press ▲ or ▼ to `Networks` and press  to select.

When you enter the `Networks` menu, the radio automatically refreshes the network list.

- If you are already in the `Networks` menu, perform the following action to refresh the network list.


Press ▲ or ▼ to `Refresh` and press  to select.


The radio refreshes and displays the latest network list.

5.7.31.6

Refreshing the Network List

- Perform the following actions to refresh the network list through the menu.

a. Press  to access the menu.

b. Press ▲ or ▼ to `WiFi` and press  to select.

5.7.31.7


Adding a Network









NOTICE:




This task is not applicable to WPA-Enterprise Wi-Fi networks.


If a preferred network is not in the available network list, perform the following actions to add a network.




- 1 Press  to access the menu.


- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to Add Network and press  to select.

- 5 Enter the Service Set Identifier (SSID) and press  .


- 6 Press  or  to Open and press  to select.




- 7 Enter the password and press  .
The radio displays a positive mini notice to indicate that the network is successfully saved.




5.7.31.8




Viewing Details of Network Access Points


You can view details of network access points.

- 1 Press  to access the menu.

- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to a network access point and press  to select.

- 5 Press ▲ or ▼ to View Details and press  to select.



NOTICE:

WPA-Personal Wi-Fi and WPA-Enterprise Wi-Fi display different details of Network Access Points.

WPA-Personal Wi-Fi

For a connected network access point, your radio displays Service Set Identifier (SSID), Security Mode, Media Access Control (MAC) address, and Internet Protocol (IP) address.

For a non-connected network access point, your radio displays SSID and Security Mode.

WPA-Enterprise Wi-Fi

For a connected network access point, your radio displays SSID, Security Mode, Identity, Extended Authentication Protocol (EAP) Method, Phase 2 Authentication, Cert Name, MAC address, IP address, Gateway, DNS1, and DNS2.

For a non-connected network access point, your radio displays SSID, Security Mode, Identity, EAP Method, Phase 2 Authentication, and Cert Name.

5.7.31.9


Removing Network Access Points





NOTICE:


This task is not applicable to Enterprise Wi-Fi networks.


Perform the following actions to remove network access points from the profile list.

- 1 Press  to access the menu.


- 2 Press ▲ or ▼ to WiFi and press  to select.

- 3 Press ▲ or ▼ to Networks and press  to select.

- 4 Press ▲ or ▼ to the selected network access point and press  to select.

- 5 Press ▲ or ▼ to Remove and press  to select.

6

Press ▲ or ▼ to Yes and press  to select.

The radio displays a positive mini notice to indicate that the selected network access point is successfully removed.

5.8

Utilities

This chapter explains the operations of the utility functions available in your radio.

5.8.1

Keypad Lock Options

With this feature, you can avoid accidentally pressing buttons or changing channels when your radio is not in use. You can choose to either lock your keypad, channel selector knob, or both; depending on your requirements.

Your dealer can use CPS/RM to configure one of the following options:

- Lock Keypad
- Lock Channel Selector Knob

- Lock Keypad and Channel Selector Knob

Contact your dealer to determine how your radio has been programmed.

5.8.1.1

Enabling the Keypad Lock Option

The following steps are applicable for either Lock Keypad, Lock Channel Selector Knob, or Lock Keypad and Channel Selector Knob option depending on how your radio has been configured.

Press the programmed **Keypad Lock** button.

The display shows **Locked**.

5.8.1.2

Disabling the Keypad Lock Option

The following steps are applicable for either Lock Keypad, Lock Channel Selector Knob, or Lock Keypad and Channel Selector Knob option depending on how your radio has been configured.


Press the programmed **Keypad Lock** button.




The display shows `Unlocked`.




5.8.2




Identifying Cable Type



Do the following steps to select the type of cable your radio uses.

- 1 Press  to access the menu.

- 2 Press  or  to `Utilities`. Press  to select.

- 3 Press  or  to `Radio Settings`. Press  to select.

- 4 Press  or  to `Cable Type`. Press  to select.


- 5 Press  or  to change the selected option.




The current cable type is indicated by a .




5.8.3




Setting Menu Timer




You can set the time your radio stays in the menu before it automatically switches to the Home screen. Follow the procedure to set the menu timer.

- 1 Press  to access the menu.


- 2 Press  or  to `Utilities`. Press  to select.

- 3 Press  or  to `Radio Settings`. Press  to select.

- 4 Press  or  to `Display`. Press  to select.

- 5 Press  or  to `Menu Timer`. Press  to select.

6

Press ▲ or ▼ to the required setting. Press  to select.

5.8.4

Text-to-Speech

The Text-to-Speech feature can only be enabled by your dealer. If Text-to-Speech is enabled, the Voice Announcement feature is automatically disabled. If Voice Announcement is enabled, then the Text-to-Speech feature is automatically disabled.

This feature enables the radio to audibly indicate the following features:

- Current Channel
- Current Zone
- Programmed button feature on or off
- Content of received text messages
- Content of received Job Tickets


This audio indicator can be customized per customer requirements. This feature is typically useful when the user is in a difficult condition to read the content shown on the display.

5.8.4.1

Setting Text-to-Speech

Follow the procedure to set the Text-to-Speech feature.


1

Press  to access the menu.


2

Press ▲ or ▼ to Utilities. Press  to select.


3

Press ▲ or ▼ to Radio Settings. Press  to select.

4

Press ▲ or ▼ to Voice Announcement. Press  to select.

5

Press ▲ or ▼ to any of the following features.
Press  to select.

The available features are as follows:

- All
- Messages





- Job Tickets
- Channel
- Zone
- Program Button

✓ appears beside the selected setting.


5.8.5




Turning the Acoustic Feedback Suppressor Feature On or Off



This feature allows you to minimize acoustic feedback in received calls.

- 1 Press  to access the menu.
- 2 Press  or  to Utilities and press  to select.



- 3 Press  or  to Radio Settings and press

 to select.

- 4 Press  or  to AF Suppressor and press  to select.

You can also use  or  buttons to change the selected option.

- 5 Do one of the following.

- Press  to enable Acoustic Feedback Suppressor. The display shows ✓ beside Enabled.
- Press  to disable Acoustic Feedback Suppressor. The ✓ disappears from beside Enabled.

5.8.6

Turning Global Navigation Satellite System On or Off

Global Navigation Satellite System (GNSS) is a satellite navigation system that determines the radio precise location. GNSS includes Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), and BeiDou Navigation Satellite System (BDS).




NOTICE:




Selected radio models may offer GPS, GLONASS, and BDS. GNSS constellation is configured by using CPS. Check with your dealer or system administrator to determine how your radio has been programmed.

1




2 Do one of the following steps to toggle GNSS on or off on your radio.

- Press the programmed **GNSS** button.
- Press  to access the menu. Proceed to the next step.

3

Press  or  to Utilities. Press  to select.


4

Press  or  to Radio Settings. Press  to select.

5

Press  or  to GNSS. Press  to select.

6

Press  to enable or disable GNSS.


If enabled, ✓ appears beside Enabled.




If disabled, ✓ disappears beside Enabled.




5.8.7




Turning Introduction Screen On or Off




You can enable and disable the Introduction Screen by following the procedure.




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Display. Press  to select.


- 5 Press  or  to Intro Screen. Press  to select.




- 6 Press  to enable or disable the Introduction Screen.
The display shows one of the following results:
 - If enabled,  appears beside Enabled.
 - If disabled,  disappears beside Enabled.




5.8.8




Turning Radio Tones/Alerts On or Off

You can enable and disable all radio tones and alerts, if needed, except for incoming Emergency alert tone . Follow the procedure to turn tones and alerts on or off on your radio.


- 1 Do one of the following:
 - Press the programmed **Tones/Alerts** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to All Tones. Press  to select.


6 Press  to enable or disable all tones and alerts. The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-


5.8.9


Setting Tones/Alerts Volume Offset Levels


This feature adjusts the volume of the tones or alerts, allowing it to be higher or lower than the voice volume. Follow the procedure to set the tones and alerts volume offset levels on your radio.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.



3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to Vol. Offset. Press  to select.

6 Press ▲ or ▼ to the required volume offset level. A feedback tone sounds with each corresponding volume offset level.


7 Do one of the following:




- Press  to select. The required volume offset level is saved.
 - Press  to exit. The changes are discarded.
-




5.8.10




Turning Talk Permit Tone On or Off




Follow the procedure to turn Talk Permit Tone on or off on your radio.

- 1 Press  to access the menu.


- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alerts. Press  to select.

- 5 Press  or  to Talk Permit. Press  to select.

6

Press  to enable or disable the Talk Permit Tone.


The display shows one of the following results:




- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.




5.8.11


Turning Power Up Tone On or Off

Follow the procedure to turn Power Up Tone on or off on your radio.


- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to Power Up. Press  to select.


6 Press  to enable or disable the Power Up Tone. The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.


5.8.12

Setting Text Message Alert Tones

You can customize the text message alert tone for each entry in the Contacts list. Follow the procedure to set the text message alert tones on your radio.

1 Press  to access the menu.

2 Press ▲ or ▼ to Contacts. Press  to select.


3 Press ▲ or ▼ to the required alias or ID. Press  to select.

4 Press ▲ or ▼ to Message Alert. Press  to select.

5 Do one of the following:

- Press ▲ or ▼ to Momentary. Press  to select.

The display shows ✓ beside Momentary.

- Press ▲ or ▼ to Repetitive. Press  to select.

The display shows ✓ beside Repetitive.

5.8.13

Power Levels

You can customize the power setting to high or low for each channel.

High

This enables communication with radios located at a considerable distance from you.

Low

This enables communication with radios in closer proximity.



NOTICE:


This feature is not applicable in Citizens Band channels that are in the same frequency.

5.8.13.1




Setting Power Levels

Follow the procedure to set the power levels on your radio.




- 1 Do one of the following:
 - Press the programmed **Power Level** button. Skip the steps below.

- Press  to access the menu.

2

- Press  or  to Utilities. Press  to select.







3

- Press  or  to Radio Settings. Press  to select.

4

- Press  or  to Power. Press  to select.

5 Do one of the following:

- Press  or  to High. Press  to select. The display shows ✓ beside High.
- Press  or  to Low. Press  to select. The display shows ✓ beside Low.


6




- Long press  to return to the Home screen.




5.8.14




Adjusting Display Brightness

Follow the procedure to adjust the display brightness on your radio.




- 1 Do one of the following:
 - Press the programmed **Brightness** button. Skip the following steps.
 - Press  to access the menu.
-

- 2 Press  or  to Utilities. Press  to select.
-

- 3 Press  or  to Radio Settings. Press  to select.
-

- 4 Press  or  to Brightness. Press  to select.


The display shows the progress bar.




- 5 Press  or  to decrease or increase the display brightness. Press  to select.
-




5.8.15


Setting Display Backlight Timer


You can set the display backlight timer of the radio as needed. The setting also affects the Menu Navigation Buttons and keypad backlighting accordingly. Follow the procedure to set the backlight timer on your radio.

- 1 Do one of the following:
 - Press the programmed **Backlight** button. Skip the following steps.
 - Press  to access the menu.
-

- 2 Press  or  to Utilities. Press  to select.
-

- 3 Press  or  to Radio Settings. Press  to select.
-

4 Press ▲ or ▼ to Display. Press  to select.


5 Press ▲ or ▼ to Backlight Timer. Press  to select.


The display backlight and keypad backlighting are automatically turned off as the LED indicator is disabled. See [Turning LED Indicators On or Off on page 181](#) for more information.


5.8.16

Turning Backlight Auto On or Off


You can enable and disable the backlight of the radio to turn on automatically as needed. If enabled, the backlight is turned on when the radio receives a call, Notification List event, or Emergency Alarm.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Backlight Auto.

5 Press  to enable or disable Backlight Auto.


The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-


5.8.17


Turning LED Indicators On or Off


Follow the procedure to turn the LED indicators on or off on your radio.

1 Press  to access the menu.


2 Press ▲ or ▼ to Utilities. Press  to select.


3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to LED Indicator. Press  to select.


5 Press  to enable or disable the LED indicator. The display shows one of the following results:

- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.


4 Press ▲ or ▼ to Languages. Press  to select.

5 Press ▲ or ▼ to the required language. Press  to select. The display shows ✓ beside the selected language.

5.8.18

Setting Languages

Follow the procedure to set the languages on your radio.

1 Press  to access the menu.

5.8.19

Turning Option Board On or Off

Option board capabilities within each channel can be assigned to programmable buttons. Follow the procedure to turn option board on or off on your radio.

Press the programmed **Option Board** button.





5.8.20










Turning Voice Announcement On or Off

This feature enables the radio to audibly indicate the current zone or channel the user has just assigned, or the programmable button the user has just pressed.

This is typically useful when the user has difficulty reading the content shown on the display.

This audio indicator can be customized according to customer requirements. Follow the procedure to turn Voice Announcement on or off on your radio.

- 1 Do one of the following:
 - Press the programmed **Voice Announcement** button. Skip the following steps.
 - Press  to access the menu.
-
- 2 Press  or  to **Utilities**. Press  to select.

- 3 Press  or  to **Radio Settings**. Press  to select.
-
- 4 Press  or  to **Voice Announcement**. Press  to select.
-
- 5 Press  to enable or disable Voice Announcement.
 - If enabled,  appears beside **Enabled**.
 - If disabled,  disappears beside **Enabled**.


5.8.21




Turning Digital Microphone AGC On or Off




The Digital Microphone Automatic Gain Control (AGC) controls the microphone gain of the radio automatically while transmitting on a digital system.




This feature suppresses loud audio or boosts soft audio to a preset value in order to provide a consistent level of


audio. Follow the procedure to turn Digital Microphone AGC on or off on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Mic AGC-D. Press  to select.

- 5 Press  to enable or disable Digital Microphone AGC.
The display shows one of the following results:
 - If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.

5.8.22

Switching Audio Route between Internal Radio Speaker and Wired Accessory

Follow the procedure to toggle audio routing between internal radio speaker and wired accessory.

You can toggle audio routing between the internal radio speaker and the speaker of a wired accessory with the condition that:

- The wired accessory with speaker is attached.
- The audio is not routed to an external Bluetooth accessory.

Press the programmed **Audio Toggle** button.

A tone sounds when the audio route has switched.

Powering down the radio or detaching the accessory resets the audio routing to the internal radio speaker.

5.8.23


Turning Intelligent Audio On or Off




Your radio automatically adjusts the audio volume to overcome current background noise in the environment, inclusive of both stationary and non-stationary noise sources. This is a receive-only feature and does not affect transmission audio. Follow the procedure to turn Intelligent Audio on or off on your radio.






NOTICE:

This feature is not applicable during a Bluetooth session.




- 1 Do one of the following:
 - Press the programmed **Intelligent Audio** button. Skip the steps below.
 - Press  to access the menu.

- 2 Press  or  to **Utilities**. Press  to select.

3







Press  or  to **Radio Settings**. Press  to select.

4

Press  or  to **Intelligent Audio**. Press  to select.

5

Do one of the following:


- Press  or  to **On**. Press  to select. The display shows ✓ beside **On**.
- Press  or  to **Off**. Press  to select. The display shows ✓ beside **Off**.

5.8.24




Turning Trill Enhancement On or Off

You can enable this feature when you are speaking in a language that contains many words with alveolar trill (rolling "R") pronunciations. Follow the procedure to turn Trill Enhancement on or off on your radio.


1 Do one of the following:

- Press the programmed **Trill Enhancement** button. Skip the steps below.
- Press  to access the menu.




2

Press  or  to Utilities. Press  to select.







3

Press  or  to Radio Settings. Press  to select.

4

Press  or  to Trill Enhance. Press  to select.

5 Do one of the following:


- Press  or  to On. Press  to select. The display shows ✓ beside On.
- Press  or  to Off. Press  to select. The display shows ✓ beside Off.

5.8.25




Turning the Microphone Dynamic Distortion Control Feature On or Off

This feature allows you to enable the radio to automatically monitor the microphone input and adjust the microphone gain value to avoid audio clipping.




1

Press  to access the menu.




2

Press  or  to Utilities. Press  to select.



3

Press  or  to Radio Settings. Press  to select.

4

Press  or  to Mic Distortion. Press  to select.








5 Do one of the following:

- Press  to enable Microphone Dynamic Distortion Control. If enabled, ✓ appears beside Enabled.
- Press  to disable Microphone Dynamic Distortion Control. If disabled, ✓ disappears beside Enabled.




5.8.26

Setting Audio Ambience

Follow the procedure to set the audio ambience on your radio according to your environment.

- 1 Press  to access the menu.
- 2 Press  or  to Utilities. Press  to select.
- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Audio Ambience. Press  to select.

- 5 Press  or  to the required setting. Press  to select.

The settings are as follows.


- Choose Default for the default factory settings.
- Choose Loud to increase speaker loudness when using in noisy surroundings.
- Choose Work Group to reduce acoustic feedback when using with a group of radios that are near to each other.


The display shows ✓ beside the selected setting.


5.8.27

Setting Audio Profiles


Follow the procedure to set audio profiles on your radio.

- 1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Audio Profiles. Press  to select.

5 Press ▲ or ▼ to the required setting. Press  to select.

The settings are as follows.

- Choose `Default` to disable the previously selected audio profile and return to the default factory settings.
- Choose `Level 1`, `Level 2`, or `Level 3` for audio profiles intended to compensate for noise-induced hearing loss that is typical for adults over 40 years of age.
- Choose `Treble Boost`, `Mid Boost`, or `Bass Boost` for audio profiles that align with your

preference for tinnier, more nasal, or deeper sounds.

The display shows ✓ beside the selected setting.

5.8.28

General Radio Information

Your radio contains information on various general parameters.


The general information of your radio is as follows:


- Battery information.
- Radio alias and ID.
- Firmware and Codeplug versions.
- Software update.
- GNSS information.
- Site information.

- Received Signal Strength Indicator.



NOTICE:

Press  to return to the previous screen. Long


press  to return to the Home screen. The radio exits the current screen once the inactivity timer expires.

5.8.28.1




Accessing Battery Information

Displays information of your radio battery.

1

Press  to access the menu.




2

Press  or  to Utilities. Press  to select.

3

Press  or  to Radio Info. Press  to select.

4

Press  or  to Battery Info. Press  to select.



NOTICE:

For **IMPRES** batteries only: The display reads **Recondition Battery** when the battery requires reconditioning in an IMPRES charger. After the reconditioning process, the display then shows the battery information.

The display shows the battery information.



NOTICE:

For non-supported battery, the display shows **Unknown Battery**.


5.8.28.2




Checking Radio Alias and ID




1 Do one of the following:




- Press the programmed **Radio Alias and ID** button. Skip the following steps. A positive indicator tone sounds.

You can press the programmed **Radio Alias and ID** button to return to the previous screen.

- Press  to access the menu.


2 Press  or  to Utilities. Press  to select.




3 Press  or  to Radio Info. Press  to select.




4 Press  or  to My ID. Press  to select.
The first text line shows the radio alias. The second text line shows the radio ID.




5.8.28.3

Checking Firmware and Codeplug Versions

1 Press  to access the menu.

2 Press  or  to Utilities. Press  to select.

3 Press  or  to Radio Info. Press  to select.

4 Press  or  to Versions. Press  to select.
The display shows the current firmware and codeplug versions.


5.8.28.4




Checking GNSS Information




Displays the GNSS information on your radio, such as values of:




- Latitude
- Longitude
- Altitude
- Direction
- Velocity




- Horizontal Dilution of Precision (HDOP)
- Satellites
- Version

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.


- 4 Press  or  to GNSS Info. Press  to select.




- 5 Press  or  to the required item. Press  to select. The display shows the requested GNSS information.




5.8.28.5




Checking Software Update Information

This feature shows the date and time of the latest software update carried out through OTAP or Wi-Fi. Follow the procedure to check the software update information on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.


- 4 Press  or  to SW Update. Press  to select.
The display shows the date and time of the latest software update.




Software Update menu is only available after at least one successful OTAP or Wi-Fi session. See [Over-the-Air Programming on page 427](#) for more information.




5.8.28.6




Displaying Site Information

Follow the procedure to display the current site name your radio is on.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.


- 4 Press  or  to Site Info. Press  to select.




The display shows the current site name.




5.8.29




Viewing Enterprise Wi-Fi Certificate Details

You can view the details of the selected Enterprise Wi-Fi Certificate.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Certificate Menu. Press  to select.
✓ appears beside ready certificates.

- 4 Press  or  to the required certificate. Press  to select.

Your radio displays the full details of the certificate.



NOTICE:

For unready certificates, the display shows only Status.

Connect Plus

Connect Plus is a full trunking solution based on DMR technology. Connect Plus uses a dedicated control channel for channel requests and allocations.

6.1

Additional Radio Controls in Connect Plus Mode

This chapter explains the additional radio controls available to the radio user through preprogrammed means such as programmable buttons and assignable radio functions.

6.1.1

Push-To-Talk (PTT) Button

The **PTT** button on the side of the radio serves two basic purposes:

- While a call is in progress, the **PTT** button allows the radio to transmit to other radios in the call.

Press and hold the **PTT** button to talk. Release the **PTT** button to listen.

The microphone is activated when the **PTT** button is pressed.

- While a call is not in progress, the **PTT** button is used to make a new call (see [Making a Radio Call on page 209](#)).

If the Talk Permit Tone (see [Turning the Talk Permit Tone On or Off on page 287](#)) is enabled, wait until the short alert tone ends before talking.

6.1.2

Programmable Buttons

Your dealer can program the programmable buttons as shortcuts to radio functions depending on the duration of a button press:

Short press

Pressing and releasing rapidly.

Long press

Pressing and holding for the programmed duration.



NOTICE:

The programmed duration of a button press is applicable for all assignable radio/utility functions or settings. See [Emergency Operation on page 240](#) for more information on the programmed duration of the *Emergency* button.

6.1.2.1

Assignable Radio Functions

Beacon On/Off

Toggles the Beacon feature on or off. Requires purchase of Connect Plus Man Down feature.

Beacon Reset

Resets (cancels) the Beacon tone, but it does not turn the Beacon feature off. Requires purchase of Connect Plus Man Down feature.

Bluetooth® Audio Switch

Toggles audio routing between internal radio speaker and external Bluetooth-enabled accessory.

Bluetooth Connect

Initiates a Bluetooth find-and-connect operation.

Bluetooth Disconnect

Terminates all existing Bluetooth connections between your radio and any Bluetooth-enabled devices.

Bluetooth Discoverable

Enables your radio to enter Bluetooth Discoverable Mode.

Busy Queue Cancellation

Exits the busy mode when a non-Emergency call in the Busy Queue was initiated. Emergency calls, once accepted into the Busy Queue, cannot be cancelled.

Call Log

Selects the call log list.

Channel Announcement

Plays zone and channel announcement voice messages for the current channel.

Contacts

Provides direct access to the Contacts list.

Emergency On/Off

Depending on the programming, initiates or cancels an emergency.

Indoor Location

Toggles Indoor Location on or off.

Intelligent Audio

Toggles intelligent audio on or off.

Man Down Alarms On/Off

Toggles all configured Man Down Alarms on or off.
Requires purchase of Connect Plus Man Down feature.

Man Down Alarms Reset

If pressed while a Man Down feature Alert Tone is playing, the tone is cancelled and feature timers are reset, but it does not turn the Man Down Alarms off.
Requires purchase of Man Down feature.

Manual Dial

Depending on the programming, initiates a Private or Phone Call by keying in any subscriber ID or phone number.

One Touch Access

Directly initiates a predefined Private Call, a Call Alert, a Quick Text message, or Home Revert.

Privacy

Toggles privacy on or off.

Radio Check

Determines if a radio is active in a system.

Radio Enable

Allows a target radio to be remotely enabled.

Radio Disable

Allows a target radio to be remotely disabled.

Remote Monitor

Turns on the microphone of a target radio without it giving any indicators.

Reset Home Channel

Sets a new home channel.

Ring Alert Type

Provides direct access to the Ring Alert Type Setting.

Roam Request

Requests to search for a different site.

Scan

Toggles scan on or off.

Silence Home Channel Reminder

Mutes the Home Channel Reminder.

Site Lock On/Off

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Text Message

Selects the text message menu.

Vibrate Style

Configures the vibrate style.

Voice Announcement On/Off

Toggles voice announcement on or off.

Wi-Fi

Toggles Wi-Fi on or off.

Zone

Allows selection from a list of zones.

6.1.2.2

Assignable Settings or Utility Functions

AF Suppressor

Toggles the Acoustic Feedback Suppressor feature on or off.

All Tones/Alerts

Toggles all tones and alerts on or off.

Backlight

Toggles display backlight on or off.

Backlight Brightness

Adjusts the brightness level.

Display Mode

Toggles the day/night display mode on or off.

Global Navigation Satellite System (GNSS)

Toggles the satellite navigation system on or off.

Power Level

Toggles transmit power level between high and low.

Unassigned

Indicates that the button function has not yet been assigned.

6.1.3

Identifying Status Indicators in Connect Plus Mode

The radio display shows radio status, text entries, and menu entries.

6.1.3.1

Display Icons








The following are icons that appear on the display of the radio. Icons are displayed on the status bar, arranged left-









most in order of appearance/usage and are channel specific.








	<p>Received Signal Strength Indicator (RSSI)</p> <p>The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.</p>
	<p>Bluetooth Not Connected</p> <p>The Bluetooth feature is enabled but there is no remote Bluetooth device connected.</p>
	<p>Bluetooth Connected</p> <p>The Bluetooth feature is enabled. The icon stays lit when a remote Bluetooth device is connected.</p>
	<p>High Volume Data</p> <p>Radio is receiving high volume data and channel is busy.</p>

	<p>Indoor Location Available ⁴</p> <p>Indoor location status is on and available.</p>
	<p>Indoor Location Unavailable ⁴</p> <p>Indoor location status is on but unavailable due to Bluetooth disabled or Beacons Scan suspended by Bluetooth.</p>
	<p>Mute Mode</p> <p>Mute Mode is enabled and speaker is muted.</p>
	<p>Notification</p> <p>Notification List has one or more missed events.</p>
	<p>Power Level</p> <p>Radio is set at Low power or Radio is set at High power.</p>
	<p>Tones Disable</p> <p>Tones are turned off.</p>

⁴ Only applicable for models with the latest software and hardware




	Option Board The Option Board is enabled.
	Option Board Non-Function The Option Board is disabled.
	GNSS Available The GPS/GNSS feature is enabled. The icon stays lit when a position fix is available.
	GNSS Not Available/Out of Range The GPS/GNSS feature is enabled but is not receiving data from the satellite.
	Scan Scan feature is enabled.
	Emergency Radio is in Emergency mode.
	Secure The Privacy feature is enabled.

	Unsecure The Privacy feature is disabled.
	Site Roaming The site roaming feature is enabled.
	Battery The number of bars (0 – 4) shown indicates the charge remaining in the battery. Blinks when the battery is low.
	Contact Radio contact is available.
	Call Log Radio call log.
	Message Incoming message.
	Ring Only Ringing mode is enabled.
	Silent Ring Silent ring mode is enabled.

	Vibrate Vibrate mode is enabled.
	Vibrate and Ring Vibrate and Ring mode is enabled.
	Wi-Fi Excellent ⁵ Wi-Fi signal is excellent.
	Wi-Fi Good ⁵ Wi-Fi signal is good.
	Wi-Fi Average ⁵ Wi-Fi signal is average.
	Wi-Fi Poor ⁵ Wi-Fi signal is poor.
	Wi-Fi Unavailable ⁵ Wi-Fi signal is unavailable.

Call Icons

The following icons appear on your radio display during a call. These icons also appear in the Contacts list to indicate ID type.

	Private Call Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).
	Group Call/Site All Call Indicates a Group Call or Site All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).
	Phone Call as Private Call Indicates a Phone Call as Private Call in progress.




6.1.3.2

⁵ Only applicable for DP4601e

6.1.3.3

Advanced Menu Icons









The following icons appear beside menu items that offer a choice between two options or as an indication that there is a sub-menu offering two options.

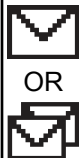
	Checkbox (Empty) Indicates the option is not selected.
	Checkbox (Checked) Indicates the option is selected.
	Solid Black Box Indicates the option selected for the menu item with a sub-menu.

6.1.3.4

Sent Item Icons

The following icons appear at the top right corner of the radio display in the Sent Items folder.

	Sent Successfully The text message has been successfully sent.
OR	
	
	Send Failed The text message has not been sent.
OR	
	
	In Progress
OR	
	
	Individual or Group Message Read The text message has been read.
OR	
	



Individual or Group Message Unread

The text message has not been read.



Bluetooth Sensor Device

Bluetooth-enabled sensor device, such as gas sensor.

6.1.3.5

Bluetooth Device Icons

The following icons also appear next to items in the list of Bluetooth-enabled devices available to indicate the device type.



Bluetooth Data Device

Bluetooth-enabled data device, such as a scanner.



Bluetooth Audio Device

Bluetooth-enabled audio device, such as a headset.



Bluetooth PTT Device

Bluetooth-enabled PTT device, such as a PTT-Only Device (POD).

6.1.3.6

LED Indicator

The LED indicator shows the operational status of your radio.

Blinking red

Battery mismatch occurs or radio is transmitting at low battery condition, receiving an emergency transmission or has failed the self-test upon powering up, or has moved out of range if radio is configured with Auto-Range Transponder System. Mute Mode is enabled.

Rapidly blinking red

Radio is receiving over-the-air file transfer (Option Board firmware file, Network Frequency file or Option Board Codeplug file) or upgrading to a new Option Board firmware file.

Blinking green and yellow	Radio is receiving a Call Alert, received a text message or Scan is enabled and is receiving activity.
Solid yellow	Radio is in Bluetooth Discoverable Mode.
Double blinking yellow	Radio is actively searching for a new site.
Blinking yellow	Radio is receiving a Call Alert or Scan is enabled and is idle (radio will remain muted to any activity).
Solid green	Radio is powering up or transmitting.
Blinking green	Radio is powering up, receiving a call or data.
Double blinking green	Radio is receiving a privacy-enabled call.



6.1.3.7

Indicator Tones

The following are the tones that sound through the radio speaker.

High pitched tone Low pitched tone



Indicator tones provide you with audible indications of the status after an action to perform a task is taken.



	Positive Indicator Tone
	Negative Indicator Tone

6.1.3.8

Alert Tones

Alert tones provide you with audible indications of the status, or response to data received on the radio.

Continuous Tone 	A monotone sound. Sounds continuously until termination.
Periodic Tone 	Sounds periodically depending on the duration set by the radio. Tone starts, stops, and repeats itself.

Repetitive Tone 	A single tone that repeats itself until it is terminated by the user.
Momentary Tone 	Sounds only once for a short period of time defined by the radio.

6.1.4

Switching Between Connect Plus and Non-Connect Plus Modes

To switch to a non-Connect Plus mode, you must change to another zone, if programmed by your dealer or system administrator. Check with your dealer or system administrator to see if your radio has been programmed with non-Connect Plus zones, and what features are available while operating in non-Connect Plus zones.

6.2

Making and Receiving Calls in Connect Plus Mode

This section explains general radio operations and call features that are available in your radio.

6.2.1

Selecting a Site

A site provides coverage for a specific area. A Connect Plus site has a site controller and a maximum of 15 repeaters. In a multi-site network, the Connect Plus radio will automatically search for a new site when the signal level from the current site drops to an unacceptable level.

6.2.1.1

Roam Request

A Roam Request tells the radio to search for a different site, even if the signal from the current site is acceptable.

If there are no sites available:

- The radio displays `Searching` and `Selected Channel Alias` and continues to search through the list of sites.

- The radio will return to the previous site, if the previous site is still available.

**NOTICE:**

This is programmed by your dealer.

Press the programmed **Roam Request** button.

You hear a tone, indicating the radio has switched to a new site. The display shows Site ID <Site Number>.

6.2.1.2

Site Lock On/Off

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Press the programmed **Site Lock** button.

If the **Site Lock** function is toggled on:

- You hear a positive indicator tone, indicating the radio has locked to the current site.
- The display shows Site Locked.

If the **Site Lock** function is toggled off:

- You hear a negative indicator tone, indicating the radio is unlocked.
 - The display shows Site Unlocked.
-

6.2.1.3

Site Restriction

Your Connect Plus radio system administrator has the ability to decide which network sites your radio is and is not allowed to use. Your radio does not need to be reprogrammed to change the list of allowed and disallowed sites. If your radio attempts to register at a disallowed site, you see a brief message stating: Site <number given> Not Allowed. The radio then searches for a different network site.

6.2.2





Selecting a Zone

The radio can be programmed with a maximum of 16 Connect Plus Zones and each Connect Plus zone contains a maximum of 16 assignable positions on the Channel Selector Knob.

Each assignable knob position can be used to start one of the following voice call types:





- Group Call
- Multi-group Call
- Site All Call
- Private Call

1 Access the Zone feature by performing the following:

Radio Controls	Steps
Programmed Zone Selection button	Press the programmed Zone Selection button.
Radio menu	<p>a Press  to access the menu.</p> <p>b Press  or  to Zone and press  to select.</p>

The current zone is displayed and indicated by a ✓ .

2 Select the required zone.

Radio Control	Steps
 or 	Press  or  and scroll to the required zone.

3 Press  to select.

The display shows <Zone> Selected momentarily and returns to the selected zone screen.

6.2.3 Using Multiple Networks

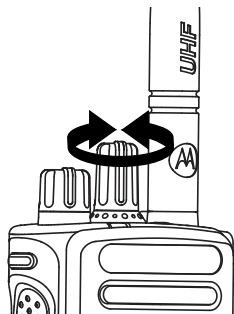
If your radio has been programmed to use multiple Connect Plus networks, you can select a different network by switching to the Connect Plus zone that is assigned to the desired network. These network-to-zone assignments are configured by your dealer through radio programming.

6.2.4

Selecting a Call Type

Use the Channel Selector Knob to select a call type. This can be a Group Call, Multi-group Call, Site All Call or Private Call, depending on how your radio is programmed. If you change the Channel Selector Knob to a different position (that has a call type assigned to it), this causes the radio to re-register with the Connect Plus site. The radio registers with the Registration Group ID that has been programmed for the new Channel Selector Knob position call type.

If you select a position that has no call type assigned to it, your radio sounds a continuous tone and the display shows *Unprogrammed*. Your radio does not operate when selected to an unprogrammed channel, use the Channel Selector Knob to select a programmed channel instead.



Once the required zone is displayed (if you have multiple zones in your radio), turn the programmed Channel Selector Knob to select the call type.

6.2.5

Receiving and Responding to a Radio Call

Once the channel, subscriber ID or call type is displayed, you can proceed to receive and respond to calls.

The LED lights up solid green while the radio is transmitting and blinks green when the radio is receiving.



NOTICE:

The LED lights up solid green while the radio is transmitting and double blinks green when the radio is receiving a privacy-enabled call. To unscramble a privacy-enabled call, your radio must have the same Privacy Key, OR the same Key Value and Key ID (programmed by your dealer), as the transmitting radio (the radio you are receiving the call from).

See [Privacy on page 261](#) for more information.

6.2.5.1

Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group.

When you receive a Group Call (while on the Home screen), the LED blinks green. The Group Call icon appears in the top right corner. The first text line shows the caller alias. The second text line displays the group call alias.

Your radio unmutes and the incoming call sounds through the radio speaker.

- 1 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

The LED lights up solid green.

- 2 Wait for one of the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.
-

- 3 Release the **PTT** button to listen.

If there is no voice activity for a predetermined period of time, the call ends.



NOTICE:

See [Making a Group Call on page 210](#) for details on making a Group Call.

6.2.5.2

Receiving and Responding to a Private Call

A Private Call is a call from an individual radio to another individual radio.

When you receive a Private Call, the LED blinks green. The Private Call icon appears in the top right corner. The first text line shows the caller alias. Your radio unmutes and the incoming call sounds through the speaker of the radio.

- 1 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

- 2 Press the **PTT** button to respond to the call.
The LED lights up solid green.

- 3 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.

- 4 Release the **PTT** button to listen.

If there is no voice activity for a predetermined period of time, the call ends.

You hear a short tone. The display shows `Call Ended`.

See [Making a Private Call on page 211](#) for details on making a Private Call.

6.2.5.3

Receiving a Site All Call

A Site All Call is a call from an individual radio to every radio on the site. It is used to make important announcements requiring the user's full attention.

When you receive an Site All Call, a tone sounds and the LED blinks green.

The Group Call icon appears in the top right corner. The first text line shows the caller alias. The second text line displays `Site All Call`. Your radio unmutes and the incoming call sounds through the radio speaker.

Once the Site All Call ends, the radio returns to the previous screen before receiving the call. A Site All Call does not wait for a predetermined period of time before ending.

You cannot respond to a Site All Call.



NOTICE:

See [Making a Site All Call on page 212](#) for details on making a Site All Call.

The radio stops receiving the Site All Call if you switch to a different channel while receiving the call. During a Site All Call, you will not be able to use any programmed button functions until the call ends.

6.2.5.4

Receiving an Inbound Private Phone Call

When you receive an Inbound Private Phone Call, the Phone Call as Private Call icon appears in the top right corner. The first text line shows `Phone Call`.

- 1 Press and hold the **PTT** button to answer and talk. Release the **PTT** button to listen.

- 2 Long press  to end the call.

The first line of the display shows `Ending`. The second line of the display shows `Phone Call....`
The display returns to the Phone Call screen.
The display shows `Phone Call Ended`.

6.2.5.5

Receiving an Inbound Phone Talkgroup Call

When you receive an Inbound Phone Talkgroup Call, the Group Call icon appears in the top right corner. The first text line shows `Call11`.

Press the **PTT** button to talk and release it to listen.

6.2.5.6

Inbound Phone Multi-Group Call

When you receive an Inbound Phone Multi-Group Call, the Group Call icon appears in the top right corner. The first text line shows `Multigroup Call`. The radio unmutes and the incoming multi-group call sounds through the radio speaker.

6.2.6

Making a Radio Call

After selecting your channel, you can select a subscriber alias or ID, or group alias or ID by using:

- The Channel Selector Knob.

- A programmed **One Touch Access** button – The One Touch Access feature allows you to make a Private Call to a predefined ID easily. This feature can be assigned to a short or long programmable button press. You can only have one ID assigned to a **One Touch Access** button. Your radio can have multiple **One Touch Access** buttons programmed.
- The Contacts list (see [Contacts Settings on page 227](#)).



NOTICE:

Your radio must have the Privacy feature enabled on the channel to send a privacy-enabled transmission. Only target radios with the same Key Value and Key ID as your radio will be able to unscramble the transmission.

See [Privacy on page 261](#) for more information.

6.2.6.1

Making a Call with the Channel Selector Knob

This feature allows the radio users to make different call types : Group Call, Private Call, Site All Call, Multi-group Call.

6.2.6.1.1

210

Making a Group Call

To make a call to a group of users, your radio must be configured as part of that group.

- 1 Select the channel with the active group alias or ID. See [Selecting a Call Type on page 206](#).

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

- 3 Press the **PTT** button to make the call.
The LED lights up solid green. The Group Call icon appears in the top right corner. The first text line shows the group call alias.

- 4 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.

- 5 Release the **PTT** button to listen.

When the target radio responds, the LED blinks green, the radio unmutes and the response sounds through the radio speaker. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.

If there is no voice activity for a predetermined period of time, the call ends. Radio returns to the screen you were on prior to initiating the call.

6.2.6.1.2

Making a Private Call

While you can receive and/or respond to a Private Call initiated by an authorized individual radio, your radio must be programmed for you to initiate a Private Call.

You will hear a negative indicator tone, when you make a Private Call using the Contacts list, Call Log, **One Touch Access** button, or the Channel Selector Knob, if this feature is not enabled.

Use the Text Message or Call Alert features to contact an individual radio. See [Text Messaging on page 134](#) or [Call Alert Operation on page 236](#) for more information.

- 1 Do one of the following.
 - Select the channel with the active subscriber alias or ID. See [Selecting a Call Type on page 206](#).
 - Press the programmed **One Touch Access** button.
-

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
-

- 3 Press the **PTT** button to make the call.

The LED lights up solid green. The Private Call icon appears on the top right corner. The first text line shows the target subscriber alias. The second text line displays the call status.

- 4 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.
-

- 5 Release the **PTT** button to listen.

When the target radio responds, the LED blinks green.

If there is no voice activity for a predetermined period of time, the call ends. You hear a short tone. The display shows `Call Ended`.

Your radio may be programmed to perform a radio presence check prior to setting up the Private Call. If the target radio is not available, you hear a short tone and see negative mini notice on the display.

6.2.6.1.3

Making a Site All Call

This feature allows you to transmit to all users on the site that are currently not engaged in another call. Your radio must be programmed to allow you to use this feature.

Users on the channel/site cannot respond to an Site All Call.

- 1 Select the channel with the active Site All Call group alias. See [Selecting a Call Type on page 206](#).
-

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
-

- 3 Press the **PTT** button to make the call.

The LED lights up solid green. The Group Call icon appears in the top right corner. The first text line shows `Site All Call`.

- 4 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.
-

Making a Multi-group Call

This feature allows you to transmit to all users on multiple groups. Your radio must be programmed to allow you to use this feature.

**NOTICE:**

Users on the groups cannot respond to a Multi-group Call.

- 1 Turn the Channel Selector Knob to select the Multi-group alias or ID.
-

- 2 Press the **PTT** button to make the call.

The LED lights up solid green. The display shows the Multi-group alias or ID.

Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

6.2.6.1.4

6.2.6.1.5

Making a Private Call with a One Touch Call Button



NOTICE:

Programmable buttons press must be initiated from the Home screen.

The One Touch Call feature allows you to easily make a Private Call to a pre-defined Private Call alias or ID. This feature can be assigned to a short or long programmable button press.

You can **ONLY** have one alias or ID assigned to a One Touch Call button. Your radio can have multiple One Touch Call buttons programmed.

- 1 Press the programmed **One Touch Call** button to make a Private Call to the pre-defined Private Call alias or ID.

- 2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

- 3 Press the **PTT** button to make the call.
The LED lights up solid green.

The display shows the Private Call alias or ID.

- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 5 Release the **PTT** button to listen.

When the target radio responds, the LED blinks green.

If there is no voice activity for a predetermined period of time, the call ends.

6.3

Advanced Features in Connect Plus Mode

This chapter explains the operations of the features available in your radio.

6.3.1

Home Channel Reminder

This feature provides a reminder when the radio is not set to the home channel for a period of time.

If this feature is enabled by using the CPS, the Home Channel Reminder tone and announcement sound, the first line of the display shows `Home` and the second line shows `Home Channel` periodically when the radio is not set to the home channel for a period of time.

You can respond to the reminder by performing one of the following actions:

- Return to the home channel.
- Mute the reminder temporarily by using the programmable button.
- Set a new home channel by using the programmable button.

6.3.1.1

Muting the Home Channel Reminder

When the Home Channel Reminder occurs, you can temporarily mute the reminder by performing the following action.

Press the **Silence Home Channel Reminder** programmable button.

The first line of the display shows `HCR` and the second line shows `Silenced`.

6.3.1.2











Setting a New Home Channel

When the Home Channel Reminder occurs, you can set a new home channel by performing one of the following actions:

- Press the **Reset Home Channel** programmable button.

The first line of the display shows the channel alias and the second line shows `New Home Ch.`

- Set a new home channel via the menu:

- a. Press  to access the menu.
- b. Press  or  to Utilities and press  to select.
- c. Press  or  to Radio Settings and press  to select.
- d. Press  or  to Home Channel and press  to select.
- e. Select from the list of valid channels.

The display shows ✓ beside the selected home channel alias.

6.3.2

Auto Fallback

Auto Fallback is a system feature that allows you to continue to make and receive non-emergency calls on the selected Group Contact, if certain types of failures occur in the Connect Plus system.

If one of these failures occurs, your radio attempts to roam to a different Connect Plus site. This search process may result in your radio finding an operable Connect Plus site, or it may result in your radio finding a Fallback Channel (if your radio is enabled for Auto Fallback).

A Fallback Channel is a repeater that is normally part of an operable Connect Plus site, but cannot communicate with either the site controller or Connect Plus network at that moment. In Fallback mode, the repeater operates as a single digital repeater. Auto Fallback Mode supports non-emergency Group Calls only. No other call types are supported in Fallback Mode.

6.3.2.1

Indications of Auto Fallback Mode

When your radio is using a Fallback channel, you hear the intermittent Fallback Tone approximately once every 15 seconds (except while transmitting). The display periodically shows a brief message, `Fallback Channel`. Your radio only permits PTT on the selected Group Contact (Group Call, Multigroup Call, or Site All Call). It does not allow you to make other types of calls.

Making/Receiving Calls in Fallback Mode



NOTICE:

Calls are heard only by radios that are monitoring the same Fallback channel and selected to the same Group. Calls are not networked to other sites or other repeaters.

Emergency voice calls or Emergency Alerts are not available in Fallback mode. If you press the emergency button in Fallback mode, the radio provides an invalid key press tone. Display-equipped radios also show the message, "Feature not available".

Private (radio to radio) and Phone calls are not available in Fallback mode. If you attempt a call to a private contact, you will receive a denial tone. At this point you should select a desired group contact. Other non-supported calls include Remote Monitor, Call Alert, Radio Check, Radio Enable, Radio Disable, Text messaging, Location Updates, and packet data calls.

Enhanced Traffic Channel Access (ETCA) is not supported in Auto Fallback mode. If two or more radio users press **PTT** at the same time (or at

almost the same time), it is possible that both radios transmit until **PTT** is released. In this event, it is possible that none of the transmissions will be understood by receiving radios.

Making calls in Fallback mode is similar to normal functioning. Simply select the group contact you wish to use (using the radio's normal channel selection method), and then press the **PTT** to start your call. It is possible that the channel may be in use already by another group. If the channel is in use, you receive a busy tone and the display will say "Channel Busy". You may select Group, Multi-group or Site All Call contacts using your radio's normal channel selection method. While the radio is operating on the Fallback Channel, the Multigroup operates just like other Groups. It is only heard by radios that are currently selected to the same Multi-group.

6.3.2.3 Returning to Normal Operation

If the site returns to normal trunking operation while you are in range of your Fallback repeater, your radio automatically exits Auto Fallback mode. You hear a registration "beep" when the radio successfully registers. If you are in the range of an operable site (that is not in Fallback mode), you may press the Roam Request button (if programmed for

your radio) to force your radio to search for and register on an available site. If no other site is available, your radio returns to Auto Fallback mode after searching is complete. If you drive out of coverage of your Fallback repeater, your radio enters Search mode (display indicates Searching).

6.3.3 Radio Check






If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.

This feature is only applicable for subscriber IDs.

6.3.3.1 Sending a Radio Check

- 1 Access the Radio Check feature.

Radio Control	Steps
Programmed Ra-	a Press the programmed Radio Check button.

Radio Control	Steps
dio Check button	<p>b Press ▲ or ▼ to the required subscriber alias or ID and press  to select.</p>
Menu	<p>a Press  to access the menu.</p> <p>b Press ▲ or ▼ to Contacts and press  to select.</p> <p>c Press ▲ or ▼ to the required subscriber alias or ID and press  to select.</p> <p>d Press ▲ or ▼ to Radio Check and press  to select.</p>

The display shows the Target Alias, indicating the request is in progress. The LED lights up solid green.

2 Wait for acknowledgment.

If the target radio is active in the system, a tone sounds and the display briefly shows Target Radio Available.

If the target radio is not active in the system, a tone sounds and the display briefly shows Target Radio Not Available.

Radio returns to the subscriber alias or ID screen when initiated via Menu.

Radio returns to the Home Screen if initiated via the programmable button.

6.3.4

Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio (subscriber alias or IDs only). The green LED will blink once on the target subscriber. You can use this feature to monitor, remotely, any audible activity surrounding the target radio.

Your radio must be programmed to allow you to use this feature.

6.3.4.1



Initiating Remote Monitor







NOTICE:

Remote Monitor automatically stops after a programmed duration or when there is any attempt to initiate transmission, change channels or power down the radio.

- 1 Access the Remote Monitor feature.

Radio Control	Steps
Programmed Remote Monitor Button	<ul style="list-style-type: none"> a Press the programmed Remote Monitor button. b Press ▲ or ▼ to the required subscriber alias or ID and press  to select.
Menu	<ul style="list-style-type: none"> a Press  to access the menu.

Radio Control	Steps
	<ul style="list-style-type: none"> b Press ▲ or ▼ to Contacts and press  to select. c Press ▲ or ▼ to the required subscriber alias or ID and press  to select. d Press ▲ or ▼ to Manual Dial and press  to select. e Press ▲ or ▼ to Remote Mon. and press  to select.

The first text line shows Rem. Monitor. The second text line displays the Target Alias, indicating the request is in progress. The LED lights up blinking green.

2 Wait for acknowledgment.

If successful, a positive indicator tone sounds and the display momentarily shows **Rem. Monitor Successful**. Your radio starts playing audio from the monitored radio for a programmed duration and display shows **Rem. Monitor**, followed by target alias. Once the timer expires, the radio sounds an alert tone and the LED turns off.

If unsuccessful, the radio sounds a negative indicator tone the display shows **Rem. Monitor Failed**.

6.3.5

Scan

This feature allows your radio to monitor and join calls for groups defined in a pre-programmed scan list. When scan is enabled, the scan icon appears on the status bar and the LED blinks yellow when idle.

6.3.5.1

Starting and Stopping Scan




NOTICE:




This procedure turns the Scan feature On or Off for all Connect Plus zones with the same Network ID as your currently selected zone. It is important to note that even when the Scan feature is turned on via this procedure, scan may still be disabled for some (or all) groups on your scan list. See [Editing the Scan List on page 222](#) for more information.

You can start and stop scanning by pressing the programmed **Scan** button **OR** follow the procedure described next.




1

Press  to access the menu.

2

Press  or  to Scan and press  to select.

3

Press  or  to Turn On or Turn Off and press  to select.

- The display shows **Scan On** if scan is enabled.

- The Scan menu shows `Turn Off` if scan is enabled.
- The display shows `Scan Off` if scan is disabled.
- The Scan menu shows `Turn On` if scan is disabled.

6.3.5.2

Responding to a Transmission During a Scan

During scanning, your radio stops on a group where activity is detected. The radio continuously listens for any member in the scan list when idle on the control channel.

- 1 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
 - 2 Press the **PTT** button during hang time.
The LED lights up solid green.
 - 3 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.
-

- 4 Release the **PTT** button to listen.

If you do not respond within the hang time, the radio returns to scanning other groups.

6.3.6

User Configurable Scan

If the Edit List menu is enabled, a user is able to Add and Remove the scan members from the Add Member menu. A Scan List member must be a regular Group Contact (for example, not Multi-group or Site All Call/Network Wide All Call) that is currently assigned to a Channel Selector position in a Connect Plus Zone with the same Network ID as the currently selected Zone. The Talkgroup alias must not match any Talkgroup that has been included in the current Zone Scan List.

Scan can be turned on or off from the menu or by pressing a programmed **Scan On/Off** button.

This feature functions only when the radio is not currently involved in a call. If you are presently listening to a call, your radio cannot scan for other group calls, and is therefore unaware they are in progress. Once your call is finished, your radio returns to the control channel time slot and is able to scan for groups that are in the scan list.

6.3.7

Editing the Scan List



NOTICE:

If the scan list entry happens to be the currently selected group, the radio listens for activity on this group regardless of whether the list entry currently shows a check mark or not. Whenever a radio is not in a call, the radio listens for activity on its Selected Group, Multi-group, the Site All Call, and its Default Emergency Revert Group (if configured for one). This operation cannot be disabled. If Scan is enabled the radio will also listen for activity on enabled Zone Scan List members.

Your scan list determines which groups can be scanned. The list is created when your radio is programmed. If your radio has been programmed to allow you to edit the scan list, you can:

- Enable/disable scan for individual groups on the list.
- Add and Remove the scan members from the Add Member menu. Refer to [Add or Delete a Group via the Add Members Menu on page 223](#).




NOTICE:




A Scan List member must be a regular Group Contact (not Multi-group or Site All Call/Network Wide All Call) that is currently assigned to a Channel Selector position in a Connect Plus Zone with the same Network ID as the currently selected Zone.

The Talkgroup alias must not match any Talkgroup that has been included in the current Zone Scan List.

1

Press  to access the menu.

2


Press  or  to View/Edit List and press  to select.

3

Press  or  to the desired Group name.


If a check mark precedes the Group name, then scan is currently enabled for this Group.

If there is no check mark preceding the Group name, then scan is currently disabled for this Group.

- 4  to select the desired Group.

The display shows `Enable` if scan is currently disabled for the Group.

The display shows `Disable` if scan is currently enabled for the Group.

- 5 Select the displayed option (`Enable` or `Disable`) and press  to select.

Depending on which option was selected, the radio momentarily displays `Scan Enabled` or `Scan Disabled` as confirmation.


The radio displays the Zone scan list again. If scan was enabled for the Group, the check mark displays before the Group name. If scan was disabled for the Group, the check mark is removed before the Group name.




6.3.8

Add or Delete a Group via the Add Members Menu


The Connect Plus radio does not allow a duplicate group number or a duplicate group alias to be placed on a zone scan list (or to be shown as a "scan candidate"). Thus, the list of "scan candidates" described in [step 6](#) and [step 7](#) sometimes changes after adding or deleting a group from the zone scan list.

If your radio has been programmed to allow you to edit the scan list, you can use the Add Members menu to add a group to the scan list of the currently selected zone, or to delete a group from the scan list of the currently selected zone.

- 1 Press  to access the menu.
-

- 2 Press  or  to Scan option and press  to select.
-

3


Press ▲ or ▼ to <Add Members> and press  to select.

The display shows Add Members from Zone n (n = the Connect Plus zone number of the first Connect Plus zone in your radio with the same Network ID as your currently selected zone).

4 Do one of the following.

- If the group you want to add to the scan list is assigned to a channel selector position in that zone, go to [step 6](#).
 - If the group you want to add to the scan list is assigned to a channel selector position in a different Connect Plus zone, go to [step 5](#).
-

5 Press ▲ or ▼ to scroll a list of Connect Plus zones that have the same Network ID as the currently selected zone.

6 After locating the Connect Plus zone where the desired group is assigned to a channel selector position, press  to select.

Your radio displays the first entry in a list of groups assigned to a channel position in that zone. The groups on the list are called "scan candidates", because they can be added to the scan list of your currently selected zone (or they are already on the zone scan list).


If the zone does not have any groups that can be added to the scan list, the radio displays No Candidates.

7 Press ▲ or ▼ to scroll through the list of candidate groups.

If a plus sign (+) is displayed immediately before the group alias, this indicates the group is currently on the scan list for the selected zone.

If the plus sign (+) is not displayed immediately before the alias, the group is not currently on the scan list, but can be added.


8

Press  when the desired group alias is displayed.

If this group is not currently on the scan list for the currently selected zone, the Add (Group Alias) message is displayed.

If this group is already on the scan list for the currently selected zone, the `Delete (Group Alias)` message is displayed.

9


Press  to accept the displayed message (`Add or Delete`).

If deleting a group from the list, you will know the operation is successful because the plus sign (+) will no longer display immediately before the alias.

If adding a group to the list, you will know the operation is successful because the plus sign (+) will display before the alias.

If you are attempting to add a group, and the list is already full, the radio displays `List Full`. If this should occur, it will be necessary to delete a group from the scan list prior to adding a new one.

10

When finished, press  as many times as necessary to return to the desired menu.

Understanding Scan Operation



NOTICE:

If the Radio joins a call for a Zone Scan List member from a different Zone and Call Hang Timer expires before you are able to respond, in order to respond, you must navigate to the Zone and Channel of the Scan List Member and start a new call.

There are some circumstances in which you can miss calls for groups that are in your scan list. When you miss a call for one of the following reasons, this does not indicate a problem with your radio. This is a normal scan operation for Connect Plus.

- Scan feature is not turned on (check for the scan icon on the display).
- Scan list member has been disabled via the menu (see [Editing the Scan List on page 222](#)).
- You are participating in a call already.
- No member of the scanned group is registered at your site (Multisite systems only).

6.3.10

Scan Talkback

If your radio scans into a call from the selectable group scan list, and if the **PTT** button is pressed during the scanned call, the operation of the radio depends on whether Scan Talkback was enabled or disabled during radio programming.

Scan Talkback Disabled

The radio leaves the scanned call and attempts to transmit on the contact for the currently selected channel position. After the Call Hang Time on the currently selected contact expires, the radio returns to the home channel and starts the Scan Hang Time Timer. The radio resumes group scan after its Scan Hang Time Timer expires.

Scan Talkback Enabled

If the **PTT** button is pressed during the Group Hang Time of the scanned call, the radio attempts to transmit to the scanned group.



NOTICE:

For Capacity Max, if you scan into a call for a group that is not assigned to a channel position in the currently selected zone and the call ends, switch to the proper zone and then select the channel position of the group to talk back to that group.

For Connect Plus, if you scan into a call for a group that is not assigned to a channel position in the currently selected zone and you miss the Hang Time of the call, switch to the proper zone and then select the channel position of the group to talk back to that group.

If you scan into a call for a group that is not assigned to a channel position in the currently selected zone and you miss the Hang Time of the call, switch to the proper zone and then select the channel position of the group to talk back to that group.

6.3.11

Editing Priority for a Talkgroup


The Priority Monitor feature allows the radio to automatically receive transmission from the talkgroup with




higher priority when it is in another call. A tone sounds when the radio switches to the call with higher priority. There are two levels of priority for the talkgroups: P1 and P2. P1 has higher priority than P2.









NOTICE:




If Default Emergency Revert Group ID is configured in MOTOTRBO Connect Plus Option Board CPS, there are three levels of priority for talkgroups: P0, P1, and P2. P0 is the permanent Emergency Revert Group ID and the highest priority. Check with your dealer or system administrator for more information.




- 1 Press  to access the menu.

- 2 Press  or  to Scan and press  to select.

- 3 Press  or  to View/Edit List and press  to select.

- 4 Press  or  to the required talkgroup and press  to select.

- 5 Press  or  to Edit Priority and press  to select.

- 6 Press  or  to the required priority level and press  to select.

The display shows positive mini notice before returning to the previous screen. The priority icon appears on the left of the talkgroup.

6.3.12

Contacts Settings



NOTICE:

You can add, or edit subscriber IDs for Connect Plus Contacts. Deleting subscriber IDs can only be performed by your dealer.

If the Privacy feature is enabled on a channel, you can make a privacy-enabled voice call on that channel. Only target radios with the same Privacy Key, or the same Key Value and Key ID as your radio are able to unscramble the transmission.

Access to Contact Lists depends on the zone configuration:

- If only one zone is configured in the radio, the Contact List directly displays the list from the current selected zone.
- If multiple zones are configured in the radio, the Zone Contact Folder displays all zones with identical network IDs as the current selected zone. The user can access the contacts in these zones.

Contacts provide “address-book” capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.


Each zone provides a Contact List with up to 100 contacts. The following contact types are available:




- Private Call
- Group Call
- Multigroup Call
- Site All Call Voice
- Site All Call Text
- Dispatch Call

The Dispatch Call contact type is used to send a text message to a dispatcher PC through a third-party Text Message Server.

6.3.12.1

Making a Private Call from Contacts

- 1** Press  to access the menu.

- 2** Press  or  to **Contacts** and press  to select.
The entries are alphabetically sorted.

- 3** Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

- 4** Press the **PTT** button to make the call.
The LED lights up solid green. The display shows the destination alias.

- 5** Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.

- 6 Release the **PTT** button to listen.

When the target radio responds, the LED blinks green and the display shows the transmitting user's ID.

If there is no voice activity for a predetermined period of time, the call ends.


You hear a short tone. The display shows `Call Ended`.




6.3.12.2

Making a Call Alias Search



You can also use alias or alphanumeric search to retrieve the required subscriber alias.

This feature is only applicable while in Contacts.

- 1 Press  to access the menu.

- 2 Press  or  to `Contacts` and press  to select.

The entries are alphabetically sorted.

- 3 Key in the first character of the required alias, and then press the  or  button to locate the required alias.

- 4 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

- 5 Press the **PTT** button to make the call.
The LED lights up solid green. The display shows the destination alias.

- 6 Wait for the Talk Permit Tone to finish (if enabled), and speak clearly into the microphone.

- 7 Release the **PTT** button to listen.
When the target radio responds, the LED blinks green.
If there is no voice activity for a predetermined period of time, the call ends.
The display shows `Call Ended`.

6.3.13


Call Indicator Settings




This feature allows the radio users to configure call or text message ringing tones.




6.3.13.1

Activating and Deactivating Call Ringers for Call Alert




You can select, or turn on or off ringing tones for a received Call Alert.




- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.




- 3 Press  or  to Radio Settings and press  to select.

- 4 Press  or  to Tones/Alert and press  to select.

- 5 Press  or  to Call Ringers and press  to select.

- 6 Press  or  to Call Alert and press  to select.

The current tone is indicated by a ✓.


- 7 Press  or  to the required tone and press  to select.




✓ appears beside selected tone.




6.3.13.2




Activating and Deactivating Call Ringers for Private Calls




You can turn on or off the ringing tones for a received Private Call.

- 1 Press  to access the menu.




- 2 Press  or  to *Utilities* and press  to select.

- 3 Press  or  to *Radio Settings* and press  to select.

- 4 Press  or  to *Tones/Alerts* and press  to select.

- 5 Press  or  to *Call Ringers* and press  to select.


6




Press  or  to *Private Call* and press  to select.




6.3.13.3




Activating and Deactivating Call Ringers for Text Message


You can turn on or off the ringing tones for a received Text Message.


- 1 Press  to access the menu.

- 2 Press  or  to *Utilities* and press  to select.


- 3 Press  or  to *Radio Settings* and press  to select.

- 4 Press  or  to *Tones/Alerts* and press  to select.

5 Press ▲ or ▼ to Call Ringers and press  to select.

6 Press ▲ or ▼ to Text Message and press  to select.

The current tone is indicated by a ✓.

7 Press ▲ or ▼ to the required tone and press  to select.

✓ appears beside selected tone.


displays the All Tone Mute icon. If All Tones status is enabled, the related ring alert type is displayed.

The radio vibrates once if it is a momentary ring style. The radio vibrates repetitively if it is a repetitive ring style. When set to Ring and Vibrate, the radio sounds a specific ring tone if there is any incoming radio transaction (for example, Call Alert or Message). It sounds like a positive indicator tone or missed call.

For radios with batteries that support the vibrate feature and are attached to a vibrating belt clip, the available Ring Alert Type options are Silent, Ring, Vibrate, and Ring and Vibrate.

For radios with batteries that do not support the vibrate feature and are not attached to a vibrating belt clip, Ring Alert Type is automatically set to Ring. The available Ring Alert Type options are Silent and Ring.

You can select a Ring Alert Type by performing one of the following actions.

- Press the programmed **Ring Alert Type** button to access the Ring Alert Type menu.
 - a. Press ▲ or ▼ to Ring, Vibrate, Ring & Vibrate or Silent and press  to select.

6.3.13.4







Selecting a Ring Alert Type



NOTICE:

The programmed **Ring Alert Type** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

You can program the radio calls to one predetermined vibrate call. If All Tones status is disabled, the radio

- Access this feature through the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to *Utilities* and press  to select.
 - c. Press ▲ or ▼ to *Radio Settings* and press  to select.
 - d. Press ▲ or ▼ to *Tones/Alerts* and press  to select.
 - e. Press ▲ or ▼ to *Ring Alert Type* and press  to select.
 - f. Press ▲ or ▼ to *Ring, Vibrate, Ring & Vibrate or Silent* and press  to select.

6.3.13.5

Configuring Vibrate Style






NOTICE:

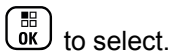
The programmed **Vibrate Style** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

Vibrate Style is enabled when the Vibrating Belt Clip is attached to the radio with a battery that supports the vibrate feature.

You can configure the vibrate style by performing one of the following actions.

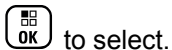
- Press the programmed **Vibrate Style** button to access the Vibrate Style menu.
 - a. Press ▲ or ▼ to *Short, Medium, or Long* and press  to select.
- Access this feature via the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to *Utilities* and press  to select.

c. Press ▲ or ▼ to Radio Settings and press



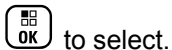
to select.

d. Press ▲ or ▼ to Tones/Alerts and press



to select.

e. Press ▲ or ▼ to Vibrate Style and press



to select.

f. Press ▲ or ▼ to Short, Medium, or Long and



press to select.

6.3.13.6

Escalating Alarm Tone Volume

You can program your radio to continually alert you when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalart.

6.3.14

Call Log

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the call log feature to view and manage recent calls.

You can perform the following tasks in each of your call lists:


- Delete
- View Details

6.3.14.1


Viewing Recent Calls


The lists are Missed, Answered, and Outgoing.

1

Press  to access the menu.





2

Press ▲ or ▼ to Call Log and press  to select.

- 3 Press ▲ or ▼ to preferred list and press  to select.
- The display shows the most recent entry at the top of the list.
-




- 4 Press ▲ or ▼ to view the list.
- Press the **PTT** button to start a Private Call with the current selected alias or ID.
-

When you select a call list and it contains no entries, the display shows `List Empty`.

- 4 Press ▲ or ▼ to the required alias or ID and press  to select.
-
- 5 Press ▲ or ▼ to `Delete` and press  to select.
-
- 6 Do one of the following:
- Press  to select `Yes` to delete the entry. The display shows `Entry Deleted`.
 - Press ▲ or ▼ to `No`, and press the  button to return to the previous screen.
-


6.3.14.2


Deleting a Call from a Call List


- 1 Press  to access the menu.
-
- 2 Press ▲ or ▼ to `Call Log` and press  to select.
-
- 3 Press ▲ or ▼ to the required list and press  to select.


6.3.14.3


Viewing Details from a Call List

- 1 Press  to access the menu.
-

2 Press ▲ or ▼ to Call Log and press  to select.

3 Press ▲ or ▼ to the required list and press  to select.

4 Press ▲ or ▼ to the required alias or ID and press  to select.

5 Press ▲ or ▼ to View Details and press  to select.
Display shows details of call list.

6.3.15

Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so.

This feature is accessible through the menu by using Contacts.

6.3.15.1

Responding to Call Alerts

When you receive a Call Alert:

- A repetitive tone sounds.
- The yellow LED blinks.
- The display shows the notification list listing a Call Alert with the alias or ID of the calling radio.


Depending on the configuration by your dealer or system administrator, you can respond to a Call Alert by doing one of the following:




- Press the **PTT** button and respond with a Private Call directly to the caller.
- Press the **PTT** button to continue normal talkgroup communication.
The Call Alert is moved to the Missed Call option at the Call Log menu. You can respond to the caller from the Missed Called log.




See [Notification List on page 159](#) and [Call Log Features on page 117](#) for more information.




6.3.15.2

Making a Call Alert from the Contact List

- 1 Press  to access the menu.

- 2 Press  or  to `Contacts` and press  to select.

- 3 Use one of the steps described next to select the required subscriber alias or ID:
 - select the subscriber alias directly
 - Press  or  to the required subscriber alias and press  to select.

- 4 Press  or  to `Call Alert` and press  to select.
 The display shows `Call Alert: <Subscriber Alias or ID>Call Alert` and the subscriber alias or ID, indicating that the Call Alert has been sent.

The LED lights up solid green when your radio is sending the Call Alert.

If the Call Alert acknowledgement is received, the display shows `Call Alert Successful`.

If the Call Alert acknowledgement is not received, the display shows `Call Alert Failed`.

6.3.15.3

Making a Call Alert with the One Touch Access Button

Press the programmed **One Touch Access** button to make a Call Alert to the predefined alias.

The display shows `Call Alert` and the subscriber alias or ID, indicating that the Call Alert has been sent.

The LED lights up solid green when your radio is sending the Call Alert.

If the Call Alert acknowledgement is received, the display shows `Call Alert Successful`.

If the Call Alert acknowledgement is not received, the display shows `Call Alert Failed`.

6.3.16

Mute Mode

Mute Mode provides an option to silence all audio indicators on your radio.

When Mute Mode is initiated, all audio indicators are muted except higher priority features such as emergency operations.

When Mute Mode is exited, your radio resumes playing ongoing tones and audio transmissions.



IMPORTANT:

You can only enable either Face Down or Man Down one at a time. Both features cannot be enabled together.

6.3.16.1

Turning On Mute Mode

Follow the procedure to turn on Mute Mode.

Do one of the following:

- Access this feature by using the programmed **Mute Mode** button.
- Access this feature by placing the radio in a face-down position momentarily.

Depending on radio model, the Face Down feature can be enabled either through the radio menu or by your system administrator. Check with your dealer or system administrator for more information.



IMPORTANT:

User can only enable either Man Down or Face Down at a time. Both features cannot be enabled together.



NOTICE:

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is enabled:

- Positive Indicator Tone sounds.
- Display shows `Mute Mode On`.
- The red LED light starts blinking and remains blinking until Mute Mode is exited.
- Display shows **Mute Mode** icon on home screen.
- Radio is muted.

- Mute Mode Timer begins counting down the duration that is configured.

6.3.16.2

Setting Mute Mode Timer


Mute Mode feature can be enabled for a pre-configured amount of time by setting the Mute Mode Timer. The timer duration is configured in the radio menu and can range between 0.5–6 hours. Mute Mode is exited once the timer expires.




If the timer is left at 0, the radio remains in Mute mode for an indefinite period until the radio is moved to a face-up position or the programmed **Mute Mode** button is pressed.









NOTICE:




Face Down feature is applicable to DP4601e only.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Mute Timer. Press  to select.

- 5 Press  or  to edit the numeric value of each digit, and press .

6.3.16.3

Exiting Mute Mode

This feature can be exited automatically once the Mute Mode Timer expires.

Do one of the following to exit Mute mode manually:

- Press the programmed **Mute Mode** button.
- Press the **PTT** button on any entry.

- Place the radio in a face-up position momentarily.

**NOTICE:**

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is disabled:

- Negative Indicator Tone sounds.
- Display shows `Mute Mode Off`.
- The blinking red LED turns off.
- **Mute Mode** icon disappears from home screen.
- Your radio unmutes and speaker state is restored.
- If the timer has not expired, Mute mode timer is stopped.

**NOTICE:**

Mute Mode is also exited if the user transmits voice or switches to an unprogrammed channel.

6.3.17

Emergency Operation

**NOTICE:**

If your radio is programmed for Silent or Silent with Voice emergency initiation, in most cases it automatically exits silent operation after the Emergency Call or Emergency Alert is finished. The exception to this rule is when Emergency Alert is the configured Emergency Mode and Silent is the configured Emergency Type. If your radio is programmed in this manner, the silent operation continues until you cancel silent operation by pressing **PTT** or the button configured for Emergency Off.

Emergency voice calls and Emergency Alerts are not supported when operating in Connect Plus Auto Fallback mode. For more information see the [Auto Fallback on page 215](#).

An Emergency Alert is used to indicate a critical situation. You can initiate an Emergency at any time on any screen display, even when there is activity on the current channel. Pressing the **Emergency** button initiates the programmed Emergency mode. The programmed Emergency mode may also be initiated by triggering the optional Man Down feature. The Emergency feature may be disabled in your radio.

Your dealer can set the duration of a button press for the programmed **Emergency** button, except for long press, which is similar with all other buttons:

Short press

Between 0.05 seconds and 0.75 seconds.

Long press

Between 1.00 second and 3.75 seconds.

The **Emergency** button is assigned with the Emergency On/Off feature. Check with your dealer for the assigned operation of the **Emergency** button.

- If the short press for the **Emergency** button is assigned to turn on the Emergency mode, then the long press for the **Emergency** button is assigned to exit the Emergency mode.
- If the long press for the **Emergency** button is assigned to turn on the Emergency mode, then the short press for the **Emergency** button is assigned to exit the Emergency mode.

When your radio is selected to a Connect Plus zone, it supports three Emergency modes:

Emergency Call

You must press the **PTT** button to talk on the assigned emergency time slot.

Emergency Call with Voice to Follow

For the first transmission on the assigned emergency time slot, the microphone is automatically unmuted and you may talk without pressing the **PTT** button. The microphone stays “hot” in this fashion for a time period programmed into the radio. For subsequent transmissions in the same Emergency call, you must press the **PTT** button.

Emergency Alert

An Emergency Alert is not a voice call. It is an emergency notification that is sent to radios that are configured to receive these alerts. The radio sends an emergency alert by using the control channel of the currently registered site. The Emergency Alert is received by radios in the Connect Plus network that are programmed to receive them (no matter which network site they are registered to).

Only one of the Emergency Modes can be assigned to the Emergency button per zone. In addition, each Emergency mode has the following types:

Regular

Radio initiates an Emergency and shows audio and/or visual indicators.

Silent

Radio initiates an Emergency without any audio or visual indicators. The radio suppresses all audio or visual indications of the Emergency until you press the **PTT** button to start a voice transmission.

Silent with Voice

The same as Silent operation, except that the radio also unmutes for some voice transmissions.

6.3.17.1

Receiving an Incoming Emergency

Your radio may be programmed to sound an alert tone and also display information about the incoming Emergency. If so programmed, upon receiving the incoming Emergency, the display shows the Emergency Details screen with the emergency icon, the Alias or ID of the radio that requested the Emergency, the Group Contact being used for the Emergency, and one additional line of information. The additional information is the name of the zone that contains the Group Contact.

At the present time, the radio displays only the most recently decoded Emergency. If a new Emergency is received before the prior Emergency is cleared, the details for the new Emergency replace the details of the previous Emergency.


Depending on how your radio has been programmed, the Emergency Details screen (or Alarm List screen) will stay on your radio display even after the Emergency ends. You can save the emergency details to the Alarm List, or you can delete the emergency details as described in the following sections.

6.3.17.2

Saving the Emergency Details to the Alarm List


Saving the emergency details to the Alarm List allows you to view the details again at a later time by selecting Alarm List from the Main Menu.


- 1 While the Emergency Details (or Alarm List) screen

is displayed, press .

The **Exit Alarm List** screen displays.


- 2 Perform one of the following actions:

- Select **Yes** and press  to save the emergency details to the Alarm List, and to exit the Emergency Details (or Alarm List) screen.



- Select **No** and press  to return to the Emergency Details (or Alarm List) screen.
-

6.3.17.3

Deleting the Emergency Details

- 1 While the Emergency Details screen is displayed, press . The **Delete** screen displays.
-

- 2 Perform one of the following actions:

- Select **Yes** and press  to delete the emergency details.
 - Select **No** and press  to return to the Emergency Details screen.
-

6.3.17.4

Responding to an Emergency Call



NOTICE:

If you do not respond to the Emergency Call within the time allotted for the Emergency Call Hang Time, the Emergency call will end. If you want to speak to the group after the Emergency Call Hang Time expires, you must first select the channel position assigned to the group (if not already selected). Then, press **PTT** to start a non-Emergency Call to the group.

- 1 When receiving an Emergency Call, press any button to stop all Emergency Call received indications.
-
- 2 Press the **PTT** button to initiate a voice transmission on the Emergency group.
All radios that are monitoring this group hear your transmission.
-
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
The LED lights up green.
-

- 4 Release the **PTT** button to listen.

When the emergency initiating radio responds, the LED blinks green. You see the Group Call icon, the group ID, and transmitting radio ID on your display.

6.3.17.5

Responding to an Emergency Alert



NOTICE:

The Group contact used for the Emergency Alert should not be used for voice communication. This could prevent other radios from sending and receiving Emergency Alerts on the same group.

An Emergency Alert from a radio indicates that the user is in an urgent situation. You may respond to the alert by initiating a private call to the radio who declared the emergency, initiating a group call to a designated talk group, sending the radio a Call Alert, initiating a Remote Monitor of that radio, etc. The proper response is determined by your organization and the individual situation.

6.3.17.6

Ignore Emergency Revert Call

This feature enhancement provides an option for your radio to disregard an active Emergency Revert Call.

To enable Ignore Emergency Revert Call, your radio must be configured through the Connect Plus Customer Programming Software (CPCPS).

When the feature is enabled, the radio does not display Emergency Call indications and does not receive any audio on the default Emergency Revert Group ID.

Contact with your dealer for more information.

6.3.17.7

Initiating an Emergency Call

**NOTICE:**

If your radio is set to Silent, it does not display any audio or visual indicators during Emergency mode until you press the **PTT** button to initiate a voice transmission.

If your radio is set to Silent with Voice, it does not initially display any audio or visual indicators that the radio is in Emergency mode. However, your radio unmutes for the transmissions of radios responding to your emergency. The emergency indicators only appear once you press the **PTT** button to initiate a voice transmission from your radio.

For both "Silent" and "Silent with Voice" operation, the radio automatically exits silent operation after the Emergency Call is finished.

- 1 Press the programmed **Emergency** button.
- 2 Press the **PTT** button to initiate a voice transmission on the Emergency group.

When you release the **PTT** button, the Emergency call continues for the time allotted for the Emergency Call Hang Time.

If you press the **PTT** button during this time, the Emergency call continues.

6.3.17.8

Initiating an Emergency Call with Voice to Follow

Your radio must be programmed for this type of operation.

When enabled for this operation, when you press the programmed **Emergency** button, and when your radio receives the time slot assignment, the microphone is automatically activated without pressing the **PTT** button. This activated microphone state is also known as "hot mic". The "hot mic" applies to the first voice transmission from your radio during the Emergency call. For subsequent transmissions in the same Emergency call, you must press the **PTT** button.

- 1 Press the programmed **Emergency** button.
 - 2 The microphone remains active for the "hot mic" time specified in your radio codeplug programming.
During this time, the LED lights up green.
-

- 3 Press and hold the **PTT** button to talk longer than the programmed duration.
-

6.3.17.9

Initiating an Emergency Alert



NOTICE:

If your radio is programmed for "Silent" or "Silent with Voice", it will not provide any audio or visual indications that it is sending an Emergency Alert. If programmed for "Silent", the silent operation continues indefinitely until you press PTT or the button configured for "Emergency Off". If programmed for "Silent with Voice", the radio automatically cancels silent operation when the site controller broadcasts the Emergency Alert.

Press the orange **Emergency** button.

Upon transmitting the Emergency Alert to the site controller, the radio display shows the Emergency icon, the Group contact used for the Emergency Alert, and TX Alarm.

Once the Emergency Alert is successfully sent and is being broadcast for other radios to hear, a positive indicator tone

sounds and the radio displays Alarm Sent. If the Emergency Alert is unsuccessful, a negative indicator tone sounds and the radio displays Alarm Failed.

6.3.17.10

Exiting Emergency Mode



NOTICE:

If the Emergency call ends due to the expiration of the Emergency Hang Time, but the emergency condition is not over, press the **Emergency** button again to restart the process.

If you initiate an Emergency Alert by pressing the programmed **Emergency** button, your radio automatically exits Emergency mode after receiving a response from the Connect Plus system.

If you initiate an Emergency call by pressing the programmed **Emergency** button, your radio will be assigned a channel automatically when one becomes available. Once your radio has transmitted a message indicating the emergency, you cannot cancel your Emergency call. However, if you pressed the button by accident or the emergency no longer exists, you may wish to say this over the assigned channel. When you release the **PTT** button, the Emergency call is discontinued after the Emergency Call Hang Time expires.

If your radio was configured for Emergency with Voice to Follow, use the “hot mic” period to explain your error, then press and release the **PTT** button to discontinue the transmission. The Emergency call is discontinued after the Emergency Call Hang Time expires.

6.3.18

Man Down Alarms



NOTICE:

This feature is applicable to DP4600e/DP4601e only.

Man Down Alarms are not supported when operating in Fallback mode. For more information see the [Auto Fallback on page 215](#).

This section describes the Connect Plus Man Down Feature. This is a purchasable feature that may or may not apply to your radio.

Your Connect Plus portable radio can be enabled and programmed for one or more of the Man Down Alarms. Your dealer or radio system administrator can tell you whether or not this applies to your radio and which specific Man Down Alarms have been enabled and programmed.

If your radio has been programmed for one or more of the following Man Down Alarms, it is important for you to

understand how the Alarm works, what indication (tones) your radio provides, and the action you should take.

The purpose of the Man Down Alarms is to alert others when you might be in danger. This is accomplished by programming your radio to detect a certain angle of tilt, lack of movement, or movement, depending on which Man Down Alarm(s) is/are enabled. If your radio detects a disallowed movement type, and if the condition is not corrected in a certain period of time, the radio starts to play an Alert Tone (if so programmed). At this point you should immediately take one or more of the corrective actions discussed below, depending on which Man Down Alarm(s) has/have been enabled for your radio. If you do not take corrective action within a certain period of time, your radio automatically starts an Emergency (either an Emergency Call or Emergency Alert).

- **Tilt Alarm** – When your radio is tilted at or beyond a specified angle for a period of time, it plays an Alert Tone (if so programmed). To prevent the radio from automatically starting an Emergency Call or Emergency Alert, restore the radio to the vertical position immediately.
- **Anti-Movement Alarm** – When your radio is motionless for a period of time, it plays an Alert Tone (if so programmed). To prevent the radio from automatically

starting an Emergency Call or Emergency Alert, move the radio immediately.

- **Movement Alarm** – When your radio is in motion for a period of time, it plays an Alert Tone (if so programmed). To prevent the radio from automatically starting an Emergency Call or Emergency Alert, stop the radio's motion immediately.

Your dealer or radio system administrator can tell you which of the above alarms (if any) has been enabled through radio programming. It is possible to enable both the Tilt and Anti- Movement Alarms. In that case, the Alert Tone plays when the radio detects the first movement violation.

Instead of taking the corrective actions discussed above, you can also prevent the radio from starting the Emergency call or Emergency Alert by using a programmable button, if your radio has been configured in this manner. This is discussed in the next two sections.

6.3.18.1

Turning Man Down Alarms On and Off



NOTICE:

The programmed **Man Down** button and Man Down settings are configured using CPS. Check with your dealer or system administrator to determine how your radio has been programmed.


If you enable Man Down to maximum sensitivity and set Vibrate Style to high, the radio automatically restricts Vibrate Style to medium. This function prevents high Vibrate Style from initiating the Man Down emergency feature.




The procedure for turning the Man Down Alarms On and Off depends on how your radio is programmed. If programmed with a Man Down Alarms On/Off button, use the button to toggle the Man Down Alarms On and Off. This applies to all of the Man Down Alarms enabled for your radio.




When using the programmable button to toggle the Man Down Alarms On, your radio plays a tone that rises in pitch and displays a brief confirmation message.




In order to hear the tones described above when turning the Man Down Alarms On and Off, the MOTOTRBO radio and Connect Plus Option Board must both be enabled for keypad tones.

If your radio has been programmed so that Man Down Alarms can be turned On and Off using the menu, perform the following procedure.

- 1 Press  to access the menu.




- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Connect Plus and press  to select.

- 4 Press  or  to Man Down Alarm and press  to select.

If Man Down Alarm is currently disabled, the *Enable* option is shown.

If Man Down Alarm is currently enabled, the *Disable* option is shown.

- 5 Press  or  to *Enable* or *Disable* and press  to select.

6.3.18.2


Resetting the Man Down Alarms




If your radio has been programmed with either a Man Down Alarms Reset button, or the Man Down Alarms menu option, it is possible to reset the Man Down Alarms without turning them On or Off. This stops any Man Down Alert Tone that is currently playing, and it also resets the Alarm timers. However, it is still necessary to correct the movement violation by taking the appropriate corrective action described in the Man Down Alarms section. If the movement violation is not corrected within a period of time, the Alert Tone starts playing again.




The procedure for resetting the Man Down Alarms depends on how your radio is programmed. If programmed with a Man Down Alarms Reset button, use the button to Reset the Man Down Alarms. This applies to all of the Man Down Alarms enabled for your radio.




When using the programmable button to reset the Man Down Alarms, the radio shows a brief confirmation message.




If your radio has been programmed so that Man Down Alarms can be Reset via the menu, follow the procedure below.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Connect Plus and press  to select.

- 4 Press  or  to Man Down Alarm and press  to select.

- 5 Press  or  to Reset and press  to select.
The radio displays a brief confirmation message.

6.3.19

Beacon Feature

The Beacon feature is part of Connect Plus Man Down, a purchasable feature. Your dealer or Radio System Administrator can tell you if the Beacon feature applies to your radio.

If your radio has been enabled and programmed for one or more of the Man Down Alarms, it can also be enabled for the Beacon feature.

If your radio automatically starts an Emergency Call or Emergency Alert due to one of the Man Down Alarms, and if your radio is also enabled for the Beacon feature, the radio starts to periodically emit a high pitched tone approximately once every ten seconds. The interval can vary depending on whether you are talking on your radio. The purpose of the Beacon tone is to help searchers locate you. If your radio has also been enabled for the “Visual Beacon”, the radio’s backlight comes on for a few seconds every time the Beacon tone plays.

You can stop your radio from playing the Beacon tone by using a programmable button, if your radio has been configured in this manner. This is discussed in the next two sections. If your radio does not have the programmable button or menu option, you can stop the Beacon tone by turning the radio off and then on again, or by changing to a

different zone (if your radio has been programmed for more than one zone).


6.3.19.1




Turning Beacon On and Off

The procedure for turning the Beacon On and Off depends on how your radio is programmed. If programmed with a Beacon On/Off button, use the button to toggle the Beacon On and Off.




- When using the programmable button to toggle the Beacon On, your radio plays a tone that rises in pitch and shows a brief confirmation message.
- When using the programmable button to toggle the Beacon Off, your radio plays a tone that falls in pitch and shows a brief confirmation message.




In order to hear the tones described above when turning the Beacon On and Off, the MOTOTRBO radio and Connect Plus Option Board must both be enabled for keypad tones. If your radio has been programmed so that the Beacon can be turned On and Off via the menu, follow the procedure below.

- 1 Press  to access the menu.
-

- 2 Press  or  to Utilities and press  to select.
-

- 3 Press  or  to Connect Plus and press  to select.
-


- 4 Press  or  to Beacon and press  to select.
If Beacon is currently disabled, the Enable option is shown.
If Beacon is currently enabled, the Disable option is shown.
-




- 5 Press  or  to Enable or Disable and press  to select.
The radio shows a brief message to confirm that Man Down Beacon was enabled (or disabled).
-




6.3.19.2

Resetting the Beacon




If your radio has been programmed with either the Beacon Reset button, or the Beacon menu option, it is possible to reset the Beacon. This stops the Beacon Tone (and also the Visual Beacon) without turning the Beacon feature Off. The procedure for resetting the Beacon depends on how your radio is programmed. If programmed with a Beacon Reset button, use the button to Reset the Beacon. When using the programmable button to reset the Man Down Alarms, your radio shows a brief confirmation message. If your radio has been programmed so that the Beacon can be Reset via the menu, follow the procedure below.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Connect Plus and press  to select.

- 4 Press  or  to Beacon and press  to select.

- 5 Press  or  to Reset and press  to select.
The radio displays a brief confirmation message.

6.3.20

Text Messaging

Your radio is able to receive data, for example a text message, from another radio or a text message application.

There are two types of text messages, Digital Mobile Radio (DMR) Short Text Message and text message. The maximum length of a DMR Short Text Message is 23 characters. The maximum length of a text message is 280 characters, including the subject line. The subject line only

appears when you receive messages from e-mail applications.



NOTICE:

The maximum character length is only applicable for models with the latest software and hardware. For radio models with older software and hardware, the maximum length of a text message is 140 characters. Contact your dealer for more information.

6.3.20.1

Sending a Quick Text Message

Your radio supports a maximum of 10 Quick Text messages as programmed by your dealer.



While Quick Text messages are predefined, you can edit each message before sending it.

If you are sending the message, perform the following to select a recipient:

- Press ▲ or ▼ to the required alias and press



to select.

- Press ▲ or ▼ to Manual Dial, and press  to select. The first line of the display shows Number: . The second line of the display shows a blinking cursor. Key in the subscriber alias or ID and press  .

The display shows Sending Message, confirming your message is being sent.

If the message is sent successfully, a tone sounds and the display shows Message Sent.

If the message cannot be sent, a low tone sounds and the display shows Message Send Failed.

If the text message fails to send, the radio returns you to the Resend option screen (see [Managing Fail-to-Send Text Messages on page 254](#)).

6.3.20.2

Sending Quick Text Messages with the One Touch Access Button

To send a predefined Quick Text message to a predefined alias, press the programmed **One Touch Access** button.

The display shows `Sending Message`.

If message is successfully sent, your radio shows the following indications:

- A positive tone sounds.
- The display shows `Message Sent`.

If message fails to be sent, your radio shows the following indications:

- A negative tone sounds.
- The display shows `Message Send Failed`.

If the text message fails to send, the radio returns you to the `Resend` option screen.

See [Managing Fail-to-Send Text Messages on page 254](#).

6.3.20.3


Managing Fail-to-Send Text Messages

You can select one of the following options while at the `Resend` option screen:

- Resend
- Forward

6.3.20.3.1

Resending a Text Message

Press  to resend the same message to the same subscriber/group alias or ID.




If the message is sent successfully, a tone sounds and the display shows the positive mini notice.




If the message cannot be sent, the display shows the negative mini notice.

6.3.20.3.2

Forwarding a Text Message

Select **Forward** to send the message to another subscriber/group alias or ID.

- 1 Press  or  to **Forward** and press  to select.

- 2 To select the message recipient, press  or  to the required alias or ID and press  to select.

The display shows **Sending Message**, confirming your message is being sent.

If the message is sent successfully, a tone sounds and the display shows **Message Sent**.

If the message cannot be sent, a low tone sounds and the display shows **Message Send Failed**.

6.3.20.4


Managing Sent Text Messages

Once a message is sent to another radio, it is saved in **Sent Items**. The most recent sent text message is always added to the top of the **Sent Items** list.

The **Sent Items** folder is capable of storing a maximum of 30 last sent messages. When the folder is full, the next sent text message automatically replaces the oldest text message in the folder.



NOTICE:





Long press  at any time to return to the Home screen.




6.3.20.4.1




Viewing a Sent Text Message

- 1 Access the **Text Message** feature.

Radio Controls	Steps
Programmed	Press the programmed Text Message button.

Radio Controls	Steps
Text Message button	
Menu	<p>a Press  to access the menu.</p> <p>b Press  or  to Messages and press  to select.</p>

2 Press  or  to Sent Items and press  to select.

3 Press  or  to the required message and press  to select.




The icon at the top right corner of the screen indicates the status of the message (see [Sent Item Icons on page 200](#)).

Sending a Sent Text Message


You can select one of the following options while viewing a sent text message:

- Resend
- Forward
- Delete

1 Press  again while viewing the message.

2  or  to one of the following options and press  to select.

Option	Steps
Forward	Select Forward to send the selected text message to another subscriber/group alias or ID (see Forwarding a Text Message on page 255).
Delete	Select Delete to delete the text message.

Option	Steps
Resend	<p>Select Resend to resend the selected text message to the same subscriber/group alias or ID.</p> <p>The display shows Sending Message, confirming that the same message is being sent to the same target radio.</p> <p>If the message is sent successfully, a tone sounds and the display shows Message Sent.</p> <p>If the message cannot be sent, a low tone sounds and the display shows Message Send Failed.</p> <p>If the message fails to send, the radio returns you to the Resend option screen. Press  to resend the message to the same subscriber/group alias or ID.</p>

If you exit the message sending screen while the message is being sent, the radio updates the status

of the message in the Sent Items folder without any audio or visual indication.

If the radio changes mode or powers down before the status of the message in Sent Items is updated, the radio cannot complete any In-Progress messages and automatically marks it with a **Send Failed** icon.





The radio supports a maximum of five In-Progress messages at one time. During this period, the radio cannot send any new message and automatically marks it with a **Send Failed** icon.




6.3.20.4.3

Deleting All Sent Text Messages from Sent Items

- 1 Access the **Text Message** feature.

Radio Controls	Steps
Programmed Text Message button	Press the programmed Text Message button.







Radio Controls	Steps
Menu	<p>a Press  to access the menu.</p> <p>b Press  or  to Messages and press  to select.</p>

- 2 Press  or  to Sent Items and press  to select.

When you select Sent Items and it contains no text messages, the display shows List Empty.

- 3 Press  or  to Delete All and press  to select.

- 4 Choose one of the following.

- Press  or  to Yes and press  to select. The display shows positive mini notice.
- Press  or  to No and press  to return to the previous screen.

6.3.20.5

Receiving a Text Message


When your radio receives a message, the display shows the Notification List with the alias or ID of the sender and the Message icon.

You can select one of the following options when receiving a text message:



- Read
- Read Later
- Delete

6.3.20.6

Reading a Text Message

- 1 Press ▲ or ▼ to Read? and press  to select. Selected message in the Inbox opens.

-
- 2 Do one of the following:

- Press  to return to the Inbox.
- Press  a second time to reply, forward, or delete the text message.

6.3.20.7

Managing Received Text Messages

Use the Inbox to manage your text messages. The Inbox is capable of storing a maximum of 30 messages.

Text messages in the Inbox are sorted according to the most recently received.


Your radio supports the following options for text messages:

- Forward
- Delete
- Delete All






NOTICE:

If the channel type is not a match, you can only forward, delete, or delete all Received messages.




Long press  at any time to return to the Home screen.

6.3.20.7.1

Viewing a Text Message from the Inbox

- 1 Press  to access the menu.
- 2 Press ▲ or ▼ to Messages and press  to select.
- 3 Press ▲ or ▼ to Inbox and press  to select.
- 4 Press ▲ or ▼ to view the messages.


5 Do one of the following:




- Press  to select the current message, and press  again to reply, forward, or delete that message.
- Long press  to return to the Home screen.




6.3.20.7.2




Deleting a Text Message from the Inbox


1 Access the **Text Message** feature.

Radio Controls	Steps
Programmed Text Message button	Press the programmed Text Message button.
Menu	a Press  to access the menu.




Radio Controls	Steps
	b Press  or  to Messages and press  to select.

2 Press  or  to Inbox and press  to select.

3 Press  or  to the required message and press  to select.

4 Press  once more to access the sub-menu.





5 Press  or  to Delete and press  to select.

6 Press  or  to Yes and press  to select. The display shows **Message Deleted**, and the screen returns to the Inbox.

6.3.20.7.3


Deleting All Text Messages from the Inbox




1 Access the **Text Message** feature.

Radio Controls	Steps
Programmed Text Message button	Press the programmed Text Message button.
Menu	<p>a Press  to access the menu.</p> <p>b Press  or  to Messages and press  to select.</p>

2 Press  or  to **Inbox** and press  to select.

When you select **Inbox** and it contains no text messages, the display shows **List Empty**.

3 Press  or  to **Delete All** and press  to select.

4 Press  or  to **Yes** and press  to select.
The display shows **Inbox Cleared**.

6.3.21 Privacy

If enabled, this feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software-based scrambling solution. The signaling and user identification portions of a transmission are not scrambled.

Your radio must have privacy enabled on the current channel selector position to send a privacy-enabled transmission, although this is not a necessary requirement for receiving a transmission. While on a privacy-enabled channel selector position, the radio is still able to receive clear (unscrambled) transmissions.

Your radio supports Enhanced Privacy.

To unscramble a privacy-enabled call transmission, your radio must be programmed to have the same Key Value

and Key ID (for Enhanced Privacy) as the transmitting radio.

If your radio receives a scrambled call that is of a different Key Value and Key ID, you hear nothing at all (Enhanced Privacy).

If the radio has a privacy type assigned, the Home screen shows the Secure or Unsecure icon, except when the radio is sending or receiving an Emergency call or alarm.

The LED lights up solid green while the radio is transmitting and blinks green rapidly when the radio is receiving an ongoing privacy-enabled transmission.

You can access this feature by performing one of the following actions:


- Pressing the programmed **Privacy** button to toggle privacy on or off.
- Using the Radio Menu as described by the steps described next.






NOTICE:

Some radio models may not offer this Privacy feature. Check with your dealer or system administrator for more information.






1

Press  to access the menu.

2


Press  or  to Utilities and press  to select.


3

Press  or  to Radio Settings or  or 
to Connect Plus and press  to select.

4

Press  or  to Enhanced Privacy.

If the display shows Turn On, press  to enable Privacy. The radio displays a message confirming your selection.

If the display shows Turn Off, press  to disable Privacy. The radio displays a message confirming your selection.

If the radio has a privacy type assigned, the secure or unsecure icon appears on the status bar, except when the radio is sending or receiving an Emergency Alert.

Security

You can enable or disable any radio in the system. For example, you might want to disable a stolen radio, to prevent the thief from using it, and enable that radio, when it is recovered.



NOTICE:

Performing Radio Disable and Enable is limited to radios with these functions enabled. Check with your dealer or system administrator for more information.

6.3.21.1

Making a Privacy-Enabled (Scrambled) Call

Toggle privacy on using the programmed privacy button or by using the menu. Your radio must have the Privacy feature enabled for the currently selected channel position to send a privacy-enabled transmission. When privacy is enabled for the currently selected channel position, all voice transmissions made by your radio will be scrambled. This includes Group Call, Multigroup Call, talk-back during scanned calls, Site All Call, Emergency Call, and Private Call. Only receiving radios with the same Key Value and Key ID as your radio will be able to unscramble the transmission.





6.3.22


6.3.22.1

Radio Disable

- 1 Access this feature by performing one of the following actions:

Radio Controls	Steps
Radio Disable button	a Press the programmed Radio Disable button.

Radio Controls	Steps
	<p>b Press ▲ or ▼ to the required alias or ID and press  to select.</p>
Radio menu	<p>a Press  to access the menu.</p> <p>b Press ▲ or ▼ to <code>Contacts</code> and press  to select. The entries are alphabetically sorted.</p> <p>c Use one of the steps described next to select the required subscriber alias or ID:</p> <ul style="list-style-type: none"> • Select the required alias or ID directly. • Press ▲ or ▼ to the required alias or ID and press  to select.

Radio Controls	Steps
	<p>d Press ▲ or ▼ to <code>Radio Disable</code> and press  to select.</p>

The display shows `Radio Disable: <Target Alias or ID>` and the LED blinks green.

2 Wait for acknowledgement.




If successful, a positive indicator tone sounds and the display shows `Radio Disable Successful`.



If not successful, a negative indicator tone sounds and the display shows `Radio Disable Failed`.

6.3.22.2

Radio Enable

- 1 Access this feature by performing one of the following actions:

Radio Controls	Steps
Radio Enable button	<p>a Press the programmed Radio Enable button.</p> <p>b Press ▲ or ▼ to the required alias or ID and press  to select.</p>
Radio menu	<p>a Press  to access the menu.</p> <p>b Press ▲ or ▼ to Contacts and press  to select. The entries are alphabetically sorted.</p> <p>c Use one of the steps described next to select the required subscriber alias or ID</p> <ul style="list-style-type: none"> • Select the required alias or ID directly.

Radio Controls	Steps
	<ul style="list-style-type: none"> • Press ▲ or ▼ to the required alias or ID and press  to select. <p>d Press ▲ or ▼ to Radio Enable and press  to select.</p>

The display shows Radio Enable: <Subscriber Alias or ID> and the LED lights up solid green.

-
- 2** Wait for acknowledgement.
- If successful, a positive indicator tone sounds and the display shows Radio Enable Successful.
- If not successful, a negative indicator tone sounds and the display shows Radio Enable Failed.
-

6.3.23

Password Lock Features

If enabled, this feature only allows you access your radio if the correct password is entered upon powering up.

6.3.23.1

Accessing the Radio from Password

- 1 Power up the radio.

The radio sounds a continuous tone.

- 2 Enter your current four-digit password. Press ▲ or ▼ to edit each digit numeric value. Each digit changes to •. Press ▶ to move to next digit. Press



to confirm your selection.

You hear a positive indicator tone for every digit

entered. Press ◀ to remove each • on the display. The radio sounds a negative indicator tone, if you

press ◀ when the line is empty, or if you press more than four digits.

If the password is correct, the radio proceeds to power up. See [Turning the Radio On on page 43](#).

If the password is incorrect, the display shows Wrong Password. Repeat [step 2](#).

After the third incorrect password, the display shows Wrong Password and then, shows Radio Locked. A tone sounds and the LED double blinks yellow.




NOTICE:

The radio is unable to receive any call, including emergency calls, in locked state.


6.3.23.2

Turning the Password Lock On or Off


1


Press  to access the menu.

2

Press ▲ or ▼ to Utilities and press  to select.

- 3 Press ▲ or ▼ to Radio Settings and press

 to select.


- 4 Press ▲ or ▼ to Passwd Lock and press  to select.
-

- 5 Enter the four-digit password.

See [step 2 in Accessing the Radio from Password on page 266](#).

- 6 Press  to proceed.

If the password is incorrect, the display shows Wrong Password, and automatically returns to the previous menu.

- 7 If the password entered in the previous step is correct, press  to enable/disable password lock. The display shows ✓ beside Enabled.

The ✓ disappears from beside Enabled.

6.3.23.3

Unlocking the Radio from Locked State

- 1 If your radio was powered down after being in the locked state, power up the radio.

A tone sounds and the LED double blinks yellow. The display shows Radio Locked.


- 2 Wait for 15 minutes.


Your radio restarts the 15 minutes timer for locked state when you power up.


- 3 Repeat [step 1](#) and [step 2](#) in [Accessing the Radio from Password on page 266](#).
-


6.3.23.4

Changing the Password


- 1 Press  to access the menu.
-


- 2 Press ▲ or ▼ to Utilities and press  to select.

- 3 Press ▲ or ▼ to Radio Settings and press  to select.

- 4 Press ▲ or ▼ to Passwd Lock and press  to select.


- 5 Enter the four-digit password.
See [step 2 in Accessing the Radio from Password on page 266](#).

- 6 Press  to proceed.
If the password is incorrect, the display shows Wrong Password, and automatically returns to the previous menu.

- 7 If the password entered in the previous step is correct, ▲ or ▼ to Change Pwd and press  to select.

- 8 Enter a new four-digit password.
See [step 2 in Accessing the Radio from Password on page 266](#).

- 9 Reenter the previously entered four-digit password.
See [step 2 in Accessing the Radio from Password on page 266](#).

- 10 Press  to proceed.
If the reentered password matches the new password entered earlier, the display shows Password Changed.
If the reentered password does **NOT** match the new password entered earlier, the display shows Passwords Do Not Match.
The screen automatically returns to the previous menu.

6.3.24

Bluetooth Operation



NOTICE:

If disabled via the CPS, all Bluetooth-related features are disabled and the Bluetooth device database is erased.

This feature allows you to use your radio with a Bluetooth-enabled device (accessory) via a wireless Bluetooth connection. Your radio supports both Motorola Solutions and Commercially available Off-The-Shelf (COTS) Bluetooth-enabled devices.

Bluetooth operates within a range of 10 meters (32 feet) line of sight. This is an unobstructed path between your radio and your Bluetooth-enabled device.

It is not recommended that you leave your radio behind and expect your Bluetooth-enabled device to work with a high degree of reliability when they are separated.


At the fringe areas of reception, both voice and tone quality will start to sound "garbled" or "broken". To correct this problem, simply position your radio and Bluetooth-enabled device closer to each other (within the 10-meter/32 feet defined range) to re-establish clear audio reception. Your radio's Bluetooth function has a maximum power of 2.5 mW (4 dBm) at the 10-meter/32 feet range.




Your radio can support up to 4 simultaneous Bluetooth connections with Bluetooth-enabled devices of unique types. For example, a headset, and a PTT-Only Device (POD).




Refer to your respective Bluetooth-enabled device's user manual for more details on your Bluetooth-enabled device's full capabilities.


6.3.24.1

Turning Bluetooth On and Off



- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth and press  to select.

- 3 Press  or  to My Status and press  to select.


The display shows On and Off. The current status is indicated by a .

4 Do one of the following:

- Press ▲ or ▼ to On and press  to select. The display shows On and a ✓ appears left of the selected status.
- Press ▲ or ▼ to Off and press  to select. The display shows Off and a ✓ appears left of the selected status.

6.3.24.2

Finding and Connecting to a Bluetooth Device


Do not turn off your Bluetooth-enabled device or press  during the finding and connecting operation as this cancels the operation.

- 1 Turn on your Bluetooth-enabled device and place it in pairing mode. Refer to respective Bluetooth-enabled device user manual.

2

On your radio, press  to access the menu.



3

Press ▲ or ▼ to Bluetooth and press  to select.

4

Press ▲ or ▼ to Devices and press  to select.

5 Do one of the following:

- Press ▲ or ▼ to the required device and press  to select.
- Press ▲ or ▼ to Find Devices to locate available devices. Press ▲ or ▼ to the required device and press  to select.

6

Press ▲ or ▼ to Connect and press  to select.

Display shows Connecting to <Device>. Your Bluetooth-enabled device may require additional

steps to complete the pairing. Refer to respective Bluetooth-enabled device user manual.

If successful, the radio display shows <Device>Connected. A tone sounds and ✓ appears besides the connected device. The Bluetooth Connected icon appears on the status bar.

If unsuccessful, the radio display shows Connecting Failed.


6.3.24.3


Finding and Connecting from a Bluetooth Device (Discoverable Mode)


Do not turn off your Bluetooth or your radio during the finding and connecting operation as this may cancel the operation.

- 1 Turn Bluetooth On.

See [Turning Bluetooth On and Off on page 269](#).

- 2 Press  to access the menu.

- 3 Press ▲ or ▼ to Bluetooth and press  to select.

- 4 Press ▲ or ▼ to Find Me and press  to select.


Your radio can now be found by other Bluetooth-enabled devices for a programmed duration. This is called Discoverable Mode.


- 5 Turn on your Bluetooth-enabled device and pair it with your radio.
Refer to respective Bluetooth-enabled device user manual.


6.3.24.4

Disconnecting from a Bluetooth Device

- 1 On your radio, press  to access the menu.

2 Press ▲ or ▼ to Bluetooth and press  to select.

3 Press ▲ or ▼ to Devices and press  to select.

4 Press ▲ or ▼ to the required device and press  to select.

5 Press ▲ or ▼ to Disconnect and press  to select.

Display shows Disconnecting from <Device>. Your Bluetooth-enabled device may require additional steps to disconnect. Refer to respective Bluetooth-enabled device user manual.

The radio display shows <Device> Disconnected. A positive indicator tone sounds and ✓ disappears beside the connected device. The Bluetooth Connected icon disappears on the status bar.

6.3.24.5

Switching Audio Route between Internal Radio Speaker and Bluetooth Device


You can toggle audio routing between internal radio speaker and external Bluetooth-enabled accessory.

Press the programmed **Bluetooth Audio Switch** button.


- A tone sounds and display shows Route Audio to Radio.
- A tone sounds and display shows Route Audio to Bluetooth.


6.3.24.6


Viewing Device Details


1 Press  to access the menu.


2 Press ▲ or ▼ to Bluetooth and press  to select.


3 Press ▲ or ▼ to Devices and press  to select.


4 Press ▲ or ▼ to the required device and press  to select.

5 Press ▲ or ▼ to View Details and press  to select.

2 Press ▲ or ▼ to Bluetooth and press  to select.

3 Press ▲ or ▼ to Devices and press  to select.


4 Press ▲ or ▼ to the required device and press  to select.

5 Press ▲ or ▼ to Delete and press  to select.
The display shows Device Deleted.

6.3.24.7

Deleting Device Name


You can remove a disconnected device from the list of Bluetooth-enabled devices.


1 Press  to access the menu.


6.3.24.8

Bluetooth Mic Gain

Allows control of the connected Bluetooth-enabled device microphone gain value.


1 Press  to access the menu.

2 Press ▲ or ▼ to Bluetooth and press  to select.

3 Press ▲ or ▼ to BT Mic Gain and press  to select.

4 Press ▲ or ▼ to the BT Mic Gain type and the current values.

To edit values, press  to select.

5 Press ▲ or ▼ to increase or to decrease values and press  to select.

6.3.24.9

Permanent Bluetooth Discoverable Mode



NOTICE:

The Permanent Bluetooth Discoverable Mode can only be enabled by using the MOTOTRBO CPS. If enabled, the Bluetooth item will **not** be displayed in the Menu and you will **not** be able to use any Bluetooth programmable button features.

Other Bluetooth-enabled devices can locate your radio, but the devices cannot connect to the radio. It enables dedicated devices to use your radio position in the process of Bluetooth-based location.

Turn on your Bluetooth-enabled device and pair it with your radio. Refer to the respective user manual of Bluetooth-enabled device.

6.3.25

Indoor Location



NOTICE:









Indoor Location feature is applicable for models with the latest software and hardware. Check with your dealer or system administrator for more information.

Indoor Location is used to keep track of the location of radio users. When Indoor Location is activated, the radio is in a limited discoverable mode. Dedicated beacons are used to locate the radio and determine its position.

6.3.25.1


Turning Indoor Location On or Off

You can turn on or turn off Indoor Location by performing one of the following actions.

- Access this feature through the menu.
 - a. Press  to access the menu.
 - b. Press  or  to Bluetooth and press  to select.
 - c. Press  or  to Indoor Location and press  to select.
 - d. Press  to turn on Indoor Location.

The display shows Indoor Location On. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon appears on the Home screen display.
 - If unsuccessful, the display shows Turning On Failed. You hear a negative indicator tone.
- e. Press  to turn off Indoor Location.

The display shows Indoor Location Off. You hear a positive indicator tone.

One of the following scenarios occurs.

 - If successful, the Indoor Location Available icon disappears on the Home screen display.
 - If unsuccessful, the display shows Turning Off Failed. You hear a negative indicator tone.
 - Access this feature by using the programmed button.
 - a. Long press the programmed **Indoor Location** button to turn on Indoor Location.

The display shows Indoor Location On. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon appears on the Home screen display.
- If unsuccessful, the display shows `Turning On Failed`. If unsuccessful, you hear a negative indicator tone.

- b. Press the programmed **Indoor Location** button to turn off Indoor Location.

The display shows `Indoor Location Off`. You hear a positive indicator tone.


One of the following scenarios occurs.




- If successful, the Indoor Location Available icon disappears on the Home screen display.
- If unsuccessful, the display shows `Turning Off Failed`. If unsuccessful, you hear a negative indicator tone.




6.3.25.2




Accessing Indoor Location Beacons Information

Follow the procedure to access Indoor Location beacons information.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth and press  to select.

- 3 Press  or  to Indoor Location and press  to select.

- 4 Press  or  to Beacons and press  to select.

The display shows the beacons information.

6.3.26

Notification List

Your radio has a Notification List that collects all your "unread" events on the channel, such as unread text messages, missed calls, and call alerts.

The Notification icon appears on the status bar when the Notification List has one or more events.

The list supports a maximum of 40 unread events. When it is full, the next event automatically replaces the oldest event.


NOTICE:


After the events are read, they are removed from the Notification List.

6.3.26.1




Accessing the Notification List

Follow the procedure to access the notification list.




1

Press  to access the menu.

2

Press  or  to Notification and press  to select.

3

Press  or  to the required event and press  to select.

Long press  to return to the Home Screen.

6.3.27

Wi-Fi Operation

This feature allows you to set up and connect to a Wi-Fi network. Wi-Fi supports updates for radio firmware, codeplug, and resources such as language packs and voice announcement.


NOTICE:

This feature is applicable to DP4601e only.

Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

Your radio supports WEP/WPA/WPA2-Personal and WPA/WPA2-Enterprise Wi-Fi networks.

WEP/WPA/WPA2-Personal Wi-Fi network

Uses pre-shared key (password) based authentication.

Pre-shared key can be entered by using the menu or CPS/RM.

WPA/WPA2-Enterprise Wi-Fi network

Uses certificate-based authentication.

Your radio must be pre-configured with a certificate.

**NOTICE:**

Check with your dealer or system administrator to connect to WPA/WPA2-Enterprise Wi-Fi network.

The programmed **Wi-Fi On or Off** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.


Voice Announcements for the programmed **Wi-Fi On or Off** button can be customized through CPS according to user requirements. Check with your dealer or system administrator for more information.




6.3.27.1




Turning Wi-Fi On or Off


- 1 Press the programmed **Wi-Fi On or Off** button. Voice Announcement sounds Turning On Wi-Fi or Turning Off Wi-Fi.
-

- 2 Access this feature using the menu.

- a Press  to access the menu.

- b Press  or  to Wi-Fi and press  to select.

- c Press  or  to Wi-Fi On and press  to select.

- d Press  to turn on/off Wi-Fi.

If Wi-Fi is on, the display shows ✓ beside Enabled.

If Wi-Fi is off, the ✓ disappears from beside Enabled.




6.3.27.2




Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Individual Control)




You can turn Wi-Fi on or off remotely in Individual Control (One to One).


NOTICE:

Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.

- 1 Do one of the following:
 - Long press the programmable button. Use the  keypad to enter the ID and press  to select. Proceed to [step 3](#).
 - Press  to access the menu.

- 2 Press  or  to **Contacts** and press  to select.

- 3 Press  or  to **WiFi Control** and press  to select.

- 4 Press  or  to select **On** or **Off**.

- 5 Press  to select.

If successful, the display shows a positive mini notice.

If unsuccessful, the display shows a negative mini notice.


6.3.27.3




Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Group Control)



You can turn Wi-Fi on or off remotely in Group Control (One to Many).





NOTICE:



Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.


- 1 Press  to access the menu.

- 2 Press  or  to `Contacts` and press  to select.

- 3 Press  or  to select the required subscriber alias or ID.

- 4 Press  or  to `WiFi Control` and press  to select.

- 5 Press  or  to select `On` or `Off`.

- 6 Press  to select.

If successful, the display shows `Sent Successfully`.

If unsuccessful, the display shows a negative mini notice.

6.3.27.4

Connecting to a Network Access Point


When you turn on Wi-Fi, the radio scans and connects to a network access point.









NOTICE:


You can also connect to a network access point using the menu.

The WPA-Enterprise Wi-Fi network access points are pre-configured. Check with your dealer or system administrator to determine how your radio has been programmed.

- 1 Press  to access the menu.

- 2 Press  or  to `WiFi` and press  to select.


- 3 Press  or  to `Networks` and press  to select.

- 4 Press ▲ or ▼ to a network access point and press  to select.



NOTICE:

For WPA-Enterprise Wi-Fi, if a network access point is not preconfigured, the `Connect` option is not available.

- 5 Press ▲ or ▼ to `Connect` and press  to select.

- 6 For WPA-Enterprise Wi-Fi, password is configured by using RM.

If the preconfigured password is correct, your radio automatically connects to the selected network access point.

If the preconfigured password is incorrect, the display shows `Authentication Failure`, and automatically returns to the previous menu.

If the connection is successful, the radio displays a notice and the network access point is saved into the profile list.

If the connection is unsuccessful, the radio displays shows the failure notice screen momentarily and automatically returns to the previous menu.

6.3.27.5

Checking Wi-Fi Connection Status

Press the programmed **Wi-Fi Status Query** button for the connection status by using Voice Announcement. Voice Announcement sounds `Wi-Fi is Off`, `Wi-Fi is On but No Connection`, or `Wi-Fi is On with Connection`.

- The display shows `WiFi Off` when the Wi-Fi is turned off.
- The display shows `WiFi On, Connected` when the radio is connected to a network.
- The display shows `WiFi On, Disconnected` when the Wi-Fi is turned on but the radio is not connected to any network.

Voice Announcements for the Wi-Fi status query results can be customized through CPS according to

user requirements. Check with your dealer or system administrator for more information.










NOTICE:

The programmed **Wi-Fi Status Query** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

6.3.27.6




Refreshing the Network List

- Perform the following actions to refresh the network list through the menu.
 - a. Press  to access the menu.
 - b. Press  or  to **WiFi** and press  to select.

- c. Press  or  to **Networks** and press  to select.

When you enter the Networks menu, the radio automatically refreshes the network list.

- If you are already in the Networks menu, perform the following action to refresh the network list.

Press  or  to **Refresh** and press  to select.

The radio refreshes and displays the latest network list.

6.3.27.7


Adding a Network









NOTICE:




This task is not applicable to WPA-Enterprise Wi-Fi networks.


If a preferred network is not in the available network list, perform the following actions to add a network.




- 1 Press  to access the menu.

- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to Add Network and press  to select.

- 5 Enter the Service Set Identifier (SSID) and press  .

- 6 Press  or  to Open and press  to select.


- 7 Enter the password and press  .




The radio displays a positive mini notice to indicate that the network is successfully saved.




6.3.27.8




Viewing Details of Network Access Points

You can view details of network access points.


- 1 Press  to access the menu.

- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to a network access point and press  to select.

5

Press ▲ or ▼ to View Details and press  to select.

**NOTICE:**

WPA-Personal Wi-Fi and WPA-Enterprise Wi-Fi display different details of Network Access Points.

WPA-Personal Wi-Fi

For a connected network access point, your radio displays Service Set Identifier (SSID), Security Mode, Media Access Control (MAC) address, and Internet Protocol (IP) address.

For a non-connected network access point, your radio displays SSID and Security Mode.

WPA-Enterprise Wi-Fi

For a connected network access point, your radio displays SSID, Security Mode, Identity, Extended Authentication Protocol (EAP) Method, Phase 2 Authentication, Cert Name, MAC address, IP address, Gateway, DNS1, and DNS2.

For a non-connected network access point, your radio displays SSID, Security Mode, Identity, EAP Method, Phase 2 Authentication, and Cert Name.


6.3.27.9

Removing Network Access Points**NOTICE:**


This task is not applicable to Enterprise Wi-Fi networks.

Perform the following actions to remove network access points from the profile list.


1

Press  to access the menu.


2

Press ▲ or ▼ to WiFi and press  to select.


3


Press ▲ or ▼ to Networks and press  to select.

4

Press ▲ or ▼ to the selected network access point and press  to select.

5

Press ▲ or ▼ to Remove and press  to select.

- 6 Press ▲ or ▼ to Yes and press  to select.
The radio displays a positive mini notice to indicate that the selected network access point is successfully removed.
-

6.4

Utilities


This chapter explains the operations of the utility functions available in your radio.


6.4.1


Turning the Radio Tones/Alerts On or Off


You can enable and disable all radio tones and alerts (except for the incoming Emergency alert tone) if needed.


Press the programmed **All Tones/Alerts** button to toggle all tones on or off, or follow the procedure described next to access this feature via the radio menu.


- 1 Press  to access the menu.

- 2 Press ▲ or ▼ to Utilities and press  to select.

- 3 Press ▲ or ▼ to Radio Settings and press  to select.

- 4 Press ▲ or ▼ to Tones/Alerts and press  to select.

- 5 Press ▲ or ▼ to All Tones and press  to select.


- 6 Press  to enable/disable all tones and alerts.
The display shows ✓ beside Enabled.


The ✓ disappears from beside Enabled.


6.4.2


Setting the Tone Alert Volume Offset Level


You can adjust the Tone Alert Volume Offset level if needed. This feature adjusts the volume of the tones/alerts, allowing it to be higher or lower than the voice volume.

- 1 Press  to access the menu.



- 2 Press ▲ or ▼ to Utilities and press  to select.

- 3 Press ▲ or ▼ to Radio Settings and press  to select.

- 4 Press ▲ or ▼ to Tones/Alerts and press  to select.

- 5 Press ▲ or ▼ to Vol. Offset and press  to select.


- 6 Press ▲ or ▼ to the required volume value.
The radio sounds a feedback tone with each corresponding volume value.




- 7 Do one of the following:
 - Press  to keep the required displayed volume value.
 - Press  to exit without changing the current volume offset settings.




6.4.3




Turning the Talk Permit Tone On or Off




You can enable and disable the Talk Permit Tone if needed.



- 1 Press  to access the menu.




- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Radio Settings and press  to select.

- 4 Press  or  to Tones/Alerts and press  to select.

- 5 Press  or  to Talk Permit and press  to select.


You can also use  or  to change the selected option.




- 6 Press  to enable/disable the Talk Permit Tone.
The display shows  beside Enabled.
The  disappears from beside Enabled.

6.4.4


Turning the Power Up Alert Tone On or Off

You can enable and disable the Power Up Alert Tone if needed.


- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press ▲ or ▼ to **Radio Settings** and press

 to select.

- 4 Press ▲ or ▼ to **Tones/Alerts** and press  to select.
-

- 5 Press ▲ or ▼ to **Power Up** and press  to select.

You can also use ◀ or ▶ to change the selected option.

- 6 Press  to enable/disable the **Power Up Alert Tone**.

The display shows ✓ beside **Enabled**.

The ✓ disappears from beside **Enabled**.

6.4.5


Setting the Power Level


You can customize your radio power setting to high or low for each Connect Plus zone.


High enables communication with tower sites in Connect Plus mode located at a considerable distance from you.
Low enables communication with tower sites in Connect Plus mode in closer proximity.

Press the programmed **Power Level** button to toggle transmit power level between high and low.


Follow the procedure described next to access this feature via the radio menu.

- 1 Press  to access the menu.
-


- 2 Press ▲ or ▼ to **Utilities** and press  to select.
-

- 3 Press ▲ or ▼ to **Radio Settings** and press  to select.
-

4 Press ▲ or ▼ to Power and press  to select.

5 Press ▲ or ▼ to the required setting and press  to select.

✓ appears beside selected setting. At any time, long

press  to return to the Home screen.

Screen returns to the previous menu.

6.4.6


Adjusting the Display Brightness


You can adjust the display brightness of the radio as needed.





NOTICE:


Display brightness cannot be adjusted when Auto Brightness is enabled.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.


3 Press ▲ or ▼ to Radio Settings and press  to select.

4 Press ▲ or ▼ to Display and press  to select.

5 Press ▲ or ▼ to Brightness and press  to select.

The display shows a progress bar.

6 Decrease display brightness by pressing ◀ or increase the display brightness by pressing ▶.

Select from setting of 1 to 8. Press  to confirm your entry.


6.4.7




Setting the Display Backlight Timer




You can set the the radio display backlight timer as needed. The setting also affects the Menu Navigation Buttons and keypad backlighting accordingly.




Press the programmed **Backlight** button to toggle the backlight settings, or follow the procedure described next to access this feature via the radio menu.




The display backlight and keypad backlighting are automatically turned off if the LED indicator is disabled (see [Turning the LED Indicator On or Off on page 292](#)).



- 1 Press  to access the menu.

- 2 Press  or  to *Utilities* and press  to select.

- 3 Press  or  to *Radio Settings* and press  to select.

- 4 Press  or  to *Display* and press  to select.


- 5 Press  or  to *Backlight Timer* and press  to select.




You can use  or  to change the selected option.

6.4.8

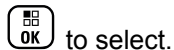
Turning the Introduction Screen On or Off

You can enable and disable the Introduction Screen if needed.

- 1 Press  to access the menu.


- 2 Press  or  to *Utilities* and press  to select.

3 Press ▲ or ▼ to Radio Settings and press




to select.

4


Press ▲ or ▼ to Display and press  to select.

5

Press ▲ or ▼ to Intro Screen and press  to select.

You can also use ◀ or ▶ to change the selected option.

6

Press  to enable/disable the Introduction Screen.


The display shows ✓ beside Enabled.

The ✓ disappears from beside Enabled.


Language

You can set your radio display to be in your required language.


1

Press  to access the menu.


2

Press ▲ or ▼ to Utilities and press  to select.

3


Press ▲ or ▼ to Radio Settings and press  to select.

4

Press ▲ or ▼ to Languages and press  to select.

You can also use ◀ or ▶ to change selected option.


5




Press ▲ or ▼ to the required language and press  to enable. ✓ appears beside selected language.




6.4.10




Turning the LED Indicator On or Off



You can enable and disable the LED Indicator if needed.

- 1 Press  to access the menu.
-

- 2 Press  or  to Utilities and press  to select.
-

- 3 Press  or  to Radio Settings and press  to select.
-

- 4 Press  or  to LED Indicator and press  to select.

You can also use  or  to change the selected option.

- 5 Press  to enable/disable the LED Indicator.


The display shows  beside Enabled.




The  disappears from beside Enabled.




6.4.11




Identifying Cable Type



You can select the type of cable your radio uses.

- 1 Press  to access the menu.
-

- 2 Press  or  to Utilities and press  to select.
-

- 3 Press  or  to Radio Settings and press  to select.
-

- 4 Press  or  to Cable Type and press  to select.


You can also use  or  to change the selected option.




- 5 The current cable type is indicated by a ✓ .
-




6.4.12




Voice Announcement



This feature enables the radio to audibly indicate the current Zone or Channel the user has just assigned, or programmable button press. This audio indicator can be customized per customer requirements. This is typically useful when the user is in a difficult condition to read the content shown on the display.



- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Radio Settings and press  to select.

- 4 Press  or  to Voice Announcement and press  to select.

You can also use  or  to change the selected option.

- 5 Do one of the following:
 - Press  to enable Voice Announcement. The display shows ✓ beside Enabled.
 - Press  to disable Voice Announcement. The ✓ disappears from beside Enabled.
-

6.4.13

Setting the Text-to-Speech Feature







NOTICE:




The Text-to-Speech feature can only be enabled by using the MOTOTRBO CPS. If enabled, the Voice Announcement feature is automatically disabled, and vice versa. Check with your dealer or system administrator for more information.



This feature enables the radio to audibly indicate the following features:


- Current Channel
- Current Zone
- Programmed button feature on or off
- Content of received text messages
 - Press the programmed **Voice Announcement** button to toggle this feature on or off.
 - This audio indicator can be customized per customer requirements. This is typically useful when the user is in a difficult condition to read the content shown on the display.



a. Press  to access the menu.

b. Press  or  to Utilities and press  to select.



c. Press  or  to Radio Settings and press  to select.

d. Press  or  to Voice Announcement and press

 to select.

e. Press  or  to Messages or Program

Button and press  to select.


You can also use  or  to change the selected option.




✓ appears beside the selected setting.


6.4.14


Menu Timer


Set the period of time your radio stays in the menu before it automatically switches to the Home screen.


1 Press  to access the menu.

2 Press  or  to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Settings and press  to select.

4 Press ▲ or ▼ to Display and press  to select.

5 Press ▲ or ▼ to Menu Timer and press  to select.


6 Press ▲ or ▼ to the required setting and press  to select.


6.4.15


Digital Mic AGC (Mic AGC-D)

This feature controls the your radio's microphone gain automatically while transmitting on a digital system. It


suppresses loud audio or boosts soft audio to a preset value in order to provide a consistent level of audio.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.


3 Press ▲ or ▼ to Radio Settings and press  to select.

You can also use ◀ or ▶ to change the selected option.

4 Press ▲ or ▼ to Mic AGC-D and press  to select.

5 Do one of the following:

- Press  to enable **Mic AGC-D**. The display shows ✓ beside Enabled.

- Press  to disable **Mic AGC-D**. The ✓ disappears from beside Enabled.

6.4.16


Intelligent Audio


Your radio can automatically adjust its audio volume to overcome background noise in the environment, inclusive of all stationary and non-stationary noise sources. This feature is a Receive-only feature and does not affect Transmit audio.


NOTICE:










This feature is not applicable during a Bluetooth session.

1



Press  to access the menu.


Radio Control	Steps
Menu	a Press  to access the menu.

Radio Control Steps


- Press  or  to Radio Settings and press  to select.
- Press  or  to Radio Settings and press  to select.
- Press  or  to Intelligent Audio and press  to select.



NOTICE:


You can also use  or  to change the selected option.

- Do one of the following:
 - Press  to enable Intelligent Audio. The display shows ✓ beside Enabled.


Radio Control	Steps
	<ul style="list-style-type: none"> Press  to disable Intelligent Audio. The ✓ disappears from beside Enabled.


2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Settings and press  to select.

4 Press ▲ or ▼ to Intelligent Audio and press  to select.

5 Do one of the following:


- Press  to enable Intelligent Audio. The display shows ✓ beside Enabled.


- Press  to disable Intelligent Audio. The ✓ disappears from beside Enabled.


6.4.17


Turning the Acoustic Feedback Suppressor Feature On or Off

This feature allows you to minimize acoustic feedback in received calls.

1 Press  to access the menu.



2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Settings and press  to select.

4 Press ▲ or ▼ to AF Suppressor and press  to select.

You can also use ◀ or ▶ to change the selected option.


5 Do one of the following.


- Press  to enable Acoustic Feedback Suppressor. The display shows ✓ beside Enabled.
 - Press  to disable Acoustic Feedback Suppressor. The ✓ disappears from beside Enabled.
-


6.4.18

Turning the Microphone Dynamic Distortion Control Feature On or Off


This feature allows you to enable the radio to automatically monitor the microphone input and adjust the microphone gain value to avoid audio clipping.

1 Press  to access the menu.



2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Settings and press  to select.

You can also use ◀ or ▶ to change the selected option.

4 Press ▲ or ▼ to Mic Distortion and press  to select.

5 Do one of the following:

- Press  to enable Microphone Dynamic Distortion Control. The display shows ✓ beside Enabled.
 - Press  to disable Microphone Dynamic Distortion Control. The ✓ disappears from beside Enabled.
-

6.4.19


Turning GNSS On or Off




Global Navigation Satellite System (GNSS) is a satellite navigation system that determines the radio precise location. GNSS includes Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), and BeiDou Navigation Satellite System (BDS).






NOTICE:




Selected radio models may offer GPS, GLONASS, and BDS. GNSS constellation is configured by using CPS. Check with your dealer or system administrator to determine how your radio has been programmed.

- 1 Do one of the following:
 - Press the programmed **GNSS** button to toggle the feature on or off. Skip the following steps.
 - Press  to access the menu.

- 2 Press  or  to **Utilities**. Press  to select.

- 3 Press  or  to **Radio Settings**. Press  to select.

- 4 Press  or  to **GNSS**. Press  to select.

- 5 Press  to enable/disable GNSS.
 - If enabled,  appears beside **Enabled**.
 - If disabled,  disappears beside **Enabled**.

See [Checking the GNSS Information on page 313](#) for details on retrieving GNSS information.



6.4.20

Accessing General Radio Information

Your radio contains information on the following:

- Battery
- Degree of Tilt (Accelerometer)
- Radio Model Number Index


- Option Board Over-the-Air (OTA) Codeplug CRC
- Site Number
- Site Info
- Radio Alias and ID
- Firmware and Codeplug Versions
- GNSS Information




Press  at any time to return to the previous screen or long press  to return to the Home screen. The radio exits the current screen once the inactivity timer expires.

6.4.20.1




Accessing the Battery Information

Displays information on your radio battery.

1 Press  to access the menu.

2 Press  or  to `Utilities` and press  to select.

3 Press  or  to `Radio Info` and press  to select.

4 Press  or  to `Battery Info` and press  to select.

The display shows the battery information.

For **IMPRES** batteries **ONLY**: The display reads `Recondition Battery` if the battery requires reconditioning in an IMPRES charger. After the reconditioning process, the display then shows the battery information.


6.4.20.2


Checking the Degree of Tilt (Accelerometer)



NOTICE:

The measurement on the display shows the degree

of tilt at the moment you press  to accept the Accelerometer option. If you change the angle of


the radio after pressing , the radio does not change the measurement shown on its display. It continues to display the measurement taken when






 was pressed.

If the portable radio has been enabled for the Man Down Alarms, there is a menu option to check how the radio measures the degree of tilt. This is a helpful feature when the dealer or Radio System Administrator uses the MOTOTRBO Connect Plus Option Board CPS to configure the activation angle that will trigger the tilt alarm.




1

Press  to access the menu.

2

Press  or  to Utilities and press  to select.




3

Press  or  to Radio Info and press  to select.

4

Tilt the radio at the angle that triggers the Tilt Alarm.

5


Press  or  to Accelerometer and press  to select.




The display shows the radio's angle of tilt (deviation from perpendicular vertical position) in degrees (example: 62 Deg.) Based on this, use MOTOTRBO Connect Plus Option Board CPS to configure the Activation Angle for 60 degrees (which is the closest programmable value). The Tilt Alarm timers are triggered when the Activation Angle is 60 degrees, or greater.




6.4.20.3




Checking the Radio Model Number Index

This index number identifies your radio model-specific hardware. Your radio system administrator may ask for this number when preparing a new Option Board codeplug for your radio.

- 1 Press  to access the menu.

- 2 Press  or  to `Utilities` and press  to select.


- 3 Press  or  to `Radio Info` and press  to select.




- 4 Press  or  to `Model Index` and press  to select.
The display shows the Model Number Index.




6.4.20.4


Checking the CRC of the Option Board OTA Codeplug File

Follow the instructions below if your radio system administrator asks you to view the Option Board OTA Codeplug File CRC (Cyclic Redundancy Check). This menu option only appears if the Option Board received its last codeplug update OTA.

- 1 Press  to access the menu.


- 2 Press  or  to `Utilities` and press  to select.

- 3 Press  or  to `Radio Info` and press  to select.

4 Press ▲ or ▼ to OB OTA CPorc and press  to select.

The display shows some letters and numbers. Communicate this information to your radio system administrator exactly as shown.

3 Press ▲ or ▼ to Radio Info and press  to select.

4 Press ▲ or ▼ to Site Number and press  to select.

The display shows the Network ID and the Site Number.

6.4.20.5


Displaying the Site ID (Site Number)




NOTICE:

If you are not currently registered at a site, the display shows Not Registered.

The radio briefly shows the Site ID as it registers with a Connect Plus site. Following registration, the radio does not generally indicate the Site number. To display the registered Site number, do the following:

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.

6.4.20.6

Checking the Site Info



NOTICE:


If you are not currently registered at a site, the display shows Not Registered.




The Site Info feature provides information that can be useful to a service technician. It consists of the following information:




- Repeater number of current Control Channel repeater.
- RSSI: Last signal strength value measured from Control Channel repeater.




- Neighbor List sent by Control Channel repeater (five numbers separated by commas).

If you are requested to use this feature, please report the displayed information exactly as it appears on the screen.


- 1 Press  to access the menu.




- 2 Press  or  to Utilities and press  to select.




- 3 Press  or  to Radio Info and press  to select.




- 4 Press  or  to Site Info and press  to select.
The display shows the Site Info.

Follow the procedure described next to access this feature via the radio screen.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Radio Info and press  to select.

- 4 Press  or  to My ID and press  to select.
The display shows the radio ID.

6.4.20.7


Checking the Radio ID




This feature displays the ID of your radio.




6.4.20.8




Checking the Firmware Version and Codeplug Version

Displays the firmware version on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to `Utilities` and press  to select.

- 3 Press  or  to `Radio Info` and press  to select.

- 4 Press  or  to `Versions` and press  to select.

The display a list with the following information:

- (Radio) Firmware Version
- (Radio) Codeplug Version
- Option Board Firmware Version

- Option Board Frequency Version
- Option Board Hardware Version
- Option Board Codeplug Version

6.4.20.9

Checking for Updates

Connect Plus provides the ability to update certain files (Option Board Codeplug, Network Frequency File, and Option Board Firmware File) Over-The-Air (OTA).



NOTICE:

Check with the dealer or network administrator to determine whether this feature has been enabled for your radio.

Any display Connect Plus radio has the ability to show its current Option Board OTA Codeplug CRC, Frequency File version or Option Board firmware file version by using a menu option. In addition, display radios that have been enabled for over-the-air file transfer can display the version of a "pending file". A "pending file" is a Frequency File or Option Board firmware file that the Connect Plus radio knows about through system messaging, but the radio has not yet collected all of the file packets. If a display Connect Plus radio has a pending file, the menu provides options to:

- See the version number of the pending file.
- See what percentage of packets has been collected so far.
- Request the Connect Plus radio to resume collecting file packets.

If the radio is enabled for Connect Plus OTA file transfer, there may be times when the radio automatically joins a file transfer without first notifying the radio user. While the radio is collecting file packets, the LED rapidly blinks red and the radio displays the High Volume Data icon on the Home Screen status bar.



NOTICE:

The Connect Plus radio cannot collect file packets and receive calls at the same time. If you wish to cancel the file transfer, press and release the **PTT** button. This causes the radio to request a call on the selected Contact Name, and it will also cancel the file transfer for that radio until the process resumes at a later time.

There are several things that can make the file transfer process start again. The first example applies to all OTA file types. The other examples apply only to the Network Frequency File and Option Board Firmware File:

- The radio system administrator re-initiates the OTA file transfer.
- The Option Board pre-defined timer expires, which causes the Option Board to automatically resume the process of collecting packets.
- The timer has not yet expired, but the radio user requests the file transfer to resume through the menu option.

After the Connect Plus radio finishes downloading all file packets, it must upgrade to the newly acquired file. For the Network Frequency File, this is an automatic process and does not require a radio reset. For the Option Board Codeplug File, this is an automatic process that will cause a brief interruption to service as the Option Board loads the new codeplug information and re-acquires a network site. How quickly the radio upgrades to a new Option Board firmware file depend on how the radio has been configured by the dealer or system administrator. The radio will either upgrade immediately after collecting all file packets, or it will wait until the next time that the user turns the radio on.



NOTICE:

Check with your dealer or system administrator to determine how your radio has been programmed.

The process of upgrading to a new Option Board firmware file takes several seconds, and it requires the Connect Plus Option Board to reset the radio. Once the upgrade starts, the radio user will not be able to make or receive calls until the process is completed. During the process, radio display prompts user to not turn off the radio.

6.4.20.9.1

Firmware File

The following section provides information on the radio firmware.


6.4.20.9.1.1




Firmware Up to Date






NOTICE:




If the Option Board firmware file is not Up to Date (and if the radio has partially collected a more recent Option Board firmware file version) the radio displays a list with additional options; Version, %Received, and Download.

- 1 Press  to access the menu.
-

- 2 Press  or  to Utilities and press  to select.
-

- 3 Press  or  to Radio Info and press  to select.
-


- 4 Press  or  to Updates and press  to select.
-


- 5 Press  or  to Firmware and press  to select.

The display shows Firmware is Up to Date.


6.4.20.9.2


Pending Firmware – Version


- 1 Press  to access the menu.
-

2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Info and press  to select.

4 Press ▲ or ▼ to Updates and press  to select.

5 Press ▲ or ▼ to Firmware and press  to select.


6 Press ▲ or ▼ to Version and press  to select.


If there is a pending Option Board firmware file, the display shows the pending firmware version number.

If there is a pending Option Board firmware file, the display shows Firmware is Up to Date.


6.4.20.9.3


Pending Firmware – % Received


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Info and press  to select.

4 Press ▲ or ▼ to Updates and press  to select.

5 Press ▲ or ▼ to Firmware and press  to select.

- 6 Press ▲ or ▼ to %Received and press  to select.

The screen displays the percentage of firmware file packets collected so far.




NOTICE:


When at 100%, the radio needs to be power cycled Off and then On to initiate the firmware upgrade.

6.4.20.9.4


Pending Firmware – Download


If the Connect Plus radio has previously left an OTA Option Board Firmware File Transfer with a partial file, the unit automatically rejoins the file transfer (if still ongoing) when an internal timer expires. If you want the unit to rejoin an ongoing Option Board Firmware File transfer prior to expiration of this internal timer, use the Download option as described below.


- 1 Press  to access the menu.

- 2 Press ▲ or ▼ to Utilities and press  to select.

- 3 Press ▲ or ▼ to Radio Info and press  to select.

- 4 Press ▲ or ▼ to Updates and press  to select.

- 5 Press ▲ or ▼ to Firmware and press  to select.



- 6 Press ▲ or ▼ to Download and press  to select.

The display shows the following:

Download Available	Start Download
--------------------	----------------

No Download Available	Download not available
-----------------------	------------------------

7 Do one of the following:

- Select Yes and press  to start the download.
- Select No and press  to return to the previous menu.

6.4.20.9.5

Frequency File

The following section provides information on the frequency file of the radio.


6.4.20.9.5.1




Frequency File Up to Date



NOTICE:

If the Frequency File is not Up to Date (and if the radio has partially collected a more recent frequency file version) the radio displays a list with additional options; Version, %Received, and Download.

1 Press  to access the menu.

2 Press  or  to Utilities and press  to select.


3 Press  or  to Radio Info and press  to select.


4 Press  or  to Frequency and press  to select.

The display shows Freq. File is Up to Date.


6.4.20.9.5.2


Frequency File Pending – Version


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.


3 Press ▲ or ▼ to Radio Info and press  to select.


4 Press ▲ or ▼ to Updates and press  to select.


5 Press ▲ or ▼ to Frequency and press  to select.


6 Press ▲ or ▼ to Version and press  to select.
If there is a pending Frequency File, the display shows the pending Frequency File version number.


Frequency File Pending – % Received

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities and press  to select.

3 Press ▲ or ▼ to Radio Info and press  to select.


4 Press ▲ or ▼ to Updates and press  to select.




5 Press ▲ or ▼ to %Received and press  to select.
The screen displays the percentage of frequency file packets collected so far.




6.4.20.9.5.4




Frequency File Pending – Download




If the Connect Plus radio has previously left an OTA Network Frequency File Transfer with a partial file, the unit automatically rejoins the file transfer (if still ongoing) when an internal timer expires. If you want the unit to rejoin an ongoing Network Frequency File transfer prior to expiration of this internal timer, use the Download option as described below.




- 1 Press  to access the menu.

- 2 Press  or  to Utilities and press  to select.

- 3 Press  or  to Radio Info and press  to select.

- 4 Press  or  to Updates and press  to select.

- 5 Press  or  to Frequency and press  to select.

- 6 Press  or  to Download and press  to select.

Download Currently Unavailable	Download not available
Download Currently Available	Start Download


- 7 Do one of the following:
 - Select Yes and press to start the download.
 - Select No and press to return to the previous menu.
-




6.4.20.9.6

Checking the GNSS Information




Displays the GNSS information on your radio, such as values of:




- Latitude
- Longitude
- Altitude
- Direction
- Velocity
- Horizontal Dilution of Precision (HDOP)
- Satellites
- Version

1 Press  to access the menu.

2 Press  or  to Utilities and press  to select.

3 Press  or  to Radio Info and press  to select.

4 Press  or  to GNSS Info and press  to select.

5 Press  or  to the required item and press  to select.


The display shows the requested GNSS information.




See [Turning GNSS On or Off on page 299](#) for details on GNSS.




6.4.21




Viewing Enterprise Wi-Fi Certificate Details

You can view the details of the selected Enterprise Wi-Fi Certificate.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Certificate Menu. Press  to select.
✓ appears beside ready certificates.

- 4 Press  or  to the required certificate. Press  to select.

Your radio displays the full details of the certificate.



NOTICE:

For unready certificates, the display shows only Status.

Other Systems

Features that are available to the radio users under this system are available in this chapter.

7.1

Push-To-Talk Button

The Push-to-Talk (**PTT**) button serves two basic purposes:

- While a call is in progress, the **PTT** button allows the radio to transmit to other radios in the call. The microphone is activated when the **PTT** button is pressed.
- While a call is not in progress, the **PTT** button is used to make a new call.

Long press the **PTT** button to talk. Release the **PTT** button to listen.

If the Talk Permit Tone is enabled, wait until the short alert tone ends before talking.

7.2

Programmable Buttons

Depending on the duration of a button press, your dealer can program the programmable buttons as shortcuts to radio functions.

Short press

Pressing and releasing rapidly.

Long press

Pressing and holding for the programmed duration.



NOTICE:

See [Emergency Operation on page 390](#) for more information on the programmed duration of the **Emergency** button.

7.2.1

Assignable Radio Functions

The following radio functions can be assigned to the programmable buttons.

Audio Profiles

Allows the user to select the preferred audio profile.

Audio Toggle

Toggles audio routing between the internal radio speaker and the speaker of a wired accessory.

Bluetooth® Audio Switch

Toggles audio routing between internal radio speaker and external Bluetooth-enabled accessory.

Bluetooth Connect

Initiates a Bluetooth find-and-connect operation.

Bluetooth Disconnect

Terminates all existing Bluetooth connections between your radio and any Bluetooth-enabled devices.

Bluetooth Discoverable

Enables your radio to enter Bluetooth Discoverable Mode.

Call Alert

Provides direct access to the contacts list for you to select a contact to whom a Call Alert can be sent.

Call Forwarding

Toggles Call Forwarding on or off.

Call Log

Selects the call log list.

Channel Announcement

Plays zone and channel announcement voice messages for the current channel.

Contacts

Provides direct access to the Contacts list.

Emergency

Depending on the programming, initiates or cancels an emergency.

Indoor Location

Toggles Indoor Location on or off.

Intelligent Audio

Toggles intelligent audio on or off.

Manual Site Roam ⁶

Starts the manual site search.

Mic AGC

Toggles the internal microphone automatic gain control (AGC) on or off.

Monitor

Monitors a selected channel for activity.

Notifications

Provides direct access to the Notifications list.

Nuisance Channel Delete⁶

Temporarily removes an unwanted channel, except for the Selected Channel, from the scan list. The Selected

⁶ Not applicable in Capacity Plus.

Channel refers to the selected zone or channel combination of the user from which scan is initiated.

One Touch Access

Directly initiates a predefined Private, Phone or Group Call, a Call Alert, a Quick Text message, or Home Revert.

Option Board Feature

Toggles option board feature(s) on or off for option board-enabled channels.

Permanent Monitor⁶

Monitors a selected channel for all radio traffic until function is disabled.

Phone

Provides direct access to the Phone Contacts list.

Privacy

Toggles privacy on or off.

Radio Alias and ID

Provides radio alias and ID.

Radio Check

Determines if a radio is active in a system.

Radio Enable

Allows a target radio to be remotely enabled.

Radio Disable

Allows a target radio to be remotely disabled.

Remote Monitor

Turns on the microphone of a target radio without it giving any indicators.

Repeater/Talkaround⁶

Toggles between using a repeater and communicating directly with another radio.

Silence Home Channel Reminder

Mutes the Home Channel Reminder.

Scan⁷

Toggles scan on or off.

Site Info

Displays the current site name and ID of Capacity Plus-Multi-Site.

Plays site announcement voice messages for the current site when Voice Announcement is enabled.

⁷ Not applicable in Capacity Plus–Single-Site.

Site Lock⁶

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Status

Selects the status list menu.

Telemetry Control

Controls the Output Pin on a local or remote radio.

Text Message

Selects the text message menu.

Transmit Interrupt Remote Dekey

Stops an ongoing interruptible call to free the channel.

Trill Enhancement

Toggles trill enhancement on or off.

Voice Announcement On/Off

Toggles voice announcement on or off.

Voice Operating Transmission (VOX)

Toggles VOX on or off.

Wi-Fi

Toggles Wi-Fi on or off.

Zone Selection

Allows selection from a list of zones.

7.2.2

Assignable Settings or Utility Functions

The following radio settings or utility functions can be assigned to the programmable buttons.

Tones/Alerts

Toggles all tones and alerts on or off.

Backlight

Toggles display backlight on or off.

Backlight Brightness

Adjusts the brightness level.

Power Level


Toggles transmit power level between high and low.




7.2.3

Accessing Programmed Functions



Follow the procedure to access programmed functions in your radio.

- 1 Do one of the following:
 - Press the programmed button. Proceed to [step 3](#).

- Press  to access the menu.

- 2 Press  or  to the menu function, and press  to select a function or enter a sub-menu.

- 3 Do one of the following:

- Press  to return to the previous screen.
- Long press  to return to the Home screen.
Your radio automatically exits the menu after a period of inactivity and returns to the Home screen.

7.3

Status Indicators

This chapter explains the status indicators and audio tones used in the radio.




7.3.1










Icons







The radio display shows radio status, text entries, and menu entries. The following are the icons that appear on the radio display.

Table 9: Display Icons




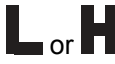

The following icons appear on the status bar at the top of the radio display. The icons are arranged left most in order of appearance or usage, and are channel-specific.








	<p>Battery</p> <p>The number of bars (0–4) shown indicates the charge remaining in the battery. The icon blinks when the battery is low.</p>
	<p>Bluetooth Connected</p> <p>The Bluetooth feature is enabled. The icon stays lit when a remote Bluetooth device is connected.</p>
	<p>Bluetooth Not Connected</p> <p>The Bluetooth feature is enabled but there is no remote Bluetooth device connected.</p>

	Call Log Radio call log.
	Contact Radio contact is available.
	Emergency Radio is in Emergency mode.
	Flexible Receive List Flexible receive list is enabled.
	GNSS Available  GNSS feature is enabled. The icon stays lit when a position fix is available.
	GNSS Not Available  GNSS feature is enabled but is not receiving data from the satellite.
	High Volume Data Radio is receiving high volume data and channel is busy.








	Indoor Location Available ⁸ Indoor location status is on and available.
	Indoor Location Unavailable ⁸ Indoor location status is on but unavailable due to Bluetooth disabled or Beacons Scan suspended by Bluetooth.
	Message Incoming message.
	Monitor Selected channel is being monitored.
	Mute Mode Mute Mode is enabled and speaker is muted.
	Notification Notification List has one or more missed events.





⁸ Only applicable for models with the latest software and hardware.

	<p>Option Board The Option Board is enabled. (Option board enabled models only)</p>
	<p>Option Board Non-Function The Option Board is disabled.</p>
	<p>Over-the-Air Programming Delay Timer Indicates time left before automatic re-start of radio.</p>
	<p>Power Level Radio is set at Low power or Radio is set at High power.</p>
	<p>Received Signal Strength Indicator (RSSI) The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.</p>

	<p>Response Inhibit Response Inhibit is enabled.</p>
	<p>Ring Only Ringing mode is enabled.</p>
	<p>Scan⁹ Scan feature is enabled.</p>
	<p>Scan- Priority 1⁹ Radio detects activity on channel/ group designated as Priority 1.</p>
	<p>Scan- Priority 2⁹ Radio detects activity on channel/ group designated as Priority 2.</p>
	<p>Secure The Privacy feature is enabled.</p>
	<p>Silent Ring Silent ring mode is enabled.</p>

⁹ Not applicable in Capacity Plus.

	Site Roaming ¹⁰ The site roaming feature is enabled.
	Talkaround ⁹ In the absence of a repeater, radio is currently configured for direct radio to radio communication.
	Tones Disable Tones are turned off.
	Unsecure The Privacy feature is disabled.
	Vibrate Vibrate mode is enabled.
	Vibrate and Ring Vibrate and Ring mode is enabled.
	Vote Scan Vote scan feature is enabled.

	Wi-Fi Excellent ¹¹ Wi-Fi signal is excellent.
	Wi-Fi Good ¹¹ Wi-Fi signal is good.
	Wi-Fi Average ¹¹ Wi-Fi signal is average
	Wi-Fi Poor ¹¹ Wi-Fi signal is poor.

¹⁰ Not applicable in Capacity Plus–Single-Site

¹¹ Only applicable for DP4601e

	<p>Wi-Fi Unavailable¹¹ Wi-Fi signal is unavailable.</p>
--	---

Table 10: Advance Menu Icons

The following icons appear beside menu items that offer a choice between two options or as an indication that there is a sub-menu offering two options.

	<p>Checkbox (Checked) Indicates that the option is selected.</p>
	<p>Checkbox (Empty) Indicates that the option is not selected.</p>
	<p>Solid Black Box Indicates that the option selected for the menu item with a sub-menu.</p>

Table 11: Bluetooth Device Icons









The following icons appear next to items in the list of Bluetooth-enabled devices available to indicate the device type.

	<p>Bluetooth Audio Device Bluetooth-enabled audio device, such as a headset.</p>
	<p>Bluetooth Data Device Bluetooth-enabled data device, such as a scanner.</p>
	<p>Bluetooth PTT Device Bluetooth-enabled PTT device, such as a PTT-Only Device (POD).</p>
	<p>Bluetooth Sensor Device¹¹ Bluetooth-enabled sensor device, such as gas sensor.</p>

Table 12: Call Icons

The following icons appear on the display during a call. These icons also appear in the Contacts list to indicate alias or ID type.

	<p>Bluetooth PC Call Indicates a Bluetooth PC Call in progress.</p>
--	--

	<p>In the Contacts list, it indicates a Bluetooth PC Call alias (name) or ID (number).</p>
 <p>Dispatch Call The Dispatch Call contact type is used to send a text message to a dispatcher PC through a third-party Text Message Server.</p>	 <p>Option Board Individual Call Indicates an Option Board individual call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).</p>
 <p>Group Call/All Call Indicates a Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>	 <p>Option Board Group Call Indicates an Option Board group call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>
 <p>Non-IP Peripheral Individual call Indicates a Non-IP Peripheral individual call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).</p>	 <p>Phone Call as Group/All Call Indicates a Phone Call as Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).</p>
 <p>Non-IP Peripheral Group call Indicates a Non-IP Peripheral group call in progress.</p>	 <p>Phone Call as Private Call Indicates a Phone Call as Private Call in progress. In the Contacts list, it indicates a phone alias (name) or ID (number).</p>


	<p>Private Call Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).</p>
---	---

Table 13: Mini Notice Icons

The following icons appear momentarily on the display after an action to perform a task is taken.








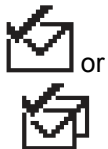
	<p>Failed Transmission (Negative) Failed action taken.</p>
	<p>Successful Transmission (Positive) Successful action taken.</p>
	<p>Transmission in Progress (Transitional) Transmitting. This is seen before indication for Successful Transmission or Failed Transmission.</p>

Table 14: Sent Items Icons 

The following icons appear at the top right corner of the display in the Sent Items folder.

	<p>In Progress The text message to a subscriber alias or ID is pending transmission, followed by waiting for acknowledgment. The text message to a group alias or ID is pending transmission.</p>
	<p>Individual or Group Message Read The text message has been read.</p>
	<p>Individual or Group Message Unread The text message has not been read.</p>
	<p>Send Failed The text message cannot be sent.</p>



Sent Successfully

The text message has been successfully sent.

7.3.2

LED Indicators

LED indicators show the operational status of your radio.

Blinking Red

- Radio is indicating a battery mismatch.
- Radio has failed the self-test upon powering up.
- Radio is receiving an emergency transmission.
- Radio is transmitting in low battery state.
- Radio has moved out of range if Auto-Range Transponder System is configured.
- Mute Mode is enabled.

Solid Green

- Radio is powering up.
- Radio is transmitting.

Radio is sending a Call Alert or an emergency transmission.

Blinking Green

- Radio is receiving a call or data.
- Radio is retrieving Over-the-Air Programming transmissions.
- Radio is detecting activity over the air.



NOTICE:

This activity may or may not affect the programmed channel of the radio due to the nature of the digital protocol.

There is no LED indication when the radio is detecting activity over the air in Capacity Plus.

Double Blinking Green

Radio is receiving a privacy-enabled call or data.

Solid Yellow

Radio is monitoring a conventional channel.

Blinking Yellow



- Radio is scanning for activity.
- Radio has yet to respond to a Call Alert.
- All Capacity Plus–Multi-Site channels are busy.

Double Blinking Yellow

- Radio has Auto Roaming enabled.
- Radio is actively searching for a new site.
- Radio has yet to respond to a Group Call Alert.
- Radio is locked.
- Radio is not connected to the repeater while in Capacity Plus.
- All Capacity Plus channels are busy.

7.3.3
Tones



The following are the tones that sound through on the radio speaker.

-  High Pitched Tone
-  Low Pitched Tone

7.3.3.1

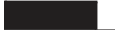
Indicator Tones


Indicator tones provide you with audible indications of the status after an action to perform a task is taken.

-  Positive Indicator Tone
-  Negative Indicator Tone

7.3.3.2
Audio Tones

Audio tones provide you with audible indications of the status, or response to data received on the radio.

-  **Continuous Tone**
A monotone sound. Sounds continuously until termination.

-  **Periodic Tone**
Sounds periodically depending on the duration set by the radio. Tone starts, stops, and repeats itself.



Repetitive Tone

A single tone that repeats itself until it is terminated by the user.



Momentary Tone

Sounds once for a short duration set by the radio.

7.4

Zone and Channel Selections

This chapter explains the operations to select a zone or channel on your radio. A zone is a group of channels.

Your radio supports up to 1000 channels and 250 zones, with a maximum of 160 channels per zone.

Each channel can be programmed with different features and/or support different groups of users.


7.4.1

Selecting Zones

Follow the procedure to select the required zone on your radio.

328

1 Do one of the following:




- Press the programmed **Zone Selection** button. Proceed to [step 3](#).
- Press  to access the menu.

2

Press  or  to Zone. Press  to select.

The display shows  and the current zone.

3

Press  or  to the required zone. Press  to select.

The display shows <Zone> Selected momentarily and returns to the selected zone screen.

7.4.2

Selecting Channels

Follow the procedure to select the required channel on your radio.

Turn the **Channel Selector** Knob to select the channel, subscriber ID, or group ID.

7.5

Calls

This chapter explains the operations to receive, respond to, make, and stop calls.

You can select a subscriber alias or ID, or group alias or ID after you have selected a channel by using one of these features:

Alias Search

This method is used for Group, Private, and All Calls only with a keypad microphone.

Contacts List

This method provides direct access to the Contacts list.

Manual Dial (by using Contacts)

This method is used for Private and Phone Calls only with a keypad microphone.

Programmed Number Keys

This method is used for Group, Private, and All Calls only with a keypad microphone.



NOTICE:

You can only have one alias or ID assigned to a number key, but you can have more than one number key associated to an alias or ID. All the number keys on a keypad microphone can be assigned. See [Assigning Entries to Programmable Number Keys on page 373](#) for more information.

Programmed One Touch Access Button

This method is used for Group, Private, and Phone Calls only.

You can only have one ID assigned to a **One Touch Access** button with a short or long programmable button press. Your radio can have multiple **One Touch Access** buttons programmed.

Programmable Button

This method is used for Phone Calls only.

7.5.1

Group Calls

Your radio must be configured as part of a group to receive a call from or make a call to the group of users.

7.5.1.1


Making Group Calls

Follow the procedure to make Group Calls on your radio.

- 1 Do one of the following:
 - Select a channel with the active group alias or ID.
 - Press the programmed **One Touch Access** button.

- 2 Press the **PTT** button to make the call.


The green LED lights up. The display shows the **Group Call** icon and the group call alias.

- 3 Do one of the following:
 - Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 -  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

- 4 Release the **PTT** button to listen.

The green LED lights up when the target radio responds. The display shows the **Group Call** icon,

the group alias or ID, and the transmitting radio alias or ID.


- 5  If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period. The radio returns to the screen you were on prior to initiating the call.

7.5.1.2

Making Group Calls by Using the Contacts List

Follow the procedure to make Group Calls on your radio by using the Contacts list.

- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.

- 3 Press ▲ or ▼ to the required alias or ID. Press




to select.

- 4 Press the **PTT** button to make the call.


The green LED lights up.

- 5 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

- 6 Release the **PTT** button to listen.

The green LED lights up when the target radio responds. The display shows the **Group Call** icon, and alias or ID, and the transmitting radio alias or ID.

- 7  If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period.

7.5.1.3


Responding to Group Calls

To receive a call from a group of users, your radio must be configured as part of that group. Follow the procedure to respond to Group Calls on your radio.


When you receive a Group Call:

- The green LED blinks.
- The display shows the **Group Call** icon at the top right corner.
- The first text line shows the caller alias.
- The second text line displays the group call alias.
- Your radio unmutes and the incoming call sounds through the speaker.

- 1 Do one of the following:


-  If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button,

indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

-  If the Voice Interrupt feature is enabled, press the **PTT** button to interrupt the audio from the transmitting radio and free the channel for you to respond.

The green LED lights up.


2 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period.

If the radio receives a Group Call while not on the Home screen, it remains on its current screen prior to answering the call.

Long press  to return to the Home screen to view the caller alias before replying.

7.5.2

Private Calls

A Private Call is a call from an individual radio to another individual radio.

There are two ways to set up a Private Call. The first type sets up the call after performing a radio presence check, while the second type sets up the call immediately. Only one of these types can be programmed to your radio by your dealer.

If your radio is programmed to perform a radio presence check prior to setting up the Private Call and the target radio is not available:

- A tone sounds.
- The display shows a negative mini notice.
- The radio returns to the menu prior to initiating the radio presence check.

See [Privacy on page 413](#) for more information.

7.5.2.1

Making Private Calls

Your radio must be programmed to initiate a Private Call. If this feature is not enabled, a negative indicator tone sounds when you initiate the call. Follow the procedure to make Private Calls on your radio.

- 1 Do one of the following:
 - Select a channel with the active subscriber alias or ID.
 - Press the programmed **One Touch Access** button.


- 2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Private Call** icon, the subscriber alias, and call status.

- 3 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- 4 Release the **PTT** button to listen.


The green LED blinks when the target radio responds.

- 5  If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows **Call Ended**.

7.5.2.2

Making Private Calls by Using the Contacts List

- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.

- 3 Press ▲ or ▼ to the required alias or ID. Press



to select.

- 4 Press the **PTT** button to make the call.

If you release the **PTT** button while the radio is setting up the call, it exits without any indication and returns to the previous screen.

The green LED lights up. The display shows the destination alias.

- 5 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

- 6 Release the **PTT** button to listen.

The green LED blinks when the target radio responds. The display shows the transmitting user alias or ID.

- 7 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows **Call Ended**.


7.5.2.3

Responding to Private Calls

Follow the procedure to respond to Private Calls on your radio.

When you receive a Private Call:

- The green LED blinks.
 - The **Private Call** icon appears in the top right corner.
 - The first text line shows the caller alias.
 - Your radio unmutes and the incoming call sounds through the speaker.
- 1 Do one of the following:
- If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

-  If the Transmit Interrupt Remote Dekey feature is enabled, press the **PTT** button to stop an ongoing interruptible call and free the channel for you to respond.

The green LED lights up.

- 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-

- 3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows `Call Ended`.

7.5.3

All Calls

An All Call is a call from an individual radio to every radio on the channel. An All Call is used to make important announcements, requiring full attention from the user. The users on the channel cannot respond to an All Call.

7.5.3.1

Making All Calls


Your radio must be programmed for you to make an All Call. Follow the procedure to make All Calls on your radio.

- 1 Select a channel with the active All Call group alias or ID.
-

- 2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Group Call** icon and `All Call`.

- 3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-  Wait for the **PTT Sidetone** to end and speak clearly into the microphone if enabled.

Users on the channel cannot respond to an All Call.

7.5.3.2

Receiving All Calls


When you receive an All Call:

- A tone sounds.

- The green LED blinks.
- The display shows the **Group Call** icon at the top right corner.
- The first text line shows the caller alias ID.
- The second text line displays **All Call**.
- Your radio unmutes and the incoming call sounds through the speaker.

The radio returns to the screen before receiving the All Call when the call ends.

An All Call does not wait for a predetermined period before ending.

 If the Channel Free Indication feature is enabled, you hear a short alert tone when the transmitting radio releases the **PTT** button, indicating the channel is free for you to use.

You cannot respond to an All Call.



NOTICE:

The radio stops receiving the All Call if you switch to a different channel while receiving the call. You are not able to continue with any menu navigation or editing until the end of an All Call.

7.5.4

Selective Calls

A Selective Call is a call from an individual radio to another individual radio. It is a Private Call on an analog system.

7.5.4.1

Making Selective Calls

Your radio must be programmed for you to initiate a Selective Call. Follow the procedure to make Selective Calls on your radio.

- 1 Select a channel with the active subscriber alias or ID.
-

- 2 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Private Call** icon, the subscriber alias, and call status.

- 3 Do one of the following:
 - Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

-  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

4 Release the **PTT** button to listen.

The green LED lights up when the target radio responds.

-
- #### 5 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period.

-
- #### 6 The display shows `Call Ended`.
-

- The first text line shows the **Private Call** icon and the caller alias or `Selective Call` or `Alert with Call`.
- Your radio unmutes and the incoming call sounds through the speaker.

- 1 Press the **PTT** button to respond to the call.

The green LED lights up.

-
- 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-

- 3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period. A tone sounds. The display shows `Call Ended`.

7.5.4.2

Responding to Selective Calls

Follow the procedure to respond to Selective Calls on your radio.

When you receive a Selective Call:

- The green LED blinks.

7.5.5

Phone Calls

A Phone Call is a call from an individual radio to a telephone.

If Phone Call capability is not enabled in your radio:


- The display shows `Unavailable`.

- Your radio mutes the call.
- Your radio returns to the previous screen when the call ends.

During the Phone Call, your radio attempts to end the call when:

- You press the **One Touch Access** button with the deaccess code preconfigured.
- You enter the deaccess code as the input for extra digits.

During channel access, access or deaccess code, or extra digits transmission, your radio responds to the **On/Off**, **Volume Control**, and **Channel Selector** buttons or knobs only. A tone sounds for every invalid input.

During channel access, press  to dismiss the call attempt. A tone sounds.



NOTICE:

Check with your dealer or system administrator for more information.

7.5.5.1




Making Phone Calls

Follow the procedure to make Phone Calls on your radio.

7.5.5.2

Making Phone Calls with the Programmable Phone Button

Follow the procedure to make a phone call with the programmable phone button.

- 1 Press the programmed **Phone** button to enter into the Phone Entry list.
-
- 2 Press  or  to the required alias or ID. Press  to select.
 - The green LED lights up. The **Phone Call** icon appears in the top right corner. The first text line shows the subscriber alias. The second text line displays the call status.
 - If the call-setup is successful, the Dual Tone Multi Frequency (DTMF) tone sounds. You hear the dialing tone of the telephone user. The first text line shows the subscriber alias. The **Phone Call** icon remains in the top right corner. The second text line displays the call status.

- If call-setup is unsuccessful, a tone sounds and the display shows `Phone Call Failed`. Your radio returns to the Access Code input screen. If the access code was preconfigured in the Contacts list, the radio returns to the screen you were on prior to initiating the call.

3 Press the **PTT** button to talk. Release the **PTT** button to listen.


4 Press  to end the call.

- The Dual Tone Multi Frequency (DTMF) tone sounds and the display shows `Ending Phone Call`.
- If the end-call-setup is successful, a tone sounds and the display shows `Call Ended`.
- If the end-call-setup is unsuccessful, your radio returns to the Phone Call screen. Repeat [step 3](#) and [step 4](#) or wait for the telephone user to end the call.
- When you press **PTT** button while in the Phone Contacts screen, a tone sounds and the display shows `Press OK to Place Phone Call`.

- When the telephone user ends the call, a tone sounds and the display shows `Phone Call Ended`.



NOTICE:

During channel access, press  to dismiss the call attempt and a tone sounds.

During the call, when you press **One Touch Access** button with the deaccess code preconfigured or enter the deaccess code as the input for extra digits, your radio attempts to end the call.

7.5.5.3

Dual Tone Multi Frequency

The Dual Tone Multi Frequency (DTMF) feature allows your radio to operate in a radio system with an interface to the telephone systems.



Disabling all radio tones and alert will automatically turn off the DTMF tone.

7.5.5.3.1

Initiating DTMF Tone

Follow the procedure to initiate a DTMF tone on your radio.

- 1 Press and hold the **PTT** button.

 - 2 Do one of the following:
 - Enter the desired number to initiate a DTMF tone.
 - Press  to initiate a DTMF tone.
 - Press  to initiate a DTMF tone.
-

7.5.5.4

Responding to Phone Calls as Private Calls


Follow the procedure to respond to Phone Calls as Private Calls on your radio.

When you receive a Phone Call as a Private Call:

- The display shows the **Phone Call** icon at the top right corner.
- The display shows the caller alias or `Phone Call`.

If Phone Call capability is not enabled on your radio, the first line of the display shows `Unavailable` and your radio mutes the call. Your radio returns to the previous screen when the call ends.

- 1 Press the **PTT** button to respond to the call. Release the **PTT** button to listen.

- 2 Press  to end the call.

The display shows `Ending Phone Call`.
If the call ends successfully:

- A tone sounds.
- The display shows `Call Ended`.

If the call fails to end, the radio returns to the Phone Call screen. Repeat this step or wait for the telephone user to end the call.

7.5.5.5

Responding to Phone Calls as Group Calls

Follow the procedure to respond to Phone Calls as Group Calls on your radio.

When you receive a Phone Call as a Group Call:

- The display shows the **Phone Call** icon at the top right corner.
- The display shows the group alias and Phone Call.

If Phone Call capability is not enabled on your radio, the first line of the display shows `Unavailable` and your radio mutes the call.

- 1 Press the **PTT** button to respond to the call. Release the **PTT** button to listen.

- 2 Press  to end the call.

The display shows `Ending Phone Call`.

If the call ends successfully:

- A tone sounds.
- The display shows `Call Ended`.

If the call fails to end, the radio returns to the Phone Call screen. Repeat this step or wait for the telephone user to end the call.

7.5.5.6

Responding to Phone Calls as All Calls

When you receive a Phone Call as an All Call, you can respond to or end the call, only if an All Call type is assigned to the channel. Follow the procedure to respond to Phone Calls as All Calls on your radio.

When you receive a Phone Call as an All Call:

- The display shows the **Phone Call** icon at the top right corner.
- The display shows `All Call` and Phone Call.

If Phone Call capability is not enabled on your radio, the first line of the display shows `Unavailable` and your radio mutes the call.

Your radio returns to the previous screen when the call ends.

1 Press the **PTT** button to respond to the call.

2 Release the **PTT** button to listen.

3 Press  to end the call.

The display shows `Ending Phone Call`.

If the call ends successfully:

- A tone sounds.
- The display shows `All Call` and `Call Ended`.

If the call fails to end, the radio returns to the Phone Call screen. Repeat [step 3](#) or wait for the telephone user to end the call.

7.5.6

Initiating Transmit Interrupt

An ongoing call is interrupted, when you perform the following actions:

- Press the **Voice PTT** button.
 - Press the **Emergency** button.
 - Perform data transmission.
 - Press the programmed **TX Interrupt Remote Dekey** button.
-

The recipient radio displays `Call Interrupted`.

7.5.7

Broadcast Voice Calls

A Broadcast Voice Call is a one-way voice call from any user to an entire talkgroup.

The Broadcast Voice Call feature allows only the call initiating user to transmit to the talkgroup, while the recipients of the call cannot respond (no Call Hang Time).

Your radio must be programmed to allow you to use this feature. Check with your dealer or system administrator for more information.

7.5.7.1

Making Broadcast Voice Calls

Program your radio to make Broadcast Voice Calls.

1 Select a channel with the active group alias or ID.

2 Do one of the following:

- Select a channel with the active group alias or ID.
 - Press the programmed **One Touch Access** button.
-

3 Press the **PTT** button to make the call.

The green LED lights up. The display shows `Broadcast Call`, the **Group Call** icon and alias. The display shows the **Group Call** icon and alias.

4 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.



NOTICE:

Users on the channel cannot respond to Broadcast Voice Calls.

The radio returns to the previous menu after the call ends.

7.5.7.2

Making Broadcast Voice Calls by Using the Programmable Number Key

Follow the procedure to make Broadcast Voice Call on your radio by using the programmable number key.

1 On the **Home** screen, long press the programmed number key assigned to the predefined alias or ID.

If the number key is assigned to an entry in a particular mode, this feature is not supported when you long press the number key in another mode.

If the number key is not associated to an entry, a negative indicator tone sounds

2 Press the **PTT** button to make the call.

The green LED lights up. The first text line shows the subscriber alias. The second text line shows the call status.

3 Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.

Users on the channel cannot respond to a Broadcast Voice Call.

The radio returns to the previous menu after the call ends.

See [Assigning Entries to Programmable Number Keys on page 373](#) for more information.

7.5.7.3

Making Broadcast Voice Calls by Using the Alias Search

7.5.7.4

Receiving Broadcast Voice Calls

When you receive a Broadcast Voice Call:

- A tone sounds.
- The green LED blinks.
- The display shows the **Group Call** icon at the top right corner.
- The first text line shows the caller alias ID.
- The second text line displays `Broadcast Call`.

- Your radio unmutes and the incoming call sounds through the speaker.

When the call ends, the radio returns to the previous screen.

A Broadcast Voice Call does not wait for a predetermined period before ending.

You cannot respond to a Broadcast Voice Call.



NOTICE:

The radio stops receiving the Broadcast Voice Call if you switch to a different channel while receiving the call. You cannot continue with any menu navigation or editing until the end of the Broadcast Voice Call.

7.5.8

Unaddressed Calls

An Unaddressed Call is a group call to one of the 16 predefined group IDs.

This feature is configured using CPS-RM. A contact for one of the predefined IDs is required to initiate and/or receive an Unaddressed Call. Check with your dealer or system administrator for more information.

7.5.8.1

Making Unaddressed Calls

1 Select a channel with the active group alias or ID.

2 Do one of the following:

- Select a channel with the active group alias or ID.
 - Press the programmed **One Touch Access** button.
-

3 Press the **PTT** button to make the call.

The green LED lights up. The text line shows Unaddress Call, the **Group Call** icon and alias.

4 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

5 Release the **PTT** button to listen.

The green LED lights up when the target radio responds. A momentary tone sounds. The display

shows Unaddress Call, the **Group Call** icon, and alias or ID, and the transmitting radio alias or ID.

6 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating that the channel is free for you to respond. Press the **PTT** button to respond to the call.

The call ends when there is no voice activity for a predetermined period.

The call initiator can press  to end a Group Call.

7.5.8.2

Responding to Unaddressed Calls

When you receive an Unaddressed Call:

- The green LED blinks.
- A momentary tone sounds.
- The text line shows Unaddress Call, the caller alias, and the group call alias.

- Your radio unmutes and the incoming call sounds through the speaker.

1 Do one of the following:

- If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
- If the Voice Interrupt feature is enabled, press the **PTT** button to interrupt the audio from the transmitting radio and free the channel for you to respond.

The green LED lights up.

2 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
- Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period.

7.5.9

Open Voice Channel Mode (OVCM)

An Open Voice Channel Mode (OVCM) allows a radio that is not preconfigured to work in a particular system to both receive and transmit during a group or individual call.

The OVCM group call also supports broadcast calls. Program your radio to use this feature. Check with your dealer or system administrator for more information.

7.5.9.1

Making OVCM Calls

Your radio must be programmed for you to make an OVCM Call. Follow the procedure to make OVCM Calls on your radio.

1 Select a channel with the active group alias or ID.

2 Do one of the following:

- Select a channel with the active group alias or ID.

- Press the programmed **One Touch Access** button.
-

3 Press the **PTT** button to make the call.

The green LED lights up.

The text line shows the call type icon, **OVCN** and alias, indicating that the radio has entered **OVCN** State.

4 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-



NOTICE:

Recipient users are not allowed to Talkback during a Broadcast Call. The display shows **Talkback Prohibit**. If the **PTT** button is pressed during a Broadcast Call, the Talkback Prohibit Tone sounds momentarily.

1 Do one of the following:

- If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
- If the Voice Interrupt feature is enabled, press the **PTT** button to interrupt the audio from the transmitting radio and free the channel for you to respond.

The green LED lights up.

2 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 - Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

7.5.9.2

Responding to OVCN Calls

When you receive an **OVCN** Call:

- The green LED blinks.
- The text line shows the call type icon, **OVCN**, and alias.
- Your radio unmutes and the incoming call sounds through the speaker.

3 Release the **PTT** button to listen.

The call ends when there is no voice activity for a predetermined period.

7.6

Advanced Features

This chapter explains the operations of the features available in your radio.

Your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

7.6.1

Bluetooth®

This feature allows you to use your radio with a Bluetooth-enabled device (accessory) through a Bluetooth connection. Your radio supports both Motorola Solutions and Commercially available Off-The-Shelf (COTS) Bluetooth-enabled devices.

Bluetooth operates within a range of 10 m (32ft) line of sight. This is an unobstructed path between your radio and your Bluetooth-enabled device. For high degree of


reliability, Motorola Solutions recommends to not separate the radio and the accessory.

At the fringe areas of reception, both voice and tone quality start to sound "garbled" or "broken". To correct this problem, position your radio and Bluetooth-enabled device closer to each other (within the 10 m defined range) to re-establish clear audio reception. The Bluetooth function of your radio has maximum power of 2.5 mW (4 dBm) at the 10 m range.

Your radio can support up to three simultaneous Bluetooth connections with Bluetooth-enabled devices of unique types. For example, a headset, a scanner, a sensor device, and a PTT-Only Device (POD).

Refer to the user manual of your respective Bluetooth-enabled device for more details on the full capabilities of your Bluetooth-enabled device.


Your radio connects to the Bluetooth-enabled device within range with either the strongest signal strength, or to one which it has connected to before in a prior session. Do not turn off your Bluetooth-enabled device or press the home




back button  during the finding and connecting operation as this cancels the operation.




7.6.1.1







Turning Bluetooth On and Off

Follow the procedure to turn Bluetooth on and off.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth. Press  to select.

- 3 Press  or  to My Status. Press  to select.
The display shows On and Off. The current status is indicated by a ✓.


- 4 Do one of the following:
 - Press  or  to On. Press  to select. The display shows ✓ beside On.
 - Press  or  to Off. Press  to select.
The display shows ✓ beside Off.




7.6.1.2




Connecting to Bluetooth Devices









Follow the procedure to connect to Bluetooth devices.

Turn on your Bluetooth-enabled device and place it in pairing mode.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth. Press  to select.

- 3 Press  or  to Devices. Press  to select.

- 4 Do one of the following:
 - Press  or  to the required device. Press  to select.
 - Press  or  to Find Devices to locate available devices. Press  or  to the required device. Press  to select.

5

Press ▲ or ▼ to Connect. Press  to select.

Your Bluetooth-enabled device may require additional steps to complete the pairing. Refer to the user manual of your Bluetooth-enabled device.

The display shows Connecting to <Device>.

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows <Device> Connected and the **Bluetooth Connected** icon.
- The display shows ✓ beside the connected device.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows Connecting Failed.


7.6.1.3

Connecting to Bluetooth Devices in Discoverable Mode

Follow the procedure to connect to Bluetooth devices in discoverable mode.

Turn on your Bluetooth-enabled device and place it in pairing mode.


1

Press  to access the menu.

2

Press ▲ or ▼ to Bluetooth. Press  to select.

3

Press ▲ or ▼ to Find Me. Press  to select. The radio can now be found by other Bluetooth-enabled devices for a programmed duration. This is called Discoverable Mode.

Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows <Device> Connected and the **Bluetooth Connected** icon.

- The display shows ✓ beside the connected device.





If unsuccessful:

- A negative indicator tone sounds.
- The display shows Connecting Failed.

7.6.1.4

Disconnecting from Bluetooth Devices

Follow the procedure to disconnect from Bluetooth devices.

- 1 Press  to access the menu.
- 2 Press ▲ or ▼ to Bluetooth. Press  to select.
- 3 Press ▲ or ▼ to Devices. Press  to select.
- 4 Press ▲ or ▼ to the required device. Press  to select.

5

Press ▲ or ▼ to Disconnect. Press  to select.

The display shows Disconnecting from <Device>.

Wait for acknowledgment.

- A tone sounds.
- The display shows <Device> Disconnected and the **Bluetooth Connected** icon disappears.
- The ✓ disappears beside the connected device.

7.6.1.5

Switching Audio Route between Internal Radio Speaker and Bluetooth Device

Follow the procedure to toggle audio routing between internal radio speaker and external Bluetooth device.

Press the programmed **Bluetooth Audio Switch** button.











The display shows one of the following results:




- A tone sounds. The display shows Route Audio to Radio.
- A tone sounds. The display shows Route Audio to Bluetooth.

7.6.1.6

Viewing Device Details

Follow the procedure to view device details on your radio.











- 1 Press  to access the menu.
- 2 Press  or  to Bluetooth. Press  to select.
- 3 Press  or  to Devices. Press  to select.
- 4 Press  or  to the required device. Press  to select.

- 5 Press  or  to View Details. Press  to select.


7.6.1.7

Deleting Device Name

You can remove a disconnected device from the list of Bluetooth-enabled devices.

- 1 Press  to access the menu.
- 2 Press  or  to Bluetooth. Press  to select.
- 3 Press  or  to Devices. Press  to select.
- 4 Press  or  to the required device. Press  to select.


5 Press ▲ or ▼ to Delete. Press  to select. The display shows Device Deleted.

5 Press ▲ or ▼ to increase or to decrease values. Press  to select.


7.6.1.8


Bluetooth Mic Gain

This feature allows the user to control the microphone gain value of the connected Bluetooth-enabled device.

1 Press  to access the menu.

2 Press ▲ or ▼ to Bluetooth. Press  to select.

3 Press ▲ or ▼ to BT Mic Gain. Press  to select.

4 Press ▲ or ▼ to the BT Mic Gain type and the current values. Press  to select. You can edit the values here.

7.6.1.9

Permanent Bluetooth Discoverable Mode

The Permanent Bluetooth Discoverable Mode must be enabled by the dealer or system administrator.



NOTICE:

If enabled, Bluetooth is **not** displayed in the Menu and you cannot use any Bluetooth programmable button features.

Other Bluetooth-enabled devices can locate your radio, but the devices cannot connect to the radio. The Permanent Bluetooth Discoverable Mode enables dedicated devices to use your radio position in the process of Bluetooth-based location.

7.6.2

Indoor Location

**NOTICE:**

Indoor Location feature is applicable for models with the latest software and hardware. Check with your dealer or system administrator for more information.





Indoor Location is use to keep track of the location of radio users. When Indoor Location is activated, the radio is in a limited discoverable mode. Dedicated beacons are used to locate the radio and determine its position.



7.6.2.1

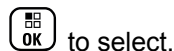
Turning Indoor Location On or Off

You can turn on or turn off Indoor Location by performing one of the following actions.


- Access this feature through the menu.

- Press  to access the menu.
- Press  or  to Bluetooth and press  to select.

- Press  or  to Indoor Location and press




to select.

- Press  to turn on Indoor Location.

The display shows Indoor Location On. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon appears on the Home screen display.
- If unsuccessful, the display shows Turning On Failed. You hear a negative indicator tone.

- Press  to turn off Indoor Location.

The display shows Indoor Location Off. You hear a positive indicator tone.

One of the following scenarios occurs.

- If successful, the Indoor Location Available icon disappears on the Home screen display.

- If unsuccessful, the display shows `Turning Off Failed`. You hear a negative indicator tone.
- Access this feature by using the programmed button.
 - a. Long press the programmed **Indoor Location** button to turn on Indoor Location.

The display shows `Indoor Location On`. You hear a positive indicator tone. One of the following scenarios occurs.

- If successful, the Indoor Location Available icon appears on the Home screen display.
 - If unsuccessful, the display shows `Turning On Failed`. If unsuccessful, you hear a negative indicator tone.
- b. Press the programmed **Indoor Location** button to turn off Indoor Location.

The display shows `Indoor Location Off`. You hear a positive indicator tone. One of the following scenarios occurs.


 - If successful, the Indoor Location Available icon disappears on the Home screen display.




- If unsuccessful, the display shows `Turning Off Failed`. If unsuccessful, you hear a negative indicator tone.




7.6.2.2


Accessing Indoor Location Beacons Information

Follow the procedure to access Indoor Location beacons information.

- 1 Press  to access the menu.

- 2 Press  or  to Bluetooth and press  to select.

- 3 Press  or  to Indoor Location and press  to select.

- 4 Press ▲ or ▼ to Beacons and press  to select.

The display shows the beacons information.

7.6.3

Multi-Site Control



Your radio is able to search for sites and switch between sites when signal is weak or your radio is unable to detect any signal from the current site.

When the signal is strong, the radio remains on the current site.

This setting is applicable when your current radio channel is part of an IP Site Connect or Capacity Plus–Multi-Site configuration.


Your radio can perform either one of the following site searches:


- Automatic Site Search
- Manual Site Search


If the current channel is a multi-site channel with an attached roam list and is out of range, and the site is unlocked, your radio also performs automatic site search.


7.6.3.1

Enabling Manual Site Search


- 1 Perform one of the following actions:
 - Press the programmed **Manual Site Roam** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press ▲ or ▼ to Utilities. Press  to select.

- 3 Press ▲ or ▼ to Radio Settings. Press  to select.

- 4 Press ▲ or ▼ to Site Roaming. Press  to select.

5

Press ▲ or ▼ to Active Search. Press  to select.

A tone sounds. The green LED blinks. The display shows Finding Site.

If the radio finds a new site, your radio shows the following indications:

- A positive tone sounds.
- The LED extinguishes.
- The display shows Site <Alias> Found.

If the radio fails to find a new site, your radio shows the following indications:

- A negative tone sounds.
- The LED extinguishes.
- The display shows Out of Range.

If a new site is within range, but the radio is unable to connect to it, your radio shows the following indications:

- A negative tone sounds.
- The LED turns off.
- The display shows Channel Busy.

7.6.3.2

Site Lock On/Off

When toggled on, the radio searches the current site only. When toggled off, the radio searches other sites in addition to the current site.

Press the programmed **Site Lock** button.

If the **Site Lock** function is toggled on:

- You hear a positive indicator tone, indicating the radio has locked to the current site.
- The display shows Site Locked.

If the **Site Lock** function is toggled off:

- You hear a negative indicator tone, indicating the radio is unlocked.
 - The display shows Site Unlocked.
-

7.6.4

Talkaround

This feature allows you to continue communicating when your repeater is non-operational, or when your radio is out

of range from the repeater but within the talk range of other radios.

The talkaround setting is retained even after powering down.




NOTICE:




This feature is not applicable in Capacity Plus–Single-Site, Capacity Plus–Multi-Site, and Citizens Band channels that are in the same frequency.




7.6.4.1




Toggling Between Repeater and Talkaround Modes

Follow the procedure to toggle between Repeater and Talkaround modes on your radio.

- 1 Do one of the following:
 - Press the programmed **Repeater/Talkaround** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Talkaround. Press  to select.

If enabled, ✓ appears beside Enabled.

If disabled, ✓ disappears beside Enabled.

The screen automatically returns to the previous screen.

7.6.5

Monitor Feature

The feature allows you to ensure that a channel is free before transmitting.



NOTICE:

This feature is not applicable in Capacity Plus–Single-Site and Capacity Plus–Multi-Site.

7.6.5.1

Monitoring Channels

Follow the procedure to monitor channels.

- 1 Long press the programmed **Monitor** button.

The **Monitor** icon appears on the display and the LED lights up solid yellow.

If the channel is in use:

- The display shows the **Monitor** icon.
- You hear radio activity or total silence.
- The yellow LED lights up.

If the monitored channel is free, you hear a “white noise”.

-
- 2 Press the **PTT** button to talk. Release the **PTT** button to listen.
-

7.6.5.2.1

Turning Permanent Monitor On or Off

Follow the procedure to turn Permanent Monitor on or off on your radio.

Press the programmed **Permanent Monitor** button.

When the radio enters the mode:

- An alert tone sounds.
- The yellow LED lights up.
- The display shows Permanent Monitor On and the **Monitor** icon.

When the radio exits the mode:

- An alert tone sounds.
 - The yellow LED turns off.
 - The display shows Permanent Monitor Off.
-

7.6.5.2

Permanent Monitor

The Permanent Monitor feature is used to continuously monitor a selected channel for activity.

7.6.6

Home Channel Reminder

This feature provides a reminder when the radio is not set to the home channel for a period of time.

If this feature is enabled through CPS, when your radio is not set to the home channel for a period of time, the following occurs periodically:

- The Home Channel Reminder tone and announcement sound.
- The first line of the display shows `Non.`
- The second line shows `Home Channel.`

You can respond to the reminder by performing one of the following actions:

- Return to the home channel.
- Mute the reminder temporarily using the programmable button.
- Set a new home channel using the programmable button.

7.6.6.1

Muting the Home Channel Reminder

When the Home Channel Reminder sounds, you can temporarily mute the reminder.

Press the programmed **Silence Home Channel Reminder** button.

The display shows `HCR Silenced.`


7.6.6.2

Setting New Home Channels




When the Home Channel Reminder occurs, you can set a new home channel.


1 Do one of the following:


- Press the **Reset Home Channel** programmable button to set the current channel as the new Home Channel. Skip the following steps. The first line of the display shows the channel alias and the second line shows `New Home Ch.`


- Press  to access the menu.
-

2

Press  or  to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Home Channel. Press  to select.

5 Press ▲ or ▼ to the desired new home channel alias. Press  to select.

The display shows ✓ beside the selected home channel alias.

7.6.7

Radio Check


This feature allows you to determine if another radio is active in a system without disturbing the radio user. No audible or visual notification is shown on the target radio. Your radio must be programmed to allow you to use this feature.

7.6.7.1

Sending Radio Checks


Follow the procedure to send radio checks on your radio.

- 1 Press the programmed **Radio Check** button.

- 2 Press ▲ or ▼ to the required alias or ID. Press  to select.

The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

Wait for acknowledgment.

If you press  when the radio is waiting for acknowledgment, a tone sounds, the radio terminates all retries, and exits Radio Check mode.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.

- The display shows a negative mini notice.
The radio returns to the subscriber alias or ID screen.

7.6.8 Remote Monitor

This feature is used to turn on the microphone of a target radio with a subscriber alias or ID. You can use this feature to remotely monitor any audible activity surrounding the target radio.

There are two types of Remote Monitor:

- Remote Monitor without Authentication
- Remote Monitor with Authentication.

Authenticated Remote Monitor is a purchasable feature. In Authenticated Remote Monitor, verification is required when your radio turns on the microphone of a target radio.

When your radio initiates this feature on a target radio with User Authentication, a passphrase is required. The passphrase is preprogrammed into the target radio through CPS.

Both your radio and the target radio must be programmed to allow you to use this feature.


This feature stops after a programmed duration or when there is any user operation on the target radio.

7.6.8.1 Initiating Remote Monitor


Follow the procedure to initiate Remote Monitor on your radio.

1 Press the programmed **Remote Monitor** button.

2 Press ▲ or ▼ to the required alias or ID.

3 Press  to select. One of the following scenarios occurs:

- The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the

request is in progress. The green LED lights up.

- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.

4 Wait for acknowledgment.

If successful:











- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows *Rem. Monitor*. Once the timer expires, an alert tone sounds, and the LED turns off.


If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

Initiating Remote Monitor by Using the Contacts List

Follow the procedure to initiate Remote Monitor on your radio by using the Contacts list.

- 1 Press  to access the menu.
- 2 Press  or  to *Contacts*. Press  to select.
- 3 Press  or  to the required alias or ID. Press  to select.
- 4 Press  or  to *Remote Mon..*
- 5 Press  to select. One of the following scenarios occurs:
 - The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
 - A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.

6 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows *Rem. Monitor*. Once the timer expires, an alert tone sounds, and the LED turns off.












If unsuccessful:


- A negative indicator tone sounds.
- The display shows a negative mini notice.

7.6.8.3


Initiating Remote Monitor by Using the Manual Dial

Follow the procedure to initiate Remote Monitor on your radio by using the manual dial.


- 1 Press  to access the menu.
- 2 Press  or  to *Contacts*. Press  to select.
- 3 Press  or  to *Manual Dial*. Press  to select.
- 4 Press  or  to *Radio Number*. Press  to select.
- 5 Do one of the following:
 - Enter the subscriber alias or ID, and press  to proceed.

- Edit the previously dialed ID, and press  to proceed.

6 Press ▲ or ▼ to Remote Mon..

7 Press  to select. One of the following scenarios occurs:

- The display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
 - If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.
-

8 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The audio from the monitored radio starts playing for a programmed duration, and the display shows *Rem. Monitor*. Once the timer expires, an alert tone sounds, and the LED turns off.

If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

7.6.9

Scan Lists

Scan lists are created and assigned to individual channels or groups. Your radio scans for voice activity by cycling through the channel or group sequence specified in the scan list for the current channel or group.

Your radio can support up to 250 scan lists, with a maximum of 16 members in a list.

Each scan list supports a mixture of both analog and digital entries.

You can add, delete, or prioritize channels by editing a scan list.

You can attach a new scan list to your radio by using Front Panel Programming. See [Front Panel Programming on page 161](#) for more information.

The **Priority** icon appears on the left of the member alias, if set, to indicate whether the member is on a Priority 1 or Priority 2 channel list. You cannot have multiple Priority 1 or Priority 2 channels in a scan list. There is no **Priority** icon if priority is set to **None**.




NOTICE:

This feature is not applicable in Capacity Plus.




7.6.9.1

Viewing Entries in the Scan List

Follow the procedure to view the entries in the Scan list on your radio.

- 1 Press  to access the menu.
-

- 2 Press  or  to Scan. Press  to select.
-


- 3 Press  or  to Scan List. Press  to select.
-

- 4 Press  or  to view each member on the list.
-

7.6.9.2


Adding New Entries to the Scan List


Follow the procedure to add new entries to the Scan list on your radio.


- 1 Press  to access the menu.
-

- 2 Press  or  to Scan. Press  to select.
-



- 3 Press  or  to Scan List. Press  to select.
-

4 Press ▲ or ▼ to Add Member. Press  to select.

5 Press ▲ or ▼ to the required alias or ID. Press  to select.


6 Press ▲ or ▼ to the required priority level. Press  to select.
The display shows a positive mini notice and then, Add Another?.

7 Do one of the following:


- Press ▲ or ▼ to Yes to add another entry.
Press  to select. Repeat [step 5](#) and [step 6](#).
- Press ▲ or ▼ to No to save the current list.
Press  to select.


Deleting Entries from the Scan List


Follow the procedure to delete entries from the Scan list.

1 Press  to access the menu.


2 Press ▲ or ▼ to Scan. Press  to select.

3 Press ▲ or ▼ to Scan List. Press  to select.


4 Press ▲ or ▼ to the required alias or ID. Press  to select.

5 Press ▲ or ▼ to Delete. Press  to select.
The display shows Delete Entry?.


6 Do one of the following:

- Press ▲ or ▼ to Yes to delete the entry. Press  to select.

The display shows a positive mini notice.

- Press ▲ or ▼ to No to return to the previous screen. Press  to select.


7 Repeat [step 4](#) to [step 6](#) to delete other entries.

8 Long press  to return to the Home screen after deleting all required aliases or IDs.


7.6.9.4


Setting Priority for Entries in the Scan List


Follow the procedure to set priorities for entries in the Scan list on your radio.


1 Press  to access the menu.

2 Press ▲ or ▼ to Scan. Press  to select.

3 Press ▲ or ▼ to Scan List. Press  to select.

4 Press ▲ or ▼ to the required alias or ID. Press  to select.

5 Press ▲ or ▼ to Edit Priority. Press  to select.

6 Press ▲ or ▼ to the required priority level. Press  to select.

The display shows a positive mini notice before returning to the previous screen. The **Priority** icon appears on the left of the member alias.

7.6.10

Scan

Your radio cycles through the programmed scan list for the current channel looking for voice activity when you start a scan.

**NOTICE:**

This feature is not applicable in Capacity Plus.

During a dual-mode scan, if you are on a digital channel, and your radio locks onto an analog channel, it automatically switches from digital mode to analog mode for the duration of the call. This is also true for the reverse.

There are two ways of initiating scan:

Main Channel Scan (Manual)

Your radio scans all the channels or groups in your scan list. On entering scan, your radio may, depending on the settings, automatically start on the last scanned active channel or group, or on the channel where scan was initiated.

Auto Scan (Automatic)

Your radio automatically starts scanning when you select a channel or group that has Auto Scan enabled.

7.6.10.1


Turning Scan On or Off

Follow the procedure to turn scan on or off on your radio.




**NOTICE:**




While scanning, the radio only accepts data (for example: text message, location, or PC data) if received on its Selected Channel.

- 1 Turn the **Channel Selector Knob** to select a channel programmed with a scan list.

-
- 2 Press  to access the menu.

-
- 3 Press  or  to Scan. Press  to select.

-
- 4 Press  or  to Scan State. Press  to select.

-
- 5 Press  or  to the required scan state and press  to select.

If scan is enabled:

- The display shows **Scan On** and **Scan** icon.
- The yellow LED blinks.


If scan is disabled:

- The display shows **Scan Off**.
- The **Scan** icon disappears.
- The LED turns off.

7.6.10.2


Responding to Transmissions During Scanning

During scanning, your radio stops on a channel or group where activity is detected. The radio stays on that channel for a programmed duration known as hang time. Follow the procedure to respond to transmissions during scanning.

- 1  If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button during hang time.

The green LED lights up.

- 2 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 -  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

- 3 Release the **PTT** button to listen.

The radio returns to scanning other channels or groups if you do not respond within the hang time.

7.6.10.3

Deleting Nuisance Channels

If a channel continually generates unwanted calls or noise, (termed a "nuisance" channel), you can temporarily remove the unwanted channel from the scan list. This capability does not apply to the channel designated as the Selected Channel. Follow the procedure to delete nuisance channels on your radio.

- 1 When your radio locks on to an unwanted or nuisance channel, press the programmed **Nuisance Channel Delete** button until you hear a tone.
-

- 2 Release the programmed **Nuisance Channel Delete** button.

The nuisance channel is deleted.

7.6.10.4

Restoring Nuisance Channels

Follow the procedure to restore nuisance channels on your radio.

Do one of the following:

- Turn the radio off and then power it on again.
 - Stop and restart a scan using the programmed **Scan** button or menu.
 - Change the channel using the **Channel Selector Knob**.
-

7.6.11



Vote Scan

Vote Scan provides you with wide area coverage in areas where there are multiple base stations transmitting identical information on different analog channels.

Your radio scans analog channels of multiple base stations and performs a voting process to select the strongest received signal. Once that is established, your radio receives transmissions from that base station.

During a vote scan, the yellow LED blinks and the display shows the **Vote Scan** icon.

To respond to a transmission during a vote scan, see [Responding to Transmissions During Scanning on page 370](#).

7.6.12

Contacts Settings

Contacts provides address book capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call. The entries are alphabetically sorted.

Each entry, depending on context, associates with the different call types: Group Call, Private Call, All Call, PC Call, or Dispatch Call.

PC Call and Dispatch Call are data-related. They are only available with the applications. Refer to the data applications documentation for further details.



NOTICE:

You see a checkmark before each number key that is assigned to an entry. If the checkmark is before Empty, you have not assign a number key to the entry.

Each entry within Contacts displays the following information:

- Call Type
- Call Alias
- Call ID




NOTICE:




If the Privacy feature is enabled on a channel, you can make privacy-enabled Group Calls, Private Calls, and All Calls on that channel. Only target radios with the same Privacy Key, or the same Key Value and Key ID as your radio will be able to decrypt the transmission.




7.6.12.1




Adding New Contacts


Follow the procedure to add new contacts on your radio.


- 1 Press  to access the menu.


- 2 Press  or  to Contacts. Press  to select.

- 3 Press  or  to New Contact. Press  to select.

- 4 Press  or  to select contact type Radio Contact or Phone Contact. Press  to select.

- 5 Enter the contact number with the keypad, and press  to proceed.

- 6 Enter the contact name with the keypad, and press  to proceed.




- 7 Press ▲ or ▼ to the required ringer type. Press  to select.


A positive indicator tone sounds. The display shows a positive mini notice.

7.6.12.2

Setting Default Contact

Follow the procedure to set the default contact on your radio.




- 1 Press  to access the menu.
-
- 2 Press ▲ or ▼ to Contacts. Press  to select.
-
- 3 Press ▲ or ▼ to the required alias or ID. Press  to select.
-


- 4 Press ▲ or ▼ to Set as Default. Press  to select.

A positive indicator tone sounds. The display shows a positive mini notice. The display shows ✓ beside the selected default alias or ID.


7.6.12.3

Assigning Entries to Programmable Number Keys

- 1 Press  to access the menu.
-
- 2 Press ▲ or ▼ to Contacts. Press  to select.
-
- 3 Press ▲ or ▼ to the required alias or ID. Press  to select.
-

- 4 Press ▲ or ▼ to Program Key. Press  to select.
-

- 5 Do one of the following:

- If the desired number key has not been assigned to an entry, press ▲ or ▼ to the desired number key. Press  to select.
- If the desired number key has been assigned to an entry, the display shows `The Key is Already Assigned` and then, the first text line shows `Overwrite?`. Do one of the following:


Press ▲ or ▼ to Yes. Press  to select.

The radio sounds a positive indicator tone and the display shows `Contact Saved` and a positive mini notice.


Press ▲ or ▼ to No to return to the previous step.


Removing Associations Between Entries and Programmable Number Keys


- 1 Do one of the following:


- Long press the programmed number key to the required alias or ID. Proceed to [step 4](#).
 - Press  to access the menu.
-

- 2 Press ▲ or ▼ to Contacts. Press  to select.
-

- 3 Press ▲ or ▼ to the required alias or ID. Press  to select.
-

- 4 Press ▲ or ▼ to Program Key. Press  to select.
-

- 5 Press ▲ or ▼ to Empty. Press  to select.
The first text line shows Clear from all keys.
-

- 6 Press ▲ or ▼ to Yes. Press  to select.



NOTICE:

When an entry is deleted, the association between the entry and its programmed number key(s) is removed.

A positive indicator tone sounds. The display shows Contact Saved.
The screen automatically returns to the previous menu.







7.6.13



Call Indicator Settings

This feature allows you to configure call or text message ringing tones.

7.6.13.1

Activating or Deactivating Call Ringers for Call Alerts



- 1 Press  to access the menu.
-
- 2 Press ▲ or ▼ to Utilities. Press  to select.
-
- 3 Press ▲ or ▼ to Radio Settings. Press  to select.
-
- 4 Press ▲ or ▼ to Tones/Alert. Press  to select.
-
- 5 Press ▲ or ▼ to Call Ringers. Press  to select.
-
- 6 Press ▲ or ▼ to Call Alert. Press  to select.
-
- 7 Do one of the following:


- Press ▲ or ▼ to the required tone. Press  to select.
The display shows ✓ and the selected tone.
- Press ▲ or ▼ to Off. Press  to select.
If the ringing tones were earlier enabled, the display shows ✓ beside Off.
If the ringing tones were earlier disabled, the display does not show ✓ beside Off.


7.6.13.2


Activating or Deactivating Call Ringers for Private Calls


Follow the procedure to activate or deactivate call ringers for Private Calls on your radio.

- 1 Press  to access the menu.
- 2 Press ▲ or ▼ to Utilities. Press  to select.

- 3 Press ▲ or ▼ to Radio Settings. Press  to select.

- 4 Press ▲ or ▼ to Tones/Alerts. Press  to select.


- 5 Press ▲ or ▼ to Call Ringers. Press  to select.

- 6 Press ▲ or ▼ to Private Call. Press  to select.


The display shows ✓ beside On if Private Call ringing tones are enabled.

The display shows ✓ beside Off if Private Call ringing tones are disabled.

- 7 Do one of the following:

- Press ▲ or ▼ to the required tone. Press  to select.

The display shows ✓ and the selected tone.


- Press ▲ or ▼ to Off. Press  to select. If the ringing tones were earlier enabled, the display shows ✓ beside Off.


If the ringing tones were earlier disabled, the display does not show ✓ beside Off.


7.6.13.3


Activating or Deactivating Call Ringers for Selective Calls


Follow the procedure to activate or deactivate call ringers for Selective Calls on your radio.


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.



4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to Call Ringers. Press  to select.

6 Press ▲ or ▼ to Selective Call. Press  to select.

The display shows ✓ and the current tone.

7 Do one of the following:


- Press ▲ or ▼ to the required tone. Press  to select. The display shows ✓ and the selected tone.
- Press ▲ or ▼ to Off. Press  to select. If the ringing tones were earlier enabled, the display shows ✓ beside Off.




If the ringing tones were earlier disabled, the display does not show ✓ beside Off.




7.6.13.4




Activating or Deactivating Call Ringers for Text Messages




Follow the procedure to activate or deactivate call ringers for text messages on your radio.




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.







- 4 Press  or  to Tones/Alerts. Press  to select.

- 5 Press  or  to Call Ringers. Press  to select.

- 6 Press  or  to Text Message. Press  to select.

The display shows ✓ and the current tone.


- 7 Do one of the following:




- Press  or  to the required tone. Press  to select.
The display shows ✓ and the selected tone.
 - Press  or  to Off. Press  to select.
If the ringing tones were earlier enabled, the display shows ✓ beside Off.
If the ringing tones were earlier disabled, the display does not show ✓ beside Off.
-




7.6.13.5




Activating or Deactivating Call Ringers for Telemetry Status with Text




Follow the procedure to activate or deactivate call ringers for telemetry status with text on your radio.





- 1 Press  to access the menu.









- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alert. Press  to select.

- 5 Press  or  to Call Ringers. Press  to select.

- 6 Press  or  to Telemetry. Press  to select.
The current tone is indicated by a .


- 7 Do one of the following:
 - Press  or  to the preferred tone. Press  to select.
The display shows Tone <Number> Selected and a  appears left of the selected tone.
 - Press  or  to Turn Off. Press  to select.
The display shows Telemetry Ringer Off and a  appears left of Turn Off.




7.6.13.6




Assigning Ring Styles




The radio can be programmed to sound one of eleven predefined ringing tones when receiving a Private Call, a Call Alert, or a Text Message from a particular contact. The


radio sounds out each ring style as you navigate through the list.




- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.
The entries are alphabetically sorted.

- 3 Press  or  to the required alias or ID. Press  to select.

- 4 Press  or  to **View/Edit**. Press  to select.

- 5 Press  until display shows **Ringer** menu
A ✓ indicates the current selected tone.

- 6 Press  or  to the required tone. Press  to select.

The display shows a positive mini notice.

7.6.13.7

Selecting a Ring Alert Type



NOTICE:

The programmed **Ring Alert Type** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.




You can program the radio calls to one predetermined vibrate call. If All Tones status is disabled, the radio displays the All Tone Mute icon. If All Tones status is enabled, the related ring alert type is displayed.





The radio vibrates once if it is a momentary ring style. The radio vibrates repetitively if it is a repetitive ring style. When set to Ring and Vibrate, the radio sounds a specific ring tone if there is any incoming radio transaction (for example, Call Alert or Message). It sounds like a positive indicator tone or missed call.

For radios with batteries that support the vibrate feature and are attached to a vibrating belt clip, the available Ring Alert Type options are Silent, Ring, Vibrate, and Ring and Vibrate.

For radios with batteries that do not support the vibrate feature and are not attached to a vibrating belt clip, Ring Alert Type is automatically set to Ring. The available Ring Alert Type options are Silent and Ring.

You can select a Ring Alert Type by performing one of the following actions.

- Press the programmed **Ring Alert Type** button to access the Ring Alert Type menu.
 - a. Press ▲ or ▼ to Ring, Vibrate, Ring & Vibrate or Silent and press  to select.
- Access this feature through the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to Utilities and press  to select.

- c. Press ▲ or ▼ to Radio Settings and press  to select.
- d. Press ▲ or ▼ to Tones/Alerts and press  to select.
- e. Press ▲ or ▼ to Ring Alert Type and press  to select.
- f. Press ▲ or ▼ to Ring, Vibrate, Ring & Vibrate or Silent and press  to select.

7.6.13.8

Configuring Vibrate Style










NOTICE:

The programmed **Vibrate Style** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

Vibrate Style is enabled when the Vibrating Belt Clip is attached to the radio with a battery that supports the vibrate feature.

You can configure the vibrate style by performing one of the following actions.

- Press the programmed **Vibrate Style** button to access the Vibrate Style menu.
 - a. Press ▲ or ▼ to Short, Medium, or Long and press  to select.
- Access this feature via the menu.
 - a. Press  to access the menu.
 - b. Press ▲ or ▼ to Utilities and press  to select.
 - c. Press ▲ or ▼ to Radio Settings and press  to select.
 - d. Press ▲ or ▼ to Tones/Alerts and press  to select.
 - e. Press ▲ or ▼ to Vibrate Style and press  to select.

- f. Press ▲ or ▼ to Short, Medium, or Long and press  to select.

7.6.13.9

Escalating Alarm Tone Volume

The radio can be programmed to continually alert, when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalert. Follow the procedure to escalate alarm tone volume on your radio.

7.6.14

Call Log Features

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. The call log feature is used to view and manage recent calls.


Missed Call Alerts may be included in the call logs, depending on the system configuration on your radio. You can perform the following tasks in each of your call lists:




- Store Alias or ID to Contacts
- Delete Call



- View Details


7.6.14.1



Viewing Recent Calls

- 1 Press  to access the menu.

- 2 Press  or  to Call Log. Press  to select.

- 3 Press  or  to the preferred list. The options are Missed, Answered, and Outgoing lists.


Press  to select.
The display shows the most recent entry.




- 4 Press  or  to view the list.
You can start a call with the alias or ID the display is currently showing by pressing the **PTT** button.




7.6.14.2




Viewing Call List Details




Follow the procedure to view call details on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Call Log. Press  to select.

- 3 Press  or  to the required list. Press  to select.

- 4 Press  or  to the required alias or ID. Press  to select.


- 5 Press  or  to View Details. Press  to select.
The display shows the call details.




7.6.14.3




Storing Aliases or IDs from the Call List









Follow the procedure to store aliases or IDs on your radio from the Call list.

- 1 Press  to access the menu.

- 2 Press  or  to Call Log. Press  to select.

- 3 Press  or  to the required list. Press  to select.

- 4 Press  or  to the required alias or ID. Press  to select.

- 5 Press  or  to Store. Press  to select.
The display shows a blinking cursor.

- 6 Enter the rest of the characters of the required alias.

Press  to select.


You can store an ID without an alias.




The display shows a positive mini notice.




7.6.14.4

Deleting Calls from the Call List

Follow the procedure to delete calls from the Call list.

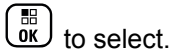
- 1 Press  to access the menu.

- 2 Press  or  to Call Log. Press  to select.

- 3 Press  or  to the required list. Press  to select.
If the list is empty:
 - A tone sounds.


- The display shows `List Empty`.

4 Press ▲ or ▼ to the required alias or ID. Press





to select.

5

Press ▲ or ▼ to `Delete Entry?`. Press  to select.

6 Do one of the following:

- Press  to select `Yes` to delete the entry. The display shows `Entry Deleted`.

- Press ▲ or ▼ to `No`. Press  to select. The radio returns to the previous screen.
-

7.6.15

Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back.

This feature is applicable for subscriber aliases or IDs only and is accessible through the menu using `Contacts` or a programmed **One Touch Access** button.

7.6.15.1

Responding to Call Alerts

When you receive a Call Alert:

- A repetitive tone sounds.
- The yellow LED blinks.
- The display shows the notification list listing a Call Alert with the alias or ID of the calling radio.

Depending on the configuration by your dealer or system administrator, you can respond to a Call Alert by doing one of the following:

- Press the **PTT** button and respond with a Private Call directly to the caller.
 - Press the **PTT** button to continue normal talkgroup communication. The Call Alert is moved to the Missed Call option at the Call Log menu. You can respond to the caller from the Missed Called log.
-

See [Notification List on page 159](#) and [Call Log Features on page 117](#) for more information.

7.6.15.2

Making Call Alerts

Follow the procedure to make Call Alerts on your radio.

- 1 Press the programmed **One Touch Access** button.

The display shows `Call Alert` and the subscriber alias or ID. The green LED lights up.


- 2 Wait for acknowledgment.

If the Call Alert acknowledgment is received, the display shows a positive mini notice.




If the Call Alert acknowledgment is not received, the display shows a negative mini notice.




7.6.15.3

Making Call Alerts by Using the Contacts List

- 1 Press  to access the menu.
-

- 2 Press  or  to `Contacts`. Press  to select.
-

- 3 Press  or  to the required alias or ID. Press  to select.
-

- 4 Press  or  to `Call Alert`. Press  to select.

The display shows `Call Alert` and the subscriber alias or ID. The green LED lights up.

- 5 Wait for acknowledgment.
 - If the acknowledgment is received, the display shows a positive mini notice.

- If the acknowledgment is not received, the display shows a negative mini notice.

7.6.16

Dynamic Caller Alias

This feature allows a Caller Alias to be configured in the radio.


When in a call, the receiving radio displays the Caller Alias of the transmitting radio.




The Caller Aliases list can store up to 500 Caller Aliases of transmitting radio. You can view or make Private Calls from the Caller Aliases list. When you turn off your radio, the history of receiving Caller Aliases is removed from the Caller Aliases list.




7.6.16.1




Viewing the Caller Aliases List

You can access the Caller Aliases list to view the transmitting Caller Alias details.

- 1 Press  to access the menu.

- 2 Press  or  to Caller Aliases. Press  to select.





- 3 Press  or  to the preferred list. Press  to select.

- 4 Press  or  to View Details. Press  to select.

7.6.16.2

Initiating Private Call From the Caller Aliases List

You can access the Caller Aliases list to initiate Private Call.

- 1 Press  to access the menu.
- 2 Press  or  to Caller Aliases. Press  to select.

- 3 Press ▲ or ▼ to the *<required Caller Alias>*.
-

- 4 To call, press and hold the **PTT** button.
-

7.6.17

Mute Mode

Mute Mode provides an option to silence all audio indicators on your radio.

When Mute Mode is initiated, all audio indicators are muted except higher priority features such as emergency operations.

When Mute Mode is exited, your radio resumes playing ongoing tones and audio transmissions.



IMPORTANT:

You can only enable either Face Down or Man Down one at a time. Both features cannot be enabled together.

7.6.17.1

Turning On Mute Mode

Follow the procedure to turn on Mute Mode.

Do one of the following:

- Access this feature by using the programmed **Mute Mode** button.
- Access this feature by placing the radio in a face-down position momentarily.

Depending on radio model, the Face Down feature can be enabled either through the radio menu or by your system administrator. Check with your dealer or system administrator for more information.



IMPORTANT:

User can only enable either Man Down or Face Down at a time. Both features cannot be enabled together.



NOTICE:

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is enabled:

- Positive Indicator Tone sounds.
- Display shows `Mute Mode On`.
- The red LED light starts blinking and remains blinking until Mute Mode is exited.
- Display shows **Mute Mode** icon on home screen.

- Radio is muted.
- Mute Mode Timer begins counting down the duration that is configured.

7.6.17.2

Setting Mute Mode Timer


Mute Mode feature can be enabled for a pre-configured amount of time by setting the Mute Mode Timer. The timer duration is configured in the radio menu and can range between 0.5–6 hours. Mute Mode is exited once the timer expires.




If the timer is left at 0, the radio remains in Mute mode for an indefinite period until the radio is moved to a face-up position or the programmed **Mute Mode** button is pressed.









NOTICE:




Face Down feature is applicable to DP4601e only.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Mute Timer. Press  to select.

- 5 Press  or  to edit the numeric value of each digit, and press .

7.6.17.3

Exiting Mute Mode

This feature can be exited automatically once the Mute Mode Timer expires.

Do one of the following to exit Mute mode manually:

- Press the programmed **Mute Mode** button.
- Press the **PTT** button on any entry.

- Place the radio in a face-up position momentarily.



NOTICE:

Face Down feature is applicable to DP4601e only.

The following occurs when Mute mode is disabled:

- Negative Indicator Tone sounds.
- Display shows `Mute Mode Off`.
- The blinking red LED turns off.
- **Mute Mode** icon disappears from home screen.
- Your radio unmutes and speaker state is restored.
- If the timer has not expired, Mute mode timer is stopped.



NOTICE:

Mute Mode is also exited if the user transmits voice or switches to an unprogrammed channel.

7.6.18

Emergency Operation

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an Emergency at any time even when there is activity on the current channel.

Your dealer can set the duration of a button press for the programmed **Emergency** button, except for long press, which is similar with all other buttons:

Short Press

Duration between 0.05 seconds and 0.75 seconds.

Long Press

Duration between 1.00 second and 3.75 seconds.

The **Emergency** button is assigned with the Emergency On/Off feature. Check with your dealer for the assigned operation of the **Emergency** button.




NOTICE:

If a short press to the **Emergency** button initiates Emergency mode, then a long press to the same enables the radio to exit Emergency mode.

If a long press to the **Emergency** button initiates Emergency mode, then a short press to the same enables the radio to exit Emergency mode.

Your radio supports three Emergency Alarms:

- Emergency Alarm

- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow 

**NOTICE:**

Only one of the Emergency Alarms above can be assigned to the programmed **Emergency** button.

In addition, each alarm has the following types:

Regular

Radio transmits an alarm signal and shows audio and/or visual indicators.

Silent

Radio transmits an alarm signal without any audio or visual indicators. Radio receives calls without any sound through the speaker, until the programmed *hot mic* transmission period is over and/or you press the **PTT** button.

Silent with Voice

Radio transmits an alarm signal without any audio or visual indicators, but allow incoming calls to sound through the speaker. If *hot mic* is enabled, the incoming calls sound through the speaker after the programmed *hot mic* transmission period is over. The indicators only appear once you press the **PTT** button.


Sending Emergency Alarms

This feature allows you to send an Emergency Alarm, a non-voice signal, which triggers an alert indication on a group of radios. Your radio does not display any audio or visual indicators during Emergency mode when it is set to Silent.

Follow the procedure to send Emergency Alarms on your radio.

- 1 Press the programmed **Emergency On** button.

You see one of these results:

- The display shows Tx Alarms and the destination alias.
-  The display shows Tx Telegram and the destination alias.

The green LED lights up. The **Emergency** icon appears.



NOTICE:

If programmed, the Emergency Search tone sounds. This tone is muted when the radio transmits or receives voice, and stops when the radio exits Emergency mode. The Emergency Search tone can be programmed through CPS.

2 Wait for acknowledgment.

If successful:

- The Emergency tone sounds.
- The red LED blinks.
- The display shows `Alarm Sent`.

If unsuccessful after all retries have been exhausted:

- A tone sounds.
- The display shows `Alarm Failed`.

The radio exits the Emergency Alarm mode and returns to the Home screen.

7.6.18.2

Sending Emergency Alarms with Call

This feature allows you to send an Emergency Alarm with Call to a group of radios. Upon acknowledgement by a radio within the group, the group of radios can communicate over a programmed Emergency channel. Follow the procedure to send Emergency Alarms with call on your radio.

1 Press the programmed **Emergency On** button.

You see the following:

- The display shows `Tx Telegram` and the destination alias.

The green LED lights up. The **Emergency** icon appears.



NOTICE:

If programmed, the Emergency Search tone sounds. This tone is muted when the radio transmits or receives voice, and stops when the radio exits Emergency mode. The Emergency Search tone can be programmed by your dealer or system administrator.

2 Wait for acknowledgment.


If successful:

- The Emergency tone sounds.
- The red LED blinks.
- The display shows `Alarm Sent`.
- Your radio enters the Emergency call mode when the display shows `Emergency` and the destination group alias.

3 Press the **PTT** button to make the call.

The green LED lights up. The display shows the **Group Call** icon.

4 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
-  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.

5 Release the **PTT** button to listen.

The display shows the caller and group aliases.

-
- ## 6 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond to the call.
-

- ## 7 To exit the Emergency mode once the call ends, press the **Emergency Off** button.

The radio returns to the Home screen.

7.6.18.3

Emergency Alarms with Voice to Follow

This feature allows you to send an Emergency Alarm with Voice to Follow to a group of radios. Your radio microphone is automatically activated, allowing you to communicate with the group of radios without pressing the **PTT** button. This activated microphone state is also known as *hot mic*.

If your radio has Emergency Cycle Mode enabled, repetitions of *hot mic* and receiving period are made for a programmed duration. During Emergency Cycle Mode, received calls sound through the speaker.

If you press the **PTT** button during the programmed receiving period, you hear a prohibit tone, indicating that you should release the **PTT** button. The radio ignores the **PTT** button press and remains in Emergency mode.

If you press the **PTT** button during *hot mic*, and continue to press it after the *hot mic* duration expires, the radio continues to transmit until you release the **PTT** button.

If the Emergency Alarm request fails, the radio does not retry to send the request, and enters the *hot mic* state directly.



NOTICE:

Some accessories may not support *hot mic*. Check with your dealer or system administrator for more information.

7.6.18.4

Sending Emergency Alarms with Voice to Follow

- 1 Press the programmed **Emergency On** button.

You see one of these results:

- The display shows Tx Alarm and the destination alias.

The green LED lights up. The **Emergency** icon appears.

-
- 2 Once the display shows Alarm Sent, speak clearly into the microphone.

The radio automatically stops transmitting when:

- The cycling duration between *hot mic* and receiving calls expires, if Emergency Cycle Mode is enabled.
 - The *hot mic* duration expires, if Emergency Cycle Mode is disabled.
-

- 3 Press the **Emergency Off** button to exit the Emergency mode.

The radio returns to the Home screen.


7.6.18.5


Receiving Emergency Alarms

When you receive an Emergency Alarm:


- A tone sounds.
- The red LED blinks.
- The display shows the **Emergency** icon, and the Emergency caller alias or if there is more than one alarm, all emergency caller aliases are displayed in an Alarm List.


- 1 Do one of the following:

- If only one alarm, press  to view more details.

- If more than one alarm, press ▲ or ▼ to the required alias, and press  to view more details.


- 2 Press  to view the action options.

- 3 Press  and select Yes to exit the Alarm list.

- 4 Press  to access the menu.

- 5 Select Alarm List to revisit the Alarm list.

- 6 To return to home screen, perform the following actions:



- a Press .
- b Press ▲ or ▼ to Yes.

c Press  to select.


The radio returns to the home screen and the display shows the Emergency icon.

7.6.18.6

Responding to Emergency Alarms

1 Make sure the display shows the Alarm List. Press  or  to the required alias or ID.

2 Press the **PTT** button to transmit non-emergency voice to the same group the Emergency Alarm targeted.

 If the Channel Free Indication feature is enabled, you hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.




NOTICE:

Emergency voice can only be transmitted by the emergency initiating radio. All other radios, including the emergency receiving radio, transmit non-emergency voice.

The green LED lights up. Your radio remains in the Emergency mode.

3 Do one of the following:

- Wait for the Talk Permit Tone to end and speak clearly into the microphone if enabled.
 -  Wait for the **PTT** Sidetone to end and speak clearly into the microphone if enabled.
-

4 Release the **PTT** button to listen.

When the emergency initiating radio responds:

- The green LED blinks.
 - The display shows the **Group Call** icon and ID, transmitting radio ID, and the Alarm list.
-

7.6.18.7

Exiting Emergency Mode After Receiving the Emergency Alarm

Do one of the following to exit Emergency mode after receiving Emergency alarm:

- Delete the alarm items.
- Power down the radio.

7.6.18.8

Reinitiating Emergency Mode

Perform one of the following actions:

- Change the channel while the radio is in Emergency mode.



NOTICE:

You can reinitiate emergency mode only if you enable emergency alarm on the new channel.

- Press the programmed **Emergency On** button during an emergency initiation or transmission state.

The radio exits the Emergency mode, and reinitiates Emergency.

7.6.18.9

Exiting Emergency Mode

This feature is only applicable to the radio sending the Emergency Alarm.

Your radio exits Emergency mode when:

- An acknowledgment is received (for Emergency Alarm only).
- All retries to send the alarm have been exhausted.
- Your radio is turned off.



NOTICE:

Your radio does not reinitiate the Emergency mode automatically when it is powered up again.


Follow the procedure to exit Emergency mode on your radio.




Do one of the following:




- Press the programmed **Emergency Off** button.
 - Turn off the radio and then, power it on again, if your radio has been programmed to remain on the Emergency Revert channel even after acknowledgment is received.
 - Change the channel to a new channel that has no emergency system configured.
The display shows `No Emergency`.
-

7.6.18.10

Deleting an Alarm Item from the Alarm List

- 1 Press  to access the menu.

 - 2 Press  or  to `Alarm List`. Press  to select.

 - 3 Press  or  to the required alarm item. Press  to select.
-

4

Press  or  to `Delete`. Press  to select.

7.6.19

Man Down



NOTICE:

Man Down feature is applicable to only DP4601e .

This feature prompts an emergency to be raised if there is a change in the motion of the radio, such as the tilt of the radio, motion and/or the lack of motion for a predefined time.

Following a change in the motion of the radio for a programmed duration, the radio pre-warns the user with an audio indicator indicating that a change in motion is detected.

If there is still no acknowledgment by the user before the predefined reminder timer expires, the radio initiates an Emergency Alarm or an Emergency Call. You can program the reminder timer by using CPS.

7.6.19.1

Turning the Man Down Feature On or Off







NOTICE:

The programmed **Man Down** button and Man Down settings are configured using CPS. Check with your dealer or system administrator to determine how your radio has been programmed.




If you disable the Man Down feature, the programmed alert tone sounds repeatedly until the Man Down feature is enabled. A device failure tone sounds when the Man Down feature fails while powering up. The device failure tone continues until the radio resumes normal operation.



You can enable or disable this feature by performing one of the following actions.


- Press the programmed **Man Down** button to toggle the feature on or off.
- Access this feature using the menu.
 - a. Press  to access the menu.

b. Press  or  to Utilities. Press  to select.

c. Press  or  to Radio Settings. Press  to select.

d. Press  or  to Man Down. Press  to select.

You can also use  or  to change the selected option.

e. Press  to enable or disable Man Down.

If enabled, ✓ appears beside Enabled.

If disabled, ✓ disappears beside Enabled.

7.6.20

Text Messaging

Your radio is able to receive data, for example a text message, from another radio or a text message application.

There are two types of text messages, Digital Mobile Radio (DMR) Short Text Message and text message. The maximum length of a DMR Short Text Message is 23 characters. The maximum length of a text message is 280 characters, including the subject line. The subject line only appears when you receive messages from e-mail applications.



NOTICE:

The maximum character length is only applicable for models with the latest software and hardware. For radio models with older software and hardware, the maximum length of a text message is 140 characters. Contact your dealer for more information.


7.6.20.1




Text Messages




The text messages are stored in an Inbox, and sorted according to the most recently received.




7.6.20.1.1

Viewing Text Messages

- 1 Press  to access the menu.

- 2 Press  or  to Messages. Press  to select.


- 3 Press  or  to Inbox. Press  to select.
If the Inbox is empty:
 - The display shows `List Empty`.
 - A tone sounds, if the Keypad Tone is turned on.




- 4 Press  or  to the required message. Press  to select.
The display shows a subject line if the message is from an e-mail application.




7.6.20.1.2




Viewing Telemetry Status Text Messages


Follow the procedure to view a telemetry status text message from the inbox.

- 1 Press  to access the menu.

- 2 Press  or  to Messages. Press  to select.


- 3 Press  or  to Inbox. Press  to select.




- 4 Press  or  to the required message. Press  to select.
 You cannot reply to a Telemetry Status text message.
 The display shows Telemetry: <Status Text Message>.




- 5 Long press  to return to the Home screen.




7.6.20.1.3

Viewing Saved Text Messages

- 1 Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).
 - Press  to access the menu.

- 2 Press  or  to Messages. Press  to select.

- 3 Press  or  to Drafts. Press  to select.

- 4 Press  or  to the required message. Press  to select.

7.6.20.1.4

Responding to Text Messages

Follow the procedure to respond to text messages on your radio.

When you receive a text message:




- The display shows the Notification list with the alias or ID of the sender.
- The display shows the **Message** icon.



NOTICE:

The radio exits the Text Message alert screen and sets up a Private or Group Call to the sender of the message if the **PTT** button is pressed.

1 Do one of the following:

- Press ▲ or ▼ to **Read**. Press  to select. The display shows the text message. The display shows a subject line if the message is from an e-mail application.
- Press ▲ or ▼ to **Read Later**. Press  to select. The radio returns to the screen you were on prior to receiving the text message.
- Press ▲ or ▼ to **Delete**. Press  to select.

2


Press  to return to the Inbox.

7.6.20.1.5

Replying to Text Messages

Follow the procedure to respond to text messages on your radio.

1 Do one of the following:

- Press the programmed **Text Message** button. Proceed to Step [step 3](#).
 - Press  to access the menu.
-

2

Press ▲ or ▼ to **Messages**. Press  to select.

3

Press ▲ or ▼ to **Inbox**. Press  to select.


4 Press ▲ or ▼ to the required message. Press





to select.

The display shows a subject line if the message is from an e-mail application.

5

Press  to access the sub-menu.

6 Do one of the following:

- Press ▲ or ▼ to Reply. Press  to select.
- Press ▲ or ▼ to Quick Reply. Press  to select.

A blinking cursor appears. You can write or edit your message, if required.

7

Press  once message is composed.

The display shows a transitional mini notice, confirming the message is being sent.

8 Wait for acknowledgment.

If successful:

- A tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A tone sounds.
 - The display shows a negative mini notice.
 - The radio returns to the Resend option screen.
-


7.6.20.1.6

Forwarding Text Messages

Follow the procedure to forward text messages on your radio.

When you are at the Resend option screen:

1

Press ▲ or ▼ to Forward, and press  to send the same message to another subscriber or group alias or ID.

- 2 Press ▲ or ▼ to the required alias or ID. Press



to select.

The display shows a transitional mini notice, confirming your message is being sent.

- 3 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:


- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

7.6.20.1.7

Resending Text Messages

When you are at the Resend option screen:



Press  to resend the same message to the same subscriber or group alias or ID.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
 - The radio returns to the Resend option screen.
-


7.6.20.1.8

Deleting Text Messages from the Inbox

Follow the procedure to delete text messages from the Inbox on your radio.

- 1 Do one of the following:

- Press the programmed **Text Message** button.
Proceed to [step 3](#).

- Press  to access the menu.

2

Press  or  to **Messages**. Press  to select.




3

Press  or  to **Inbox**. Press  to select.

If the Inbox is empty:

- The display shows **List Empty**.
- A tone sounds.

4

Press  or  to the required message. Press  to select.

The display shows a subject line if the message is from an e-mail application.




5

Press  to access the sub-menu.

6

Press  or  to **Delete**. Press  to select.

7

Press  or  to **Yes**. Press  to select.

The display shows a positive mini notice. The screen returns to the **Inbox**.

7.6.20.1.9


Deleting All Text Messages from the Inbox



Follow the procedure to delete all text messages from the **Inbox** on your radio.

1

Do one of the following:

- Press the programmed **Text Message** button.
Proceed to [step 3](#).
- Press  to access the menu.


2


Press  or  to **Messages**. Press  to select.


3 Press ▲ or ▼ to Inbox. Press  to select.


If the Inbox is empty:

- The display shows List Empty.
- A tone sounds.


4 Press ▲ or ▼ to Delete All. Press  to select.


5 Press ▲ or ▼ to Yes. Press  to select.
The display shows a positive mini notice.

- Press  to access the menu.

2 Press ▲ or ▼ to Messages. Press  to select.

3 Press ▲ or ▼ to Drafts. Press  to select.

4 Press ▲ or ▼ to the required message. Press  to select.

5 Press ▲ or ▼ to Delete. Press  to delete the text message.

7.6.20.1.10

Deleting Saved Text Messages from the Drafts Folder

- 1 Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).

7.6.20.2

Sent Text Messages

Once a message is sent to another radio, it is saved in Sent Items folder. The most recent sent text message is always added to the top of the Sent Items folder. You can resend, forward or delete a Sent text message.


The Sent Items folder is capable of storing a maximum of 30 last sent messages. When the folder is full, the next

sent text message automatically replaces the oldest text message in the folder.

If you exit the message sending screen while the message is being sent, the radio updates the status of the message in the Sent Items folder without providing any indication in the display or via sound.

If the radio changes mode or powers down before the status of the message in Sent Items folder is updated, the radio cannot complete any In-Progress messages and automatically marks it with a **Send Failed** icon.

The radio supports a maximum of five In-Progress messages at one time. During this period, the radio cannot send any new message and automatically marks it with a **Send Failed** icon.

If you long press  at any time, the radio returns to the Home screen.




NOTICE:

If the channel type, for example a conventional digital or Capacity Plus channel, is not a match, you can only edit, forward, or delete a Sent message.




7.6.20.2.1

Viewing Sent Text Messages

Follow the procedure to view sent text messages on your radio.

- 1 Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).
 - Press  to access the menu.

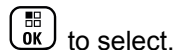
-
- 2 Press  or  to Messages. Press  to select.

-
- 3 Press  or  to Sent Items. Press  to select.

If the Sent Items folder is empty:

- The display shows List Empty.
- A low tone sounds, if the Keypad Tone is turned on.

- 4 Press ▲ or ▼ to the required message. Press



to select.


The display shows a subject line if the message is from an e-mail application.

7.6.20.2.2

Sending Sent Text Messages

Follow the procedure to send a sent text message on your radio.

When you are viewing a Sent message:

- 1 Press  while viewing the message.
-

- 2 Press ▲ or ▼ to Resend. Press  to select.

The display shows a transitional mini notice, confirming your message is being sent.

- 3 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.


If unsuccessful:


- A negative indicator tone sounds.
 - The display shows a negative mini notice.
 - The radio proceeds to the Resend option screen. See [Resending Text Messages on page 138](#) for more information.
-


7.6.20.2.3

Deleting All Sent Text Messages from the Sent Items Folder

Follow the procedure to delete all sent text messages from the Sent Items folder on your radio.


- 1 Do one of the following:
 - Press the programmed **Text Message** button. Proceed to [step 3](#).
 - Press  to access the menu.
-

2 Press ▲ or ▼ to Messages. Press  to select.



3 Press ▲ or ▼ to Sent Items. Press  to select.

If the Sent Items folder is empty:

- The display shows List Empty.
 - A tone sounds.
-

4 Press ▲ or ▼ to Delete All. Press  to select.

5 Do one of the following:

- Press ▲ or ▼ to Yes. Press  to select. The display shows a positive mini notice.
 - Press ▲ or ▼ to No. Press  to select. The radio returns to the previous screen.
-

Quick Text Messages

7.6.20.3.1

Sending Quick Text Messages

Follow the procedure to send predefined Quick Text messages on your radio to a predefined alias.

1 Press the programmed **One Touch Access** button.

The display shows a transitional mini notice, confirming the message is being sent.

2 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a negative mini notice.

- The radio proceeds to the Resend option screen. See [Resending Text Messages on page 138](#) for more information.

7.6.21





Analog Message Encode







Your radio can send preprogrammed messages from the Message list to a radio alias or the dispatcher.

7.6.21.1

Sending MDC Encode Messages to Dispatchers

Follow the procedure to send MDC Encode messages to dispatchers on your radio.


- 1 Press  to access the menu.
- 2 Press  or  to Message. Press  to select.




- 3 Press  or  to Quick Text. Press  to select.
- 4 Press  or  to the required message. Press  to select.
The display shows a transitional mini notice, confirming the message is being sent.
- 5 Wait for acknowledgment.
If successful:
 - A positive indicator tone sounds.
 - The display shows a positive mini notice.If unsuccessful:
 - A negative indicator tone sounds.
 - The display shows a negative mini notice.




7.6.21.2




Sending 5-Tone Encode Messages to Contacts




Follow the procedure to send 5-Tone Encode messages to contacts on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Message. Press  to select.

- 3 Press  or  to Quick Text. Press  to select.

- 4 Press  or  to the required message. Press  to select.

- 5 Press  or  to the required contact. Press  to select.

The display shows a transitional mini notice, confirming the message is being sent.

- 6 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a negative mini notice.



NOTICE:

Check with your dealer or system administrator for more information.

7.6.22

Analog Status Update

Your radio is able to send preprogrammed messages from the Status list indicating your current activity to a radio contact (for 5-Tone systems) or the dispatcher (for Motorola Data Communication systems).




The last acknowledged message is kept at the top of the Status list. The other messages are arranged in alphanumeric order.

7.6.22.1




Sending Status Updates to Predefined Contacts

Follow the procedure to send status updates to predefined contacts on your radio.

1 Press  or  to Status. Press  to select.

2 Press  or  to the required status. Press  to select.

When you press the **PTT** button while in the Status list for 5-Tone systems, the radio sends the selected status update, and returns to the Home screen to initiate a voice call.

3 Press  or  to Set as Default. Press  to select.

The display shows a transitional mini notice, confirming the status update is being sent.

4 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.
- The display shows ✓ beside the acknowledged status.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a negative mini notice.
- The display shows ✓ beside the previous status.

See [Setting Default Contact on page 373](#) for more information on setting the default contact for 5-Tone systems.


7.6.22.2


Viewing 5-Tone Status Details

Follow the procedure to view 5-tone status details on your radio.

It is assumed that you have purchased the Software License Key.

1 Press ▲ or ▼ to Status. Press  to select.

2 Press ▲ or ▼ to the required status. Press  to select.

3 Press ▲ or ▼ to View Details. Press  to select.

The display shows details of the selected status.

7.6.23

Privacy

This feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software-based scrambling solution. The signaling and user identification portions of a transmission are not scrambled.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission, although this is not a necessary requirement for receiving a transmission. While on a privacy-enabled channel, the radio is still able to receive clear or unscrambled transmissions.

Some radio models may not offer Privacy feature, or may have a different configuration. Check with your dealer or system administrator for more information.

Your radio supports the following types of privacy, but only one can be assigned to your radio. They are:

- Basic Privacy
- Enhanced Privacy

To unscramble a privacy-enabled call or data transmission, your radio must be programmed to have the same Privacy Key for Basic Privacy, or the same Key Value and Key ID for Enhanced Privacy as the transmitting radio.

If your radio receives a scrambled call that is of a different Privacy Key, or different Key Value and Key ID, you either hear a garbled transmission for Basic Privacy or nothing at all for Enhanced Privacy.

On a privacy-enabled channel, your radio is able to receive clear or unscrambled calls, depending on how your radio is programmed. In addition, your radio may play a warning tone or not, depending on how it is programmed.

The green LED lights up when the radio is transmitting, and blinks rapidly when the radio is receiving an ongoing privacy-enabled transmission.



NOTICE:


This feature is not applicable in Citizens Band channels that are in the same frequency.

7.6.23.1




Turning Privacy On or Off

Follow the procedure to turn privacy on or off on your radio.




- 1 Do one of the following:
 - Press the programmed **Privacy** button. Skip the proceeding steps.

- Press  to access the menu.




2

- Press  or  to Utilities. Press  to select.

3

- Press  or  to Radio Settings. Press  to select.

4

- Press  or  to *<required privacy>*. Press  to select.

- If privacy is on, display shows ✓ beside Enabled.
- If privacy is off, display shows empty box beside Enabled.

7.6.24

Response Inhibit

This feature helps prevent your radio from responding to any incoming transmissions.



NOTICE:

Contact your dealer to determine how your radio has been programmed.

If enabled, your radio does not generate any outgoing transmissions in respond to incoming transmissions, such as Radio Check, Call Alert, Radio Disable, Remote Monitor, Automatic Registration Service (ARS), Responding to Private Messages, and Sending GNSS location reports.

Your radio cannot receive Confirmed Private Calls when this feature is enabled. However, your radio is able to manually send transmission.

7.6.24.1

Turning Response Inhibit On or Off

Follow the procedure to enable or disable Response Inhibit on your radio.

Press the programmed **Response Inhibit** button.

If successful:

- A positive indicator tone sounds.
- The display shows a momentary positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
- The display shows a momentary negative mini notice.

7.6.25

Security


This feature allows you to enable or disable any radio in the system.

For example, you may want to disable a stolen radio to prevent unauthorized users from using it, and enable the radio when it is recovered.

There are two ways to enable or disable a radio, with authentication and without authentication.

Authenticated Radio Disable is a purchasable feature. In Authenticated Radio Disable, verification is required when you enable or disable a radio. When your radio initiates this feature on a target radio with User Authentication, a

passphrase is required. The passphrase is preprogrammed in the target radio through CPS.

You will not receive an acknowledgment if you press  during Radio Enable or Radio Disable operation.



NOTICE:



Check with your dealer or system administrator for more information.


7.6.25.1

Disabling Radios

Follow the procedure to disable your radio.

1 Press the programmed **Radio Disable** button.

2 Press  or  to the required alias or ID.

3 Press  to select. One of the following scenarios occurs:

- The display shows `Radio Disable:`
`<Subscriber Alias or ID>`. The green LED blinks.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
 - If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.
-

4 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.


If unsuccessful:




- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-




7.6.25.2



Disabling Radios by Using the Contacts List


Follow the procedure to disable your radio by using the Contacts list.

- 1 Press  to access the menu.


- 2 Press  or  to `Contacts`. Press  to select.

- 3 Press  or  to the required alias or ID. Press  to select.

- 4 Press  or  to `Radio Disable`.

- 5 Press  to select. One of the following scenarios occurs:
 - The display shows `Radio Disable:`
`<Subscriber Alias or ID>`. The green LED blinks.

- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.

6 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.


If unsuccessful:




- A negative indicator tone sounds.
- The display shows a negative mini notice.




7.6.25.3


Disabling Radios by Using the Manual Dial



Follow the procedure to disable your radio by using the manual dial.


- 1 Press  to access the menu.

- 2 Press  or  to **Contacts**. Press  to select.

- 3 Press  or  to **Manual Dial**. Press  to select.

- 4 Enter the subscriber ID, and press  to proceed.

- 5 Press  or  to **Radio Disable**.

- 6 Press  to select. One of the following scenarios occurs:

- The display shows a transitional mini notice, indicating the request is in progress. The green LED blinks.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.

7 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:



- A negative indicator tone sounds.
- The display shows a negative mini notice.


7.6.25.4

Enabling Radios


Follow the procedure to enable your radio.

1 Press the programmed **Radio Enable** button.

2 Press  or  to the required alias or ID.

3 Press  to select. One of the following scenarios occurs:

- The display shows `Radio Enable:`
`<Subscriber Alias or ID>`. The green LED lights up.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.
-

4 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.


If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-


7.6.25.5

Enabling Radios by Using the Contacts List


Follow the procedure to enable your radio by using the Contacts list.

1 Press  to access the menu.


2 Press ▲ or ▼ to *Contacts*. Press  to select.

3 Press ▲ or ▼ to the required alias or ID. Press  to select.

4 Press ▲ or ▼ to *Radio Enable*.

5 Press  to select. One of the following scenarios occurs:

- The display shows *Radio Enable:*
 <Subscriber Alias or ID>. The green LED lights up.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.

- If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.
-

6 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.


If unsuccessful:


- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-


7.6.25.6


Enabling Radios by Using the Manual Dial

Follow the procedure to enable your radio by using the manual dial.


1 Press  to access the menu.

2 Press ▲ or ▼ to `Contacts`. Press  to select.


3 Press ▲ or ▼ to `Manual Dial`. Press  to select.

4 Press ▲ or ▼ to `Private Call`. Press  to select.


The first text line shows `Radio Number:`.

5 Enter the subscriber ID, and press  to proceed.

6 Press ▲ or ▼ to `Radio Enable`.

7 Press  to select. One of the following scenarios occurs:

- The green LED lights up.
- A passphrase screen appears.

Enter the passphrase. Press  to proceed.

- If the passphrase is correct, the display shows a transitional mini notice, indicating the request is in progress. The green LED lights up.
 - If the passphrase is incorrect, the display shows a negative mini notice, and returns to the previous screen.
-

8 Wait for acknowledgment.

If successful:

- A positive indicator tone sounds.
- The display shows a positive mini notice.

If unsuccessful:

- A negative indicator tone sounds.
 - The display shows a negative mini notice.
-

7.6.26


Lone Worker

This feature prompts an emergency to be raised if there is no user activity, such as any radio button press or channel selection, for a predefined time.

Following no user activity for a programmed duration, the radio pre-warns you using an audio indicator once the inactivity timer expires.

If there is still no acknowledgment by you before the predefined reminder timer expires, the radio initiates an Emergency Alarm.

Only one of the following Emergency Alarms is assigned to this feature:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow 

The radio remains in the emergency state, allowing voice messages to proceed until action is taken. See [Emergency Operation on page 390](#) for more information on ways to exit Emergency.



NOTICE:

Check with your dealer or system administrator for more information.

7.6.27

Password Lock

You can set a password to restrict access to your radio. Each time you turn on your radio, you are asked to enter the password.

Your radio supports a 4-digit password input.

Your radio is unable to receive calls in locked state.


7.6.27.1

Accessing the Radio by Using Password

Turn on your radio.

- 1 Enter the four-digit password.
 - a To edit the numeric value of each digit, press ▲ or ▼. To enter and move to the next digit, press



-
- 2 Press  to confirm the password.
-

If you enter the password correctly, the radio powers up.

If you enter the wrong password after the first and second attempt, your radio shows the following indications:

- A continuous tone sounds.
- The display shows Wrong Password.

Repeat [step 1](#).

If you enter the wrong password after the third attempt, your radio shows the following indications:

- A tone sounds.
- The yellow LED double blinks.
- The display shows Wrong Password and then, Radio Locked.
- Your radio enters into locked state for 15 minutes.



NOTICE:

In locked state, your radio responds to inputs from the **On/Off/Volume Control Knob** and programmed **Backlight** button only.

Wait for the 15-minute locked state timer to end and then repeat [step 1](#).




NOTICE:




If you turn off and turn your radio on again, the 15-minute timer restarts.




7.6.27.2




Turning Password Lock On or Off




Follow the procedure to turn password lock on or off on your radio.

- 1 Press  to access the menu.


- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Passwd Lock. Press  to select.




- 5 Enter the current four-digit password.
 - Use a keypad microphone.
 - Press  or  to edit the numeric value of each digit, and press  to enter and move to the next digit.

A positive indicator tone sounds for every digit pressed.




6 Press  to enter the password.

If the password is incorrect, the display shows `Wrong Password` and automatically returns to the previous menu.

7 Do one of the following:

- Press  or  to Turn On. Press  to select.

The display shows `✓` beside Turn On.

- Press  or  to Turn Off. Press  to select.

The display shows `✓` beside Turn Off.

7.6.27.3

Unlocking Radios in Locked State

Your radio is unable to receive calls in locked state. Follow the procedure to unlock your radio in locked state.

Do one of the following:


- If the radio is powered on, wait for 15 minutes and then repeat the steps in [Accessing the Radio by Using Password on page 156](#) to access the radio.
- If the radio is powered off, power up the radio. Your radio restarts the 15-minute timer for locked state. A tone sounds. The yellow LED double blinks. The display shows `Radio Locked`.




Wait for 15 minutes and then repeat the steps in [Accessing the Radio by Using Password on page 156](#) to access the radio.


7.6.27.4


Changing Passwords


Follow the procedure to change passwords on your radio.

1 Press  to access the menu.


2 Press  or  to Utilities. Press  to select.


3 Press ▲ or ▼ to Radio Settings. Press  to select.


4 Press ▲ or ▼ to Passwd Lock. Press  to select.

5 Enter the current four-digit password, and press  to proceed.

If the password is incorrect, the display shows Wrong Password and automatically returns to the previous menu.

6 Press ▲ or ▼ to Change PWD. Press  to select.

7 Enter a new four-digit password, and press  to proceed.

8 Re-enter the new four-digit password, and press  to proceed.

If successful, the display shows Password Changed. If unsuccessful, the display shows Passwords Do Not Match.

The screen automatically returns to the previous menu.

7.6.28

Notification List

Your radio has a Notification list that collects all your unread events on the channel, such as unread text messages, telemetry messages, missed calls, and call alerts.

The display shows the **Notification** icon when the Notification list has one or more events.


The list supports a maximum of 40 unread events. When the list is full, the next event automatically replaces the oldest event. After the events are read, they are removed from the Notification list.


For text messages, missed calls, and call alert events, the maximum number of notifications are 30 text messages and 10 missed calls or call alerts. This maximum number depends on individual feature (job tickets or text messages or missed calls or call alerts) list capability.




7.6.28.1




Accessing Notification List

Follow the procedure to access the Notification list on your radio.

- 1 Do one of the following:
 - Press the programmed **Notification** button. Skip the steps below.
 - Press  to access the menu.

-
- 2 Press  to access the menu.

-
- 3 Press  or  to Notification. Press  to select.
-

- 4 Press  or  to the required event. Press  to select.

Long press  to return to the Home screen.

7.6.29

Auto-Range Transponder System



The Auto-Range Transponder System (ARTS) is an analog-only feature designed to inform you when your radio is out-of-range of other ARTS-equipped radios.

ARTS-equipped radios transmit or receive signals periodically to confirm that they are within range of each other.

Your radio provides indications of states as follows:

First-Time Alert

A tone sounds.

The display shows channel alias and In Range.

ARTS-in-Range Alert

A tone sounds, if programmed.

The display shows channel alias and In Range.

ARTS-Out-of-Range Alert

A tone sounds. The red LED rapidly blinks.

The display shows Out of Range alternating with the Home screen.

**NOTICE:**

Check with your dealer or system administrator for more information.

7.6.30

Over-the-Air Programming 

Your dealer can remotely update your radio through Over-the-Air Programming (OTAP) without any physical connection. Additionally, some settings can also be configured by using OTAP.

When your radio undergoes OTAP, the green LED blinks.

When your radio receives high volume data:

- The display shows the **High Volume Data** icon.
- The channel becomes busy.
- A negative tone sounds if you press the **PTT** button.

When OTAP completes, depending on the configuration:

- A tone sounds. The display shows **Updating Restarting**. Your radio restarts by powering off and on again.
- You can select **Restart Now** or **Postpone**. When you select **Postpone**, your radio returns to the previous screen. The display shows the **OTAP Delay Timer** icon until the automatic restart occurs.

When your radio powers up after automatic restart:

- If successful, the display shows **Sw Update Completed**.
- If the program update is unsuccessful, a tone sounds, the red LED blinks once, and the display shows **Sw Update Failed**.

**NOTICE:**

If the programming update is unsuccessful, the software update failure indications appear every time you turn on your radio. Contact your dealer to reprogram your radio with the latest software to eliminate the software update failure indications.

See [Checking Software Update Information on page 191](#) for the updated software version.

7.6.31

Transmit Inhibit

Transmit inhibit feature allow users to block all transmission from the radio.

**NOTICE:**


Bluetooth and Wi-Fi features are available in Transmit Inhibit mode.

7.6.31.1

Enabling Transmit Inhibit

Follow the procedure to enable Transmit Inhibit.

Perform one of the following actions:

- Press ▲ or ▼ to Tx Inhibit and press  to select.
 - Press the **Transmit Inhibit** programmable button.
-
- A positive indicator tone sounds.
 - The display shows Tx Inhibit On.

**NOTICE:**


The status of the Transmit Inhibit does not change after the radio powers up.

7.6.31.2

Disabling Transmit Inhibit

Follow the procedure to disable Transmit Inhibit.

Perform one of the following actions:

- Press ▲ or ▼ to Tx Inhibit and press  to select.
 - Press the **Transmit Inhibit** programmable button.
-
- A negative indicator tone sounds. Transmission is back to normal operation.
 - The display shows Tx Inhibit Off.

7.6.32

Wi-Fi Operation

This feature allows you to set up and connect to a Wi-Fi network. Wi-Fi supports updates for radio firmware, codeplug, and resources such as language packs and voice announcement.

**NOTICE:**

This feature is applicable to DP4601e only.

Wi-Fi® is a registered trademark of Wi-Fi Alliance®.

Your radio supports WEP/WPA/WPA2-Personal and WPA/WPA2-Enterprise Wi-Fi networks.

WEP/WPA/WPA2-Personal Wi-Fi network

Uses pre-shared key (password) based authentication.

Pre-shared key can be entered by using the menu or CPS/RM.

WPA/WPA2-Enterprise Wi-Fi network

Uses certificate-based authentication.

Your radio must be pre-configured with a certificate.



NOTICE:

Check with your dealer or system administrator to connect to WPA/WPA2-Enterprise Wi-Fi network.

The programmed **Wi-Fi On or Off** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.









Voice Announcements for the programmed **Wi-Fi On or Off** button can be customized through CPS according to user requirements. Check with your dealer or system administrator for more information.

7.6.32.1

Turning Wi-Fi On or Off

- 1 Press the programmed **Wi-Fi On or Off** button. Voice Announcement sounds Turning On Wi-Fi or Turning Off Wi-Fi.
-

- 2 Access this feature using the menu.

- a Press  to access the menu.
- b Press  or  to Wi-Fi and press  to select.
- c Press  or  to Wi-Fi On and press  to select.
- d Press  to turn on/off Wi-Fi.

If Wi-Fi is on, the display shows ✓ beside Enabled.

If Wi-Fi is off, the ✓ disappears from beside Enabled.




7.6.32.2




Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Individual Control)




You can turn Wi-Fi on or off remotely in Individual Control (One to One).


NOTICE:

Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.

- 1 Do one of the following:
 - Long press the programmable button. Use the  keypad to enter the ID and press  to select. Proceed to [step 3](#).
 - Press  to access the menu.

- 2 Press  or  to **Contacts** and press  to select.

- 3 Press  or  to **WiFi Control** and press  to select.

- 4 Press  or  to select **On** or **Off**.

- 5 Press  to select.

If successful, the display shows a positive mini notice.

If unsuccessful, the display shows a negative mini notice.


7.6.32.3




Turning Wi-Fi On or Off Remotely by Using a Designated Radio (Group Control)



You can turn Wi-Fi on or off remotely in Group Control (One to Many).





NOTICE:



Only radio with specific CPS setting supports this function, check with your dealer or system administrator for more information.


- 1 Press  to access the menu.

- 2 Press  or  to `Contacts` and press  to select.

- 3 Press  or  to select the required subscriber alias or ID.

- 4 Press  or  to `WiFi Control` and press  to select.

- 5 Press  or  to select `On` or `Off`.

- 6 Press  to select.

If successful, the display shows `Sent Successfully`.

If unsuccessful, the display shows a negative mini notice.

7.6.32.4

Connecting to a Network Access Point


When you turn on Wi-Fi, the radio scans and connects to a network access point.









NOTICE:


You can also connect to a network access point using the menu.

The WPA-Enterprise Wi-Fi network access points are pre-configured. Check with your dealer or system administrator to determine how your radio has been programmed.

- 1 Press  to access the menu.

- 2 Press  or  to `WiFi` and press  to select.

- 3 Press  or  to `Networks` and press  to select.

- 4 Press ▲ or ▼ to a network access point and press  to select.

**NOTICE:**

For WPA-Enterprise Wi-Fi, if a network access point is not preconfigured, the `Connect` option is not available.

- 5 Press ▲ or ▼ to `Connect` and press  to select.

- 6 For WPA-Enterprise Wi-Fi, password is configured by using RM.

If the preconfigured password is correct, your radio automatically connects to the selected network access point.

If the preconfigured password is incorrect, the display shows `Authentication Failure`, and automatically returns to the previous menu.

If the connection is successful, the radio displays a notice and the network access point is saved into the profile list.

If the connection is unsuccessful, the radio displays shows the failure notice screen momentarily and automatically returns to the previous menu.

7.6.32.5

Checking Wi-Fi Connection Status

Press the programmed **Wi-Fi Status Query** button for the connection status by using Voice Announcement. Voice Announcement sounds `Wi-Fi is Off`, `Wi-Fi is On but No Connection`, or `Wi-Fi is On with Connection`.

- The display shows `WiFi Off` when the Wi-Fi is turned off.
- The display shows `WiFi On, Connected` when the radio is connected to a network.
- The display shows `WiFi On, Disconnected` when the Wi-Fi is turned on but the radio is not connected to any network.

Voice Announcements for the Wi-Fi status query results can be customized through CPS according to

user requirements. Check with your dealer or system administrator for more information.










NOTICE:

The programmed **Wi-Fi Status Query** button is assigned by your dealer or system administrator. Check with your dealer or system administrator to determine how your radio has been programmed.

7.6.32.6




Refreshing the Network List

- Perform the following actions to refresh the network list through the menu.
 - a. Press  to access the menu.
 - b. Press  or  to **WiFi** and press  to select.

- c. Press  or  to **Networks** and press  to select.

When you enter the Networks menu, the radio automatically refreshes the network list.

- If you are already in the Networks menu, perform the following action to refresh the network list.

Press  or  to **Refresh** and press  to select.

The radio refreshes and displays the latest network list.

7.6.32.7


Adding a Network









NOTICE:




This task is not applicable to WPA-Enterprise Wi-Fi networks.


If a preferred network is not in the available network list, perform the following actions to add a network.




- 1 Press  to access the menu.

- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to Add Network and press  to select.

- 5 Enter the Service Set Identifier (SSID) and press  .

- 6 Press  or  to Open and press  to select.


- 7 Enter the password and press  .




The radio displays a positive mini notice to indicate that the network is successfully saved.




7.6.32.8




Viewing Details of Network Access Points

You can view details of network access points.


- 1 Press  to access the menu.

- 2 Press  or  to WiFi and press  to select.

- 3 Press  or  to Networks and press  to select.

- 4 Press  or  to a network access point and press  to select.

5

Press ▲ or ▼ to View Details and press  to select.

**NOTICE:**

WPA-Personal Wi-Fi and WPA-Enterprise Wi-Fi display different details of Network Access Points.

WPA-Personal Wi-Fi

For a connected network access point, your radio displays Service Set Identifier (SSID), Security Mode, Media Access Control (MAC) address, and Internet Protocol (IP) address.

For a non-connected network access point, your radio displays SSID and Security Mode.

WPA-Enterprise Wi-Fi

For a connected network access point, your radio displays SSID, Security Mode, Identity, Extended Authentication Protocol (EAP) Method, Phase 2 Authentication, Cert Name, MAC address, IP address, Gateway, DNS1, and DNS2.

For a non-connected network access point, your radio displays SSID, Security Mode, Identity, EAP Method, Phase 2 Authentication, and Cert Name.


7.6.32.9

Removing Network Access Points**NOTICE:**


This task is not applicable to Enterprise Wi-Fi networks.

Perform the following actions to remove network access points from the profile list.


1

Press  to access the menu.


2

Press ▲ or ▼ to WiFi and press  to select.


3

Press ▲ or ▼ to Networks and press  to select.


4

Press ▲ or ▼ to the selected network access point and press  to select.

5

Press ▲ or ▼ to Remove and press  to select.

6

Press ▲ or ▼ to Yes and press  to select.

The radio displays a positive mini notice to indicate that the selected network access point is successfully removed.

7.6.33

Front Panel Programming

You are able to customize certain feature parameters in Front Panel Programming (FPP) to enhance the use of your radio.

The following buttons are used as required while navigating through the feature parameters.

Up/Down Navigation Button

Press to navigate through options horizontally or vertically, or increase or decrease values.

Menu/OK Button

Press to select the option or enter a sub-menu.

Return/Home Button


Short press to return to the previous menu or exit the selection screen.

Long press at any time to return to the Home screen.


7.6.33.1

Entering Front Panel Programming Mode


1

Press  to access the menu.

2

Press ▲ or ▼ to Utilities. Press  to select.


3


Press ▲ or ▼ to Program Radio. Press  to select.

7.6.33.2

Editing Mode Parameters

Use the following buttons as required while navigating through the feature parameters.

- ▲ , ▼ – Scroll through options, increase/decrease values, or navigate vertically.
-  – Select the option or enter a sub-menu.

-  – Short-press to return to previous menu or to exit the selection screen. Long-press to return to Home screen.

7.7

Utilities

This chapter explains the operations of the utility functions available in your radio.

7.7.1

Keypad Lock Options

With this feature, you can avoid accidentally pressing buttons or changing channels when your radio is not in use. You can choose to either lock your keypad, channel selector knob, or both; depending on your requirements.

Your dealer can use CPS/RM to configure one of the following options:

- Lock Keypad
- Lock Channel Selector Knob
- Lock Keypad and Channel Selector Knob

Contact your dealer to determine how your radio has been programmed.

7.7.1.1

Enabling the Keypad Lock Option

The following steps are applicable for either Lock Keypad, Lock Channel Selector Knob, or Lock Keypad and Channel Selector Knob option depending on how your radio has been configured.

Press the programmed **Keypad Lock** button.

The display shows **Locked**.

7.7.1.2

Disabling the Keypad Lock Option

The following steps are applicable for either Lock Keypad, Lock Channel Selector Knob, or Lock Keypad and Channel Selector Knob option depending on how your radio has been configured.


Press the programmed **Keypad Lock** button.




The display shows **Unlocked**.




7.7.2




Turning Automatic Call Forwarding On or Off




You can enable your radio to automatically forward voice calls to another radio.




- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Call Forward. Press  to select.


- 5 Do one of the following:
 - Press  or  to enable Call Forwarding. If enabled,  appears beside Enabled.




- Press  or  to disable Call Forwarding. If disabled,  disappears beside Enabled.
-




7.7.3




Identifying Cable Type




Do the following steps to select the type of cable your radio uses.

- 1 Press  to access the menu.

 - 2 Press  or  to Utilities. Press  to select.

 - 3 Press  or  to Radio Settings. Press  to select.

 - 4 Press  or  to Cable Type. Press  to select.

 - 5 Press  or  to change the selected option.
The current cable type is indicated by a .
-

7.7.4


Flexible Receive List




Flexible Receive List is a feature that allows you to create and assign members on the receive talkgroup list. Your radio can support a maximum of 16 members in the list. This feature is supported in Capacity Plus.

7.7.4.1







Turning Flexible Receive List On or Off

Follow the procedure to turn Flexible Receive List on or off.

- 1 Do one of the following:
 - Press the programmed **Flexible Receive List** button. Skip the following steps.
 - Press  to access the menu.
-

- 2 Press  or  to Flexible Rx List. Press  to select.
-


- 3 Do one of the following:




- Press  or  to Turn On. Press  to select.
A positive indicator tone sounds.
The display shows a positive mini notice.
 - Press  or  to Turn Off. Press  to select.
A negative indicator tone sounds.
The display shows a negative mini notice.
-


7.7.4.2


Adding New Entries to the Flexible Receive List


Follow the procedure to add new members to the receive talkgroup list.


- 1 Press  to access the menu.
-


- 2 Press  or  to Utilities. Press  to select.
-

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Flexible Rx List. Press  to select.



5 Press ▲ or ▼ to View/Edit List. Press  to select.

6 Press ▲ or ▼ to Add Member. Press  to select.

7 Press ▲ or ▼ to the required alias or ID. Press  to select.

The display shows a positive mini notice and then, Add Another?.


8 Do one of the following:


- Press ▲ or ▼ to Yes to add another entry. Press  to select. Repeat [step 7](#).
 - Press ▲ or ▼ to No to save the current list. Press  to select.
-


7.7.4.3


Deleting Entries from the Flexible Receive List


Follow the procedure to delete members of the receive talkgroup list from your radio.


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.



3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Flexible Rx List. Press  to select.


5 Press ▲ or ▼ to View/Edit List. Press  to select.

6 Press ▲ or ▼ to the required alias or ID. Press  to select.

7 Press ▲ or ▼ to Delete. Press  to select.

- 8 Do one of the following:
- Press ▲ or ▼ to Yes to delete the entry. Press  to select.
The display shows a positive mini notice.
 - Press ▲ or ▼ to No. Press  to select.
The radio returns to the previous screen.
-


9 Repeat [step 6](#) to [step 8](#) to delete other entries.


10 Long press  to return to the Home screen after deleting all required aliases or IDs.


7.7.5


Setting Menu Timer


You can set the time your radio stays in the menu before it automatically switches to the Home screen. Follow the procedure to set the menu timer.


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Display. Press  to select.

5 Press ▲ or ▼ to Menu Timer. Press  to select.

6 Press ▲ or ▼ to the required setting. Press  to select.

7.7.6

Text-to-Speech

The Text-to-Speech feature can only be enabled by your dealer. If Text-to-Speech is enabled, the Voice Announcement feature is automatically disabled. If Voice Announcement is enabled, then the Text-to-Speech feature is automatically disabled.

This feature enables the radio to audibly indicate the following features:


- Current Channel
- Current Zone
- Programmed button feature on or off
- Content of received text messages
- Content of received Job Tickets


This audio indicator can be customized per customer requirements. This feature is typically useful when the user is in a difficult condition to read the content shown on the display.


7.7.6.1


Setting Text-to-Speech

Follow the procedure to set the Text-to-Speech feature.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Voice Announcement. Press  to select.

- 5 Press ▲ or ▼ to any of the following features.


Press  to select.

The available features are as follows:


- All
- Messages
- Job Tickets
- Channel
- Zone
- Program Button

✓ appears beside the selected setting.


- Press the programmed **AF Suppressor** button. Skip the following steps.

- Press  to access the menu.


2

Press ▲ or ▼ to Utilities. Press  to select.


3

Press ▲ or ▼ to Radio Settings. Press  to select.

4

Press ▲ or ▼ to AF Suppressor. Press  to select.

-
- 5 Do one of the following:


- Press  to enable Acoustic Feedback Suppressor.

7.7.7

Turning Acoustic Feedback Suppressor On or Off

The feature allows you to minimize acoustic feedback in received calls. Follow the procedure to turn Acoustic Feedback Suppressor on or off on your radio.

- 1 Do one of the following:

- Press  to disable Acoustic Feedback Suppressor.

If enabled, ✓ appears beside Enabled. If disabled, ✓ disappears beside Enabled.

7.7.8

Turning Global Navigation Satellite System On or Off

Global Navigation Satellite System (GNSS) is a satellite navigation system that determines the radio precise location. GNSS includes Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), and BeiDou Navigation Satellite System (BDS).




NOTICE:

Selected radio models may offer GPS, GLONASS, and BDS. GNSS constellation is configured by using CPS. Check with your dealer or system administrator to determine how your radio has been programmed.




1

- 2 Do one of the following steps to toggle GNSS on or off on your radio.




- Press the programmed **GNSS** button.

- Press  to access the menu. Proceed to the next step.

3

Press  or  to Utilities. Press  to select.

4

Press  or  to Radio Settings. Press  to select.

5

Press  or  to GNSS. Press  to select.

6

Press  to enable or disable GNSS.


If enabled, ✓ appears beside Enabled.




If disabled, ✓ disappears beside Enabled.




7.7.9




Turning Introduction Screen On or Off




You can enable and disable the Introduction Screen by following the procedure.

- 1 Press  to access the menu.


- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Display. Press  to select.

- 5 Press  or  to Intro Screen. Press  to select.

6

Press  to enable or disable the Introduction Screen.


The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.


7.7.10


Turning Radio Tones/Alerts On or Off

You can enable and disable all radio tones and alerts, if needed, except for incoming Emergency alert tone . Follow the procedure to turn tones and alerts on or off on your radio.


- 1 Do one of the following:
 - Press the programmed **Tones/Alerts** button. Skip the following steps.
 - Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to All Tones. Press  to select.


6 Press  to enable or disable all tones and alerts. The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-


7.7.11

Setting Tones/Alerts Volume Offset Levels


This feature adjusts the volume of the tones or alerts, allowing it to be higher or lower than the voice volume. Follow the procedure to set the tones and alerts volume offset levels on your radio.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.



4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to Vol. Offset. Press  to select.

6 Press ▲ or ▼ to the required volume offset level.

A feedback tone sounds with each corresponding volume offset level.


7 Do one of the following:


- Press  to select. The required volume offset level is saved.
 - Press  to exit. The changes are discarded.
-


7.7.12


Turning Talk Permit Tone On or Off


Follow the procedure to turn Talk Permit Tone on or off on your radio.


1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Tones/Alerts. Press  to select.

5 Press ▲ or ▼ to Talk Permit. Press  to select.

6 Press  to enable or disable the Talk Permit Tone.


The display shows one of the following results:




- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-




7.7.13




Turning Power Up Tone On or Off




Follow the procedure to turn Power Up Tone on or off on your radio.


- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Tones/Alerts. Press  to select.

- 5 Press  or  to Power Up. Press  to select.


- 6 Press  to enable or disable the Power Up Tone. The display shows one of the following results:




- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-




7.7.14




Setting Text Message Alert Tones

You can customize the text message alert tone for each entry in the Contacts list. Follow the procedure to set the text message alert tones on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Contacts. Press  to select.


- 3 Press  or  to the required alias or ID. Press  to select.

- 4 Press  or  to Message Alert. Press  to select.

- 5 Do one of the following:

- Press ▲ or ▼ to Momentary. Press  to select.

The display shows ✓ beside Momentary.

- Press ▲ or ▼ to Repetitive. Press  to select.

The display shows ✓ beside Repetitive.

7.7.15

Power Levels

You can customize the power setting to high or low for each channel.

High

This enables communication with radios located at a considerable distance from you.

Low

This enables communication with radios in closer proximity.



NOTICE:


This feature is not applicable in Citizens Band channels that are in the same frequency.


7.7.15.1


Setting Power Levels

Follow the procedure to set the power levels on your radio.


- 1 Do one of the following:
 - Press the programmed **Power Level** button. Skip the steps below.


- Press  to access the menu.


- 2 Press ▲ or ▼ to Utilities. Press  to select.

- 3 Press ▲ or ▼ to Radio Settings. Press  to select.

- 4 Press ▲ or ▼ to Power. Press  to select.

- 5 Do one of the following:
 - Press ▲ or ▼ to High. Press  to select.
The display shows ✓ beside High.


- Press ▲ or ▼ to Low. Press  to select.
The display shows ✓ beside Low.


- 6 Long press  to return to the Home screen.


7.7.16


Adjusting Display Brightness

Follow the procedure to adjust the display brightness on your radio.


- 1 Do one of the following:
 - Press the programmed **Brightness** button. Skip the following steps.
 - Press  to access the menu.

- 2 Press ▲ or ▼ to Utilities. Press  to select.

- 3 Press ▲ or ▼ to Radio Settings. Press  to select.

- 4 Press ▲ or ▼ to Brightness. Press  to select.


The display shows the progress bar.


- 5 Press ▲ or ▼ to decrease or increase the display brightness. Press  to select.


7.7.17


Setting Display Backlight Timer


You can set the display backlight timer of the radio as needed. The setting also affects the Menu Navigation Buttons and keypad backlighting accordingly. Follow the procedure to set the backlight timer on your radio.

- 1 Do one of the following:
 - Press the programmed **Backlight** button. Skip the following steps.
 - Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Display. Press  to select.


5 Press ▲ or ▼ to Backlight Timer. Press  to select.


The display backlight and keypad backlighting are automatically turned off as the LED indicator is disabled. See [Turning LED Indicators On or Off on page 181](#) for more information.


7.7.18

Turning Backlight Auto On or Off


You can enable and disable the backlight of the radio to turn on automatically as needed. If enabled, the backlight is turned on when the radio receives a call, Notification List event, or Emergency Alarm.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Backlight Auto.

5 Press  to enable or disable Backlight Auto.

The display shows one of the following results:

- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-

7.7.19

Squelch Levels

You can adjust the squelch level to filter out unwanted calls with low signal strength or channels with noise higher than normal background.

Normal

This is the default setting.

Tight

This setting filters out unwanted calls and/or background noise. Calls from remote locations may also be filtered out.



NOTICE:

This feature is not applicable in Citizens Band channels that are in the same frequency.


7.7.19.1

Setting Squelch Levels




Follow the procedure to set the squelch levels on your radio.

1 Do one of the following:




- Press the programmed **Squelch** button. Skip the following steps.

- Press  to access the menu.

2

- Press  or  to Utilities. Press  to select.









3

- Press  or  to Radio Settings. Press  to select.

4

- Press  or  to Squelch. Press  to select.

5 Do one of the following:


- Press  or  to Normal. Press  to select. The display shows  beside Normal.
- Press  or  to Tight. Press  to select. The display shows  beside Tight.




The screen automatically returns to the previous menu.




7.7.20




Turning LED Indicators On or Off


Follow the procedure to turn the LED indicators on or off on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to LED Indicator. Press  to select.


- 5 Press  to enable or disable the LED indicator.
The display shows one of the following results:
 - If enabled, ✓ appears beside Enabled.




- If disabled, ✓ disappears beside Enabled.




7.7.21




Setting Languages




Follow the procedure to set the languages on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Languages. Press  to select.

- 5 Press  or  to the required language. Press  to select.
The display shows ✓ beside the selected language.

7.7.22

Voice Operating Transmission

The Voice Operating Transmission (VOX) allows you to initiate a hands-free voice-activated call on a programmed channel. The radio automatically transmits, for a programmed period, whenever the microphone on the VOX-capable accessory detects voice.


NOTICE:

This feature is not applicable in Citizens Band channels that are in the same frequency.

You can enable or disable VOX by doing one of the following:

- Turn the radio off and then power it on again to enable VOX.
- Change the channel by using the **Channel Selector** knob to enable VOX.
- Turn VOX on or off by using the programmed **VOX** button or menu to enable or disable VOX.
- Press the **PTT** button during radio operation to disable VOX.



NOTICE:




Turning this feature on or off is limited to radios with this function enabled. Check with your dealer or system administrator for more information.




7.7.22.1

Turning Voice Operating Transmission On or Off

Follow the procedure to turn VOX on or off on your radio.



- 1 Do one of the following:
 - Press the programmed **VOX** button. Skip the steps below.
 - Press  **OK** to access the menu.

- 2 Press  or  to Utilities. Press  **OK** to select.

- 3 Press  or  to Radio Settings. Press  **OK** to select.

4 Press ▲ or ▼ to UOX. Press  to select.

5 Do one of the following:

- Press ▲ or ▼ to On. Press  to select. The display shows ✓ beside On.
 - Press ▲ or ▼ to Off. Press  to select. The display shows ✓ beside Off.
-



NOTICE:

If the Talk Permit Tone is enabled, use a trigger word to initiate the call. Wait for the Talk Permit Tone to finish before speaking clearly into the microphone. See [Turning Talk Permit Tone On or Off on page 177](#) for more information.

7.7.23

Turning Option Board On or Off

Option board capabilities within each channel can be assigned to programmable buttons. Follow the procedure to turn option board on or off on your radio.

Press the programmed **Option Board** button.

7.7.24


Turning Voice Announcement On or Off

This feature enables the radio to audibly indicate the current zone or channel the user has just assigned, or the programmable button the user has just pressed.


This is typically useful when the user has difficulty reading the content shown on the display.


This audio indicator can be customized according to customer requirements. Follow the procedure to turn Voice Announcement on or off on your radio.


1 Do one of the following:


- Press the programmed **Voice Announcement** button. Skip the following steps.
 - Press  to access the menu.
-

2

Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Voice Announcement. Press  to select.

5 Press  to enable or disable Voice Announcement.

- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.


7.7.25


Turning Digital Microphone AGC On or Off


The Digital Microphone Automatic Gain Control (AGC) controls the microphone gain of the radio automatically while transmitting on a digital system.


This feature suppresses loud audio or boosts soft audio to a preset value in order to provide a consistent level of


audio. Follow the procedure to turn Digital Microphone AGC on or off on your radio.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Mic AGC-D. Press  to select.

5 Press  to enable or disable Digital Microphone AGC.

The display shows one of the following results:


- If enabled, ✓ appears beside Enabled.
 - If disabled, ✓ disappears beside Enabled.
-




7.7.26




Turning Analog Microphone AGC On or Off




The Analog Microphone Automatic Gain Control (AGC) controls the microphone gain of the radio automatically while transmitting on an analog system.

This feature suppresses loud audio or boosts soft audio to a preset value in order to provide a consistent level of audio. Follow the procedure to turn Analog Microphone AGC on or off on your radio.


- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Mic AGC-A. Press  to select.

5

Press  to enable or disable Analog Microphone AGC.

The display shows one of the following results:

- If enabled, ✓ appears beside Enabled.
- If disabled, ✓ disappears beside Enabled.

7.7.27

Switching Audio Route between Internal Radio Speaker and Wired Accessory

Follow the procedure to toggle audio routing between internal radio speaker and wired accessory.

You can toggle audio routing between the internal radio speaker and the speaker of a wired accessory with the condition that:

- The wired accessory with speaker is attached.
- The audio is not routed to an external Bluetooth accessory.

Press the programmed **Audio Toggle** button.

A tone sounds when the audio route has switched.

Powering down the radio or detaching the accessory resets the audio routing to the internal radio speaker.

7.7.28

Turning Intelligent Audio On or Off


Your radio automatically adjusts the audio volume to overcome current background noise in the environment, inclusive of both stationary and non-stationary noise sources. This is a receive-only feature and does not affect transmission audio. Follow the procedure to turn Intelligent Audio on or off on your radio.









NOTICE:




This feature is not applicable during a Bluetooth session.

- 1 Do one of the following:
 - Press the programmed **Intelligent Audio** button. Skip the steps below.







- Press  to access the menu.
-

- 2 Press  or  to Utilities. Press  to select.
-

- 3 Press  or  to Radio Settings. Press  to select.
-

- 4 Press  or  to Intelligent Audio. Press  to select.
-


- 5 Do one of the following:




- Press  or  to On. Press  to select. The display shows ✓ beside On.
 - Press  or  to Off. Press  to select. The display shows ✓ beside Off.
-




7.7.29




Turning Trill Enhancement On or Off

You can enable this feature when you are speaking in a language that contains many words with alveolar trill (rolling "R") pronunciations. Follow the procedure to turn Trill Enhancement on or off on your radio.









- 1 Do one of the following:
 - Press the programmed **Trill Enhancement** button. Skip the steps below.
 - Press  to access the menu.

2 Press  or  to **Utilities**. Press  to select.

3 Press  or  to **Radio Settings**. Press  to select.

4 Press  or  to **Trill Enhance**. Press  to select.


-
- 5 Do one of the following:




- Press  or  to **On**. Press  to select. The display shows  beside **On**.
- Press  or  to **Off**. Press  to select. The display shows  beside **Off**.




7.7.30


Turning the Microphone Dynamic Distortion Control Feature On or Off

This feature allows you to enable the radio to automatically monitor the microphone input and adjust the microphone gain value to avoid audio clipping.



1 Press  to access the menu.

2 Press  or  to **Utilities**. Press  to select.

3 Press  or  to **Radio Settings**. Press  to select.

4 Press ▲ or ▼ to Mic Distortion. Press  to select.


5 Do one of the following:


- Press  to enable Microphone Dynamic Distortion Control. If enabled, ✓ appears beside Enabled.
 - Press  to disable Microphone Dynamic Distortion Control. If disabled, ✓ disappears beside Enabled.
-


7.7.31

Setting Audio Ambience


Follow the procedure to set the audio ambience on your radio according to your environment.

1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Radio Settings. Press  to select.

4 Press ▲ or ▼ to Audio Ambience. Press  to select.

5 Press ▲ or ▼ to the required setting. Press  to select.

The settings are as follows.


- Choose **Default** for the default factory settings.
- Choose **Loud** to increase speaker loudness when using in noisy surroundings.
- Choose **Work Group** to reduce acoustic feedback when using with a group of radios that are near to each other.




The display shows ✓ beside the selected setting.




7.7.32




Setting Audio Profiles




Follow the procedure to set audio profiles on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Settings. Press  to select.

- 4 Press  or  to Audio Profiles. Press  to select.

- 5 Press  or  to the required setting. Press  to select.

The settings are as follows.

- Choose `Default` to disable the previously selected audio profile and return to the default factory settings.

- Choose `Level 1`, `Level 2`, or `Level 3` for audio profiles intended to compensate for noise-induced hearing loss that is typical for adults over 40 years of age.
- Choose `Treble Boost`, `Mid Boost`, or `Bass Boost` for audio profiles that align with your preference for tinnier, more nasal, or deeper sounds.

The display shows  beside the selected setting.

7.7.33

General Radio Information


Your radio contains information on various general parameters.


The general information of your radio is as follows:

- Battery information.
- Radio alias and ID.
- Firmware and Codeplug versions.
- Software update.
- GNSS information.
- Site information.

- Received Signal Strength Indicator.

**NOTICE:**

Press  to return to the previous screen. Long


press  to return to the Home screen. The radio exits the current screen once the inactivity timer expires.

7.7.33.1




Accessing Battery Information

Displays information of your radio battery.

1

Press  to access the menu.




2

Press  or  to Utilities. Press  to select.

3

Press  or  to Radio Info. Press  to select.

4

Press  or  to Battery Info. Press  to select.

**NOTICE:**

For **IMPRES** batteries only: The display reads **Recondition Battery** when the battery requires reconditioning in an IMPRES charger. After the reconditioning process, the display then shows the battery information.

The display shows the battery information.

**NOTICE:**

For non-supported battery, the display shows **Unknown Battery**.


7.7.33.2




Checking Radio Alias and ID




1 Do one of the following:




- Press the programmed **Radio Alias and ID** button. Skip the following steps. A positive indicator tone sounds.

You can press the programmed **Radio Alias and ID** button to return to the previous screen.

- Press  to access the menu.


2 Press  or  to Utilities. Press  to select.




3 Press  or  to Radio Info. Press  to select.




4 Press  or  to My ID. Press  to select.
The first text line shows the radio alias. The second text line shows the radio ID.




7.7.33.3

Checking Firmware and Codeplug Versions

1 Press  to access the menu.

2 Press  or  to Utilities. Press  to select.

3 Press  or  to Radio Info. Press  to select.

4 Press  or  to Versions. Press  to select.
The display shows the current firmware and codeplug versions.


7.7.33.4




Checking GNSS Information




Displays the GNSS information on your radio, such as values of:




- Latitude
- Longitude
- Altitude
- Direction
- Velocity




- Horizontal Dilution of Precision (HDOP)
- Satellites
- Version

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.


- 4 Press  or  to GNSS Info. Press  to select.




- 5 Press  or  to the required item. Press  to select. The display shows the requested GNSS information.




7.7.33.5




Checking Software Update Information

This feature shows the date and time of the latest software update carried out through OTAP or Wi-Fi. Follow the procedure to check the software update information on your radio.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.


- 4 Press  or  to SW Update. Press  to select.
The display shows the date and time of the latest software update.




Software Update menu is only available after at least one successful OTAP or Wi-Fi session. See [Over-the-Air Programming on page 427](#) for more information.




7.7.33.6




Displaying Site Information

Follow the procedure to display the current site name your radio is on.

- 1 Press  to access the menu.

- 2 Press  or  to Utilities. Press  to select.

- 3 Press  or  to Radio Info. Press  to select.

- 4 Press  or  to Site Info. Press  to select.

The display shows the current site name.

7.7.33.7



Received Signal Strength Indicator

This feature allows you to view the Received Signal Strength Indicator (RSSI) values.


The display shows the **RSSI** icon at the top right corner. See [Display Icons](#) for more information on the **RSSI** icon.

7.7.33.7.1

Viewing RSSI Values

At the home screen, press  three times and immediately press , all in 5 seconds.


The display shows the current RSSI values.


To return to the home screen, press and hold .


7.7.34

Viewing Enterprise Wi-Fi Certificate Details


You can view the details of the selected Enterprise Wi-Fi Certificate.

- 1 Press  to access the menu.

2 Press ▲ or ▼ to Utilities. Press  to select.

3 Press ▲ or ▼ to Certificate Menu. Press  to select.

✓ appears beside ready certificates.

4 Press ▲ or ▼ to the required certificate. Press  to select.

Your radio displays the full details of the certificate.



NOTICE:

For unready certificates, the display shows only Status.

Authorized Accessories List

Motorola Solutions provides the following approved accessories to improve the productivity of your digital portable two-way radio.

Table 15: Antenna

Part Number	Description
PMAD4116_	VHF, 144–165 MHz, Helical Antenna
PMAD4117_	VHF, 136–155 MHz, Helical Antenna
PMAD4118_	VHF, 152–174 MHz, Helical Antenna
PMAD4119_	VHF, 136–148 MHz, Stubby Antenna
PMAD4120_	VHF, 146–160 MHz, Stubby Antenna
PMAD4121_	VHF, 160–174 MHz, Stubby Antenna

Part Number	Description
PMAD4147_	VHF, 136–174 MHz, Whip Antenna 20 cm
PMAD4133_ ¹²	VHF, 360–400 MHz, Stubby Antenna
PMAD4136_ ¹²	VHF, 350–380 MHz, Stubby Antenna
PMAD4139_ ¹²	VHF, 350–400 MHz, Whip Antenna
PMAE4069_	UHF, 403–450 MHz, Stubby Antenna
PMAE4070_	UHF, 440–490 MHz, Stubby Antenna
PMAE4071_	UHF, 470–527 MHz, Stubby Antenna
PMAE4079_	UHF, 403–527 MHz, Slim Whip Antenna
PMAF4009_	800/900, 806–870 MHz, Short Whip Antenna

¹² Applicable to Full Keypad and Non-Keypad only.

Part Number	Description
PMAF4010_	800/900, 896–941 MHz, Short Whip Antenna
PMAF4011_ ¹³	800/900, 806–870 MHz, Whip Antenna
PMAF4012_ ¹³	800/900, 896–941 MHz, Whip Antenna

¹³ Applicable to Full Keypad and Non-Keypad only.

Citizens Band License

The use of the Citizens Band radio service is licensed in Australia by the Australian Communications and Media Authority (ACMA) Radiocommunications (Citizens Band Radio Stations) Class Licence and in New Zealand by the Ministry of Economic Development New Zealand (MED) General User Radio Licence (GURL) for Citizens Band Radio, and operation is subject to the conditions contained in those licences.

In Australia, a Citizens Band transmitter shall not be operated on UHF emergency channels 5 and 35 and no voice transmissions are permitted on data (telemetry/telecommand) channels 22 and 23, except in an emergency. The radio that complies to this Standard will inhibit voice operation on channels 22 and 23. In the event that additional telemetry/telecommand channels are approved by the ACMA, these channels shall be added to those currently listed where voice transmission is inhibited.

Always listen on a channel (or observe a channel-busy indicator) to ensure it is not already being used before transmitting.

Citizens Band Repeater Operation

A repeater is a station established at a fixed location that receives radio signals from one Citizens Band station and automatically retransmits the signal to another station using the corresponding output channel. UHF Citizens Band repeaters can be found in all states and enable the range of vehicle to vehicle communications to be significantly increased. Avoid operating on locally used repeater input channels (which are in the range of channels 31 to 38, and channels 71 to 78 when they are authorized) or locally used repeater receiving channels (which will be in the range channels 1 to 8, and channels 41 to 48 when they are authorized), unless long-distance communication via the repeater facility is specifically required.

**NOTICE:**

In Australia, channel 11 is the customary calling channel for establishing communication and channel 40 is the customary road vehicle channel.

25 kHz Land Mobile Band to 12.5 kHz Narrow Band Transition

The existing use of 25 kHz analogue land mobile channels is to cease by 1 November 2015. This period is in accordance with the minimum period (five years) specified

in the Radio Regulations for giving notice of revocation of a licence of an undefined duration.

Land mobile frequency bands with an offset channel plan (E, EN, and ENX bands) require a different treatment to manage the introduction of digital land mobile radio (due to potential adjacent channel interference risks). The following items apply to these bands:

- Users of E band (25 kHz channels) wanting to transition to digital prior 1 November 2015, can migrate to the EE band (also in the VHF range) or any other band open for digital land mobile radio licensing.
- E band users wanting to continue operating analogue services after the five year transition period can migrate to 12.5 kHz analogue channels in the EN band (also in the VHF range) or any other band open for narrow band analogue land mobile radio.
- Introduction of digital land mobile radio in the EN and ENX bands prior to 1 November 2015 will be considered on a case by case basis. Licensing of digital land mobile radio in these bands will be possible in areas where E band users have vacated the band, or when rigorous engineering analysis guarantees no risk of interference to other band users.

For the list of currently authorized channels, please refer to the following websites:

- <http://www.acma.gov.au/Citizen/Consumer-info/All-about-spectrum/Marine-and-Amateur-Radio/citizen-band-radio-service-cbrs-fact-sheet> (Australia)
- <http://www.rsm.govt.nz/cms/licensees/types-of-licence/general-user-licences/citizen-band-radio> (New Zealand)

Limited Warranty

MOTOROLA SOLUTIONS COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

Motorola Solutions, Inc. ("Motorola Solutions") warrants the Motorola Solutions manufactured Communication Products listed below ("Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

Portable Radios	Two (2) Years
Product Accessories (Including Batteries and Chargers)	One (1) Year

Motorola Solutions, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it (with a new or reconditioned Product), or refund the purchase price of the Product during the warranty

period provided it is returned in accordance with the terms of this warranty. Replaced parts or boards are warranted for the balance of the original applicable warranty period. All replaced parts of Product shall become the property of Motorola Solutions.

This express limited warranty is extended by Motorola Solutions to the original end user purchaser only and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by Motorola Solutions. Motorola Solutions assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of Motorola Solutions.

Unless made in a separate agreement between Motorola Solutions and the original end user purchaser, Motorola Solutions does not warrant the installation, maintenance or service of the Product.

Motorola Solutions cannot be responsible in any way for any ancillary equipment not furnished by Motorola Solutions which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, Motorola Solutions

disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

II. GENERAL PROVISIONS

This warranty sets forth the full extent of Motorola Solutions responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at Motorola Solutions option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. IN NO EVENT SHALL MOTOROLA SOLUTIONS BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

III. STATE LAW RIGHTS:

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY.

This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. HOW TO GET WARRANTY SERVICE

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by Motorola Solutions through one of its authorized warranty service locations. If you first contact the company which sold you the Product (for example, dealer or communication service provider), it can facilitate your obtaining warranty service. You can also call Motorola Solutions at 1-800-927-2744.

V. WHAT THIS WARRANTY DOES NOT COVER

- 1 Defects or damage resulting from use of the Product in other than its normal and customary manner.
- 2 Defects or damage from misuse, accident, water, or neglect.
- 3 Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- 4 Breakage or damage to antennas unless caused directly by defects in material workmanship.
- 5 A Product subjected to unauthorized Product modifications, disassembles or repairs (including, without limitation, the addition to the Product of non-Motorola Solutions supplied equipment) which adversely affect performance of the Product or interfere with Motorola Solutions normal warranty inspection and testing of the Product to verify any warranty claim.
- 6 Product which has had the serial number removed or made illegible.
- 7 Rechargeable batteries if:
 - any of the seals on the battery enclosure of cells are broken or show evidence of tampering.
 - the damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified.
- 8 Freight costs to the repair depot.
- 9 A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with Motorola Solutions published specifications or the FCC certification labeling in effect for the Product at the time the Product was initially distributed from Motorola Solutions.
- 10 Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- 11 Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS

Motorola Solutions will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and Motorola Solutions will pay those

costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

- 1 Motorola Solutions will be notified promptly in writing by such purchaser of any notice of such claim,
- 2 Motorola Solutions will have sole control of the defense of such suit and all negotiations for its settlement or compromise, and
- 3 Should the Product or parts become, or in Motorola Solutions opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit Motorola Solutions, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by Motorola Solutions.

Motorola Solutions will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by

Motorola Solutions, nor will Motorola Solutions have any liability for the use of ancillary equipment or software not furnished by Motorola Solutions which is attached to or used in connection with the Product. The foregoing states the entire liability of Motorola Solutions with respect to infringement of patents by the Product or any parts thereof.

Laws in the United States and other countries preserve for Motorola Solutions certain exclusive rights for copyrighted Motorola Solutions software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola Solutions software. Motorola Solutions software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such Motorola Solutions software or exercise of rights in such Motorola Solutions software is permitted. No license is granted by implication, estoppel or otherwise under Motorola Solutions patent rights or copyrights.

VII. GOVERNING LAW

This Warranty is governed by the laws of the State of Illinois, U.S.A.

VIII. For Australia Only

This warranty is given by Motorola Solutions Australia Pty Limited (ABN 16 004 742 312) of Tally Ho Business Park, 10 Wesley Court, Burwood East, Victoria.

Our goods come with guarantees that cannot be excluded under the Australia Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Motorola Solutions Australia's limited warranty above is in addition to any rights and remedies you may have under the Australian Consumer Law. If you have any queries, please call Motorola Solutions Australia at 1800 457 439. You may also visit our website: http://www.motorolasolutions.com/XA-EN/Pages/Contact_Us for the most updated warranty terms.

www.motorolasolutions.com/mototrbo

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