PROFESSIONAL DIGITAL TWO-WAY RADIO SYSTEM

MOTOTRBO™ DGP SERIES CONNECT PLUS NON-DISPLAY PORTABLE USER GUIDE

Declaration of Conformity

DECLARATION OF CONFORMITY

Per FCC CFR 47 Part 2 Section 2.1077(a)

Responsible Party
Name: Motorola Solutions, Inc.

Address: 1303 East Algonquin Road, Schaumburg, IL 60196, U.S.A.
Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **DGP 4150/DGP 4150+**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Important Safety Information

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

ATTENTION!

This radio is restricted to Occupational use only.

Before using this product, read the RF Energy Exposure and Product Safety Guide that ships with the radio which contains instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulation.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following website:

http://www.motorolasolutions.com

Software Version

All the features described in the following sections are supported by the radio's software version **R01.06.30** or later.

Please check with your dealer or system administrator for more details of all the features supported.

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This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

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.

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http://businessonline.motorolasolutions.com/

Go to:

MOL>Resource Center>Product Information>Manuals>MOTOTRBO>Connect Plus Trunking

Getting Started

Take a moment to review the following:

How to Use This Guide . . . . . page 1
What Your Dealer/System Administrator Can Tell You . . . . . page 1

How to Use This Guide

This User Guide covers the basic operation of MOTOTRBO Non-Display Portables that are equipped with a Connect Plus Option Board, and are operating in a Connect Plus zone.

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

What Your Dealer/System Administrator Can Tell You

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?

Preparing Your Radio for Use

Assemble your radio by following these steps:

Charging the Battery . . . . . page 2
Attaching the Battery . . . . . page 3
Attaching the Antenna . . . . . page 3
Attaching the Belt Clip . . . . . page 4
Attaching the Universal Connector Cover (Dust Cover) page 4
Powering Up the Radio . . . . . page 5
Adjusting the Volume. . . . . page 5

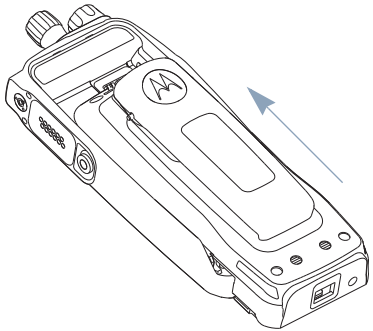
Charging the Battery

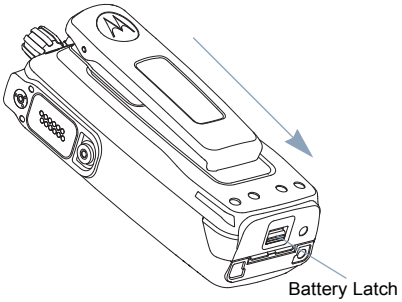
Your radio is powered by a Nickel Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) battery. To avoid damage and comply with warranty terms, charge the battery using a Motorola charger *exactly* as described in the charger user guide.

Charge a new battery 14 to 16 hours before initial use for best performance.

Attaching the Battery

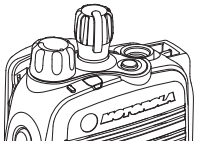
Align the battery with the rails on the back of the radio. Press the battery firmly, and slide upward until the latch snaps into place. Slide battery latch into lock position.





To remove the battery, turn the radio off. Move the battery latch into unlock position and hold. Slide the battery down and off the rails.

Attaching the Antenna



With the radio turned off, set the antenna in its receptacle and turn clockwise.

To remove the antenna, turn the antenna counterclockwise. Make sure you turn off the radio and remove the universal connector cover (dust cover) first.

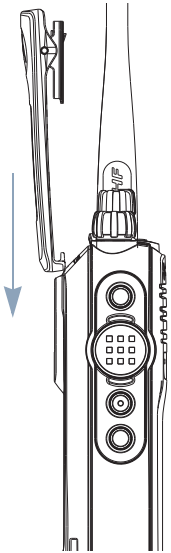
Caution

If antenna needs to be replaced, ensure that only the MOTOTRBO antennas are used. Neglecting this will damage your radio.

Attaching the Belt Clip

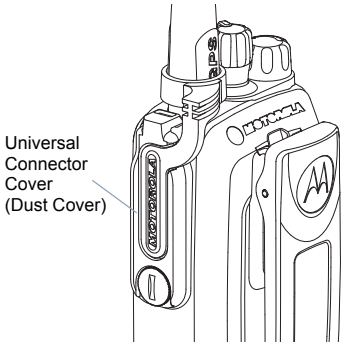
Align the grooves on the clip with those on the battery and press downward until you hear a click.

To remove the clip, press the belt clip tab away from the battery using a key. Then slide the clip upward and away from the radio.



Attaching the Universal Connector Cover (Dust Cover)

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



Place the universal connector cover loop over the attached antenna. Slide it all the way down to the base of the antenna.

Insert the hooked end of the cover into the slots above the universal connector. Press downward on the cover to seat the lower tab properly into the RF connector.

Turn the thumbscrew clockwise to secure the connector cover to the radio.

To remove the universal connector cover, press down on the cover and turn the thumbscrew counterclockwise. Lift the cover up, slide the connector cover loop upwards, and remove it from the attached antenna.

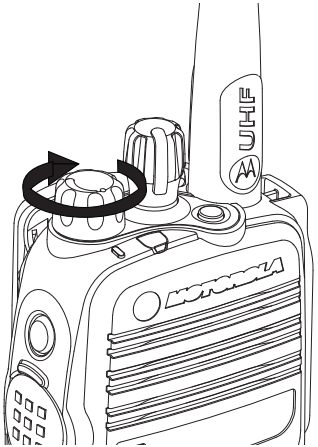
Replace the dust cover when the universal connector is not in use.

Powering Up the Radio

Rotate the **On/Off/Volume Control Knob** clockwise until you hear a click. The LED blinks green.

A brief tone sounds, indicating that the power up test is successful.

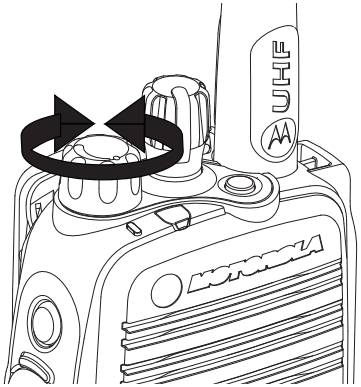
If your radio does not power up, check your battery. Make sure that it is charged and properly attached. If your radio still does not power up, contact your dealer.



To turn off the radio, rotate this knob counterclockwise until you hear a click.

Adjusting the Volume

To increase the volume, turn the **On/Off/Volume Control Knob** clockwise.



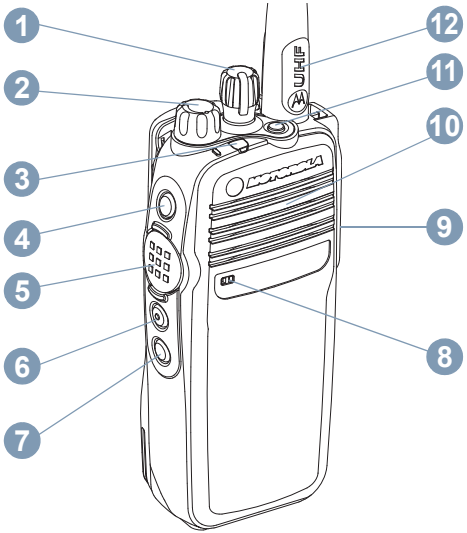
To decrease the volume, turn this knob counterclockwise.

Identifying Radio Controls

Take a moment to review the following:

Radio Controls. . . . . page 6
Programmable Buttons . . . . . page 7
Push-To-Talk (PTT) Button . . . . . page 8
Switching Between Connect Plus and Non-Connect Plus Modes . . . . . page 8

Radio Controls



1. Channel Selector Knob
2. On/Off/Volume Control Knob
3. LED Indicator
4. Side Button 1*
5. Push-to-Talk (**PTT**) Button
6. Side Button 2*
7. Side Button 3*
8. Microphone
9. Universal Connector for Accessories
10. Speaker
11. Emergency Button*
12. Antenna

** These buttons are programmable.*

Programmable Buttons

Your dealer can program the programmable buttons as shortcuts to **radio functions** or **predefined call types** depending on the duration of a button press:

- Press – Pressing and releasing rapidly (0.05 seconds).
- Long press – Pressing and holding for the programmed duration (between 0.25 second and 3.75 seconds).
- Hold down – Keeping the button pressed.

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.

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.

Emergency – Initiates an Emergency call or Emergency Alert, and also cancels an Emergency call or Emergency Alert, if the Emergency request has yet to be transmitted.

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 – Resets (cancels) the Alert tone and resets the Man Down timers, but it does not turn the Man Down Alarms off. Requires purchase of Connect Plus Man Down feature.

One Touch Call – Initiates a predefined Call Alert, Private Call, or Quick Text message.

Phone Exit – Ends a Private Phone Call.

Privacy On/Off – Used to toggle transmit privacy On or Off for the current channel selector position. The privacy setting only affects transmitted voice calls from this position, not received calls.

Roam Request – Requests to search for a different site.

Scan – Toggles Selectable Group Scan on or off.

Site Lock On/Off – When toggled on, the radio searches the current site only. When toggled off, the radio will search other sites in addition to the current site.

Zone Toggle – Allows radio user to toggle between Zone 1 and Zone 2.

Assignable Settings or Utility Functions

Power Level – Toggles transmit power level between high and low.

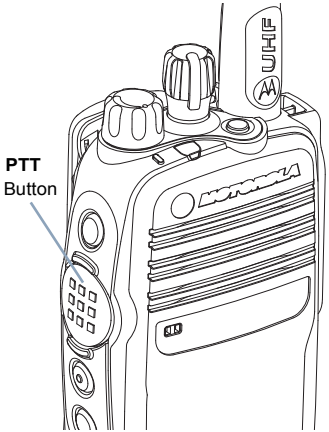
Battery Strength – Indicates battery strength through the LED indicator.

Accessing the Programmed Functions

You can access various radio functions through a short or long press of the relevant programmable buttons.

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 down **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 16).

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

During a call, if the Channel Free Indication feature is enabled on your radio (programmed by your dealer), you will hear a short alert tone the moment the target radio (the radio that is receiving your call) releases the **PTT** button, indicating the channel is free for you to respond.

You will also hear the Channel Free Indication tone if your call is interrupted.

*You can turn off the Channel Free Indication tone by disabling all radio tones and alerts (see **Turning Radio Tones/Alerts On or Off** on page 31).*

Switching Between Connect Plus and Non-Connect Plus Modes

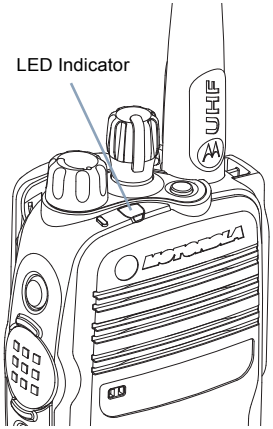
To switch to a non-Connect Plus mode, you must change to another zone, if programmed by your dealer or system administrator. Check with your dealer or system administrator to see if your radio has been programmed with non-Connect Plus zones, and what features are available while operating in non-Connect Plus zones.

Identifying Status Indicators

Your radio indicates its operational status through the following:

LED Indicator . . . . . page 9
Audio Tones . . . . . page 10
Indicator Tones . . . . . page 10

LED Indicator



The LED indicator shows the operational status of your radio.

Blinking red – Radio is transmitting at low battery condition or has failed the self-test upon powering up.

Rapidly Blinking Red – Radio is receiving an 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.

Solid yellow – Indicates fair battery charge when the programmed **Battery Strength** button is pressed.

Blinking green and yellow – Radio is receiving a Call Alert, or Scan is enabled.

Rapidly blinking yellow – Radio is searching for a site.

Solid green – Radio is transmitting. Also indicates full charge of the battery when the programmed **Battery Strength** button is pressed.

Blinking green – Radio is powering up or detecting activity over the air. LED blinks in an even pattern (blink, blink, blink)

while monitoring the Control Channel or receiving unscrambled transmissions. LED blinks in an uneven pattern (blink, blink, pause) while receiving scrambled transmissions.

Audio Tones

Alert tones provide you with audible indications of the radio's status or the radio's response to data received.

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.

Indicator Tones

High pitched tone ☐ Low pitched tone ■

Positive Indicator Tone

Negative Indicator Tone

Receiving and Making Calls

Once you understand how your MOTOTRBO Portable is configured, you are ready to use your radio.

Use this navigation guide to familiarize yourself with the basic Call features:

Selecting a Site . . . . . page 11
Selecting a Zone . . . . . page 12
Selecting a Call Type . . . . . page 13
Receiving and Responding to a Radio Call. . . . . page 13
Making a Radio Call . . . . . page 16

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 multisite 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.

Roam Request

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

This is programmed by your dealer.

Use the following procedure for a Roam Request.

Procedure:

1. Press the programmed **Roam Request** button.
2. You hear a tone, indicating the radio has switched to a new site.

Site Lock On/Off

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

Use the following procedure for Site Lock.

Procedure:

1. Press the programmed **Site Lock** button.
2. You hear a positive indicator tone, indicating the radio has locked to the current site.
   OR
   You hear a negative indicator tone, indicating the radio is unlocked.

Selecting a Zone

The non-display portable radio can be programmed with a maximum of two 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
- Multigroup Call
- Site All Call
- Private Call

Non-Connect Plus zones can be used for analog mode or non-Connect Plus digital modes.

Use the following procedure to select a zone.

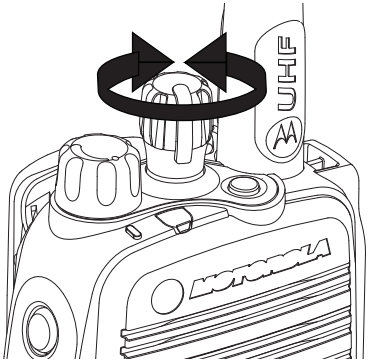
Procedure:

1. Press the programmed **Zone Toggle** button.
2. You hear a tone that rises in pitch, indicating the radio has switched from Zone 1 to Zone 2.
   OR
   You hear a tone that falls in pitch, indicating the radio has switched from Zone 2 to Zone 1.

Using Multiple Networks

If your radio has been programmed to use multiple Connect Plus networks, you can select a different network by toggling 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.

Selecting a Call Type



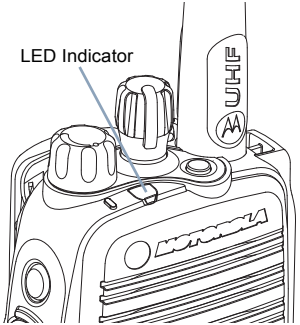
Procedure:

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

NOTE: When in Connect Plus mode, the Channel Selector Knob is used to select the call type that is started when you press PTT. This can be a Group Call, Multigroup 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. If you select a position that has no call type assigned to it, your radio sounds a continuous tone to let you know that you have selected an unprogrammed channel. Because your radio does not operate when selected to an unprogrammed channel, use the Channel Selector Knob to select a programmed channel instead.

Receiving and Responding to a Radio Call

Once the call type is set, 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 a call. The blinking pattern is even (blink, blink, blink) when receiving an unsecure (unscrambled) transmission. The blinking pattern is uneven (blink, blink, pause) when receiving a privacy-enabled

*(scrambled) transmission. To unscramble a privacy-enabled call, your radio must have the same Key Value and Key ID (programmed by your dealer), as the transmitting radio (the radio you are receiving the call from). See **Enhanced Privacy** on page 30 for more information.*

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.

1. The LED blinks green.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.
4. Press the **PTT** button to respond to the call. The LED lights up solid green.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
6. Release the **PTT** button to listen.
7. If there is no voice activity for a predetermined period of time, the call ends.

*See **Making a Group Call** on page 16 for details on making a Group Call.*

Receiving and Responding to a Private Call

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

In the Connect Plus operation, the controller performs a presence check before setting up the call.

Procedure:

When you receive a private call:

1. The LED blinks green.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.
4. Press the **PTT** button to respond to the call. The LED lights up solid green.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
6. Release the **PTT** button to listen.

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

*See **Making a Private Call** on page 16 for details on making a Private Call.*

Receiving a Site All Call

A Site All Call is a call from an individual radio to every radio on that site. It is used to make important announcements requiring the user's full attention.

Procedure:

When you receive an All Call:

1 A tone sounds and the LED blinks green.

2 If there is no voice activity for a predetermined period of time, the Site All Call ends.
If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is now available for use.

You cannot respond to a Site All Call.

*See **Making a Site All Call** on page 17 for details on making a Site All Call.*

NOTE: During a Site All Call, you will **not** be able to use any programmed button functions until the call ends.

Receiving and Responding to a Phone Call

NOTE: If Phone Call permission has been enabled for your radio and/or Group, you are able to respond to a telephone user. Check with your dealer or system administrator for more information.

Phone Call as Private Call

Procedure:

When you receive a Phone Call as Private Call:

1 You will hear ringing, depending on your radio's volume level and tone configuration.

2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

3 Press the **PTT** button to talk and release it to listen.

4 The Phone Call can be ended by the phone user or the radio user (if the radio has been programmed with the **Phone Exit** programmable button).

5 Press the **Phone Exit** programmable button to end the call.

Phone Call as Group Call

Depending on your Group permission(s) in the system, a phone user can initiate or join a Group Call. The call operates just like other calls on the same Group. For more information, see the section called Receiving and Responding to a Group Call.

NOTE: The phone user cannot understand scrambled transmissions. It is recommended that the radio users should turn Privacy OFF while the Group Call has a phone user as participant.

Making a Radio Call

You can select a channel, subscriber ID or group ID by using:

- The Channel Selector Knob
- A programmed **One Touch Call** button (Call Alert, Private Call, or Text Message)

Making a Call with the Channel Selector Knob

Making a Group Call

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

Procedure:

1. Turn the Channel Selector Knob to select the group 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.
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.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.
   OR
   If there is no voice activity for a predetermined period of time, the call ends.

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 via the **One Touch Call** button or the Channel Selector Knob, if this feature is not enabled.

Procedure:

1. Turn the Channel Selector Knob to select the subscriber 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.

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.

6 If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.
OR
If there is no voice activity for a predetermined period of time, the call ends.

7 You hear a short tone.

Making a Site All Call

This feature allows you to transmit to all users on the site that are not currently engaged in another call.

Procedure:

1 Turn the Channel Selector Knob to select the Site All Call 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.

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

Users on the site cannot respond to a Site All Call.

Making a Multigroup 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.

Procedure:

1 Turn the Channel Selector Knob to select the Multigroup ID.

2 Press the **PTT** button to make the call. The LED lights up green.

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

Users on the groups cannot respond to a Multigroup Call.

Making a Private Call with the 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 ID assigned to a **One Touch Call** button. Your radio can have multiple **One Touch Call** buttons programmed.

Procedure:

1. Press the programmed **One Touch Call** button to make a Private Call to the pre-defined target radio 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.
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.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the **PTT** button, indicating the channel is free for you to respond. Press the **PTT** button to respond.
   OR
   If there is no voice activity for a predetermined period of time, the call ends.

Making a Privacy-Enabled (scrambled) Call

Toggle privacy on by using the programmed privacy button. 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. See ***Enhanced Privacy*** on *page 30* for more information on privacy as well as instructions on enabling/disabling the feature.

Busy Queue

When a call is initiated and approved with no available channels in Connect Plus mode, the call is placed in a queue. The call will proceed as normal when a channel becomes available.

NOTE: The radio will stay in "Busy" mode until the call is assigned, or until the user presses the **Busy Queue Cancellation** button. Check with the dealer or system administrator to find out if your radio has been programmed with the **Busy Queue Cancellation** button.

Advanced Features

Use this navigation guide to learn more about advanced features available with your radio:

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Auto Fallback . . . . . page 20
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Editing Priority for a Talkgroup . . . . . page 23
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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 via the CPS, the Home Channel Reminder tone and announcement sound 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 via the programmable button.
- Set a new home channel via the programmable button.

Muting the Home Channel Reminder

When the Home Channel Reminder occurs, you can temporarily mute the reminder by performing the following action.

Procedure:

1 Press the **Mute Home Channel Reminder** programmable button.

Setting a New Home Channel

When the Home Channel Reminder occurs, you can set a new home channel by performing the following action.

Procedure:

1 Press the **Reset Home Channel** programmable button.

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 in the event of certain types of Connect Plus system failures. 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 is currently unable to communicate with either its site controller or the Connect Plus network. In Fallback mode, the repeater operates as a “stand-alone” digital repeater. Auto Fallback Mode supports non-emergency Group Calls only. No other call types are supported in Fallback Mode.

Indications of Auto Fallback Mode

When your radio is using a Fallback channel, you will hear the intermittent “Fallback Tone” approximately once every 15 seconds (except while transmitting). You will also notice that 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

Making calls in Fallback mode is similar to normal functioning. Simply select the group contact you wish to use (using the channel selector) 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 will receive a busy tone. You may select Group, Multigroup or Site All Call contacts using your channel selector. 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 Multigroup. Enhanced Privacy is supported in Fallback mode.

NOTE: 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 will provide an invalid key press tone.

Private (radio to radio) 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 will transmit until PTT is released. In this event, it is possible that none of the transmissions will be understood by receiving radios.

Returning to Normal Operation

If the site returns to normal trunking operation while you are in range of your Fallback repeater, your radio will automatically exit Auto Fallback mode. A registration “beep” will be heard when your radio successfully registers. If you believe that you are in 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 will return to Auto Fallback mode after searching is complete. If you drive out of coverage of your Fallback repeater, your radio will enter Search mode.

Selectable Group Scan

This feature allows your radio to monitor and join calls in groups, other than the one currently selected by the Channel Selector Knob. If this feature is used, your radio will be programmed with a list of groups to scan when Selectable Group Scan, or Scan, is enabled. This is your scan list.

Scan can be turned on or off 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.

Turning Scan On or Off

If Scan is turned on, and you are not participating in a call, the LED blinks yellow continuously and slowly.

Procedure:
Scan is turned on or off using a programmed button.

1. Press the programmed **Scan On/Off** button.
2. A tone sounds indicating that Scan has been turned on or off. When Scan is enabled, the tone's pitch increases. When Scan is disabled, the tone's pitch decreases.

Understanding Scan Operation

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 LED blinking yellow).
- You are participating in a call already.
- No member of the scanned group is registered at your site (Multisite systems only).

Talking Back During Scanned Calls

If your radio scans into a call from your selectable group scan list, and if you press **PTT** during the scanned call, your radio's operation depends on whether Scan Talkback was enabled or disabled during radio programming. For more information on how your radio is programmed, please contact your radio dealer (or your radio system administrator).

Scan Talkback Disabled: Your radio leaves the scanned call and attempts to transmit on the contact for your currently selected channel position. After the call on your currently selected contact, the radio waits until its Scan Hang Timer expires before it joins another call from the selectable group scan list.

Scan Talkback Enabled: If you press **PTT** during the Group Hang Time of the scanned call, your radio attempts to transmit to the scanned group.

NOTE: If you scan into a call for a group that is not assigned to a channel position in your currently selected zone and you miss the call's Hang Time, you will have to switch to the proper zone and then select the group's channel position to talk back to that group.

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.

The MOTOTRBO Connect Plus Option Board CPS can configure two levels of priority for the talkgroups: P1 and P2. P1 has higher priority than P2.

NOTE: 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.

Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to. This feature is accessible via a programmed **One Touch Call** button.

Receiving and Acknowledging a Call Alert

Procedure:

When you receive a Call Alert page:

1. You hear a repetitive tone. The LED blinks yellow and green.
2. Press the **PTT** button to start a Private Call to the radio that sent the Call Alert.

Making a Call Alert with the One Touch Call Button

Procedure:

1. Press the programmed **One Touch Call** button to make a Call Alert to the predefined ID.
2. The LED lights up solid green when your radio is sending the Call Alert.
3. If the Call Alert acknowledgement is received, a positive indicator tone sounds.
   OR
   If the Call Alert acknowledgement is not received, a negative indicator tone sounds.

Emergency Operation

An Emergency call or Emergency Alert is used to indicate a critical situation. You can initiate an Emergency at any time 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.

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 will stay "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 via 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 Connect Plus zone. In addition, each Emergency mode has the following types:

- Regular – Radio initiates an Emergency call or Emergency Alert and shows audio and/or visual indicators.
- Silent – Radio initiates an Emergency call or Emergency Alert without any audio or visual indicators. The radio will suppress all audio or visual indications of the Emergency call until you press the **PTT** button to start a voice transmission.
- Silent with Voice – The same as Silent operation, except that the radio will also unmute for some voice transmissions.

NOTE: If your radio is programmed for "Silent" or "Silent with voice" emergency initiation, in most cases it will automatically exit 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 will continue 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 Fallback mode. For more information see the ***Auto Fallback*** section on page 20.

Initiating an Emergency Call

Procedure:
To start a call on the Emergency group:

1 Press the programmed **Emergency** button. The Emergency Search Tone sounds. It is temporarily muted when the radio transmits or receives voice. The tone stops when the radio exits Emergency mode.

NOTE: The Emergency Search Tone is an optional feature, it can be enabled or disabled via the CPS programming software. This feature is disabled, if Silent Emergency is enabled. The CPS can also program tone to sound to through the speaker of the radio (default) or wired accessory. Check with your dealer or system administrator to determine how your radio has been programmed.

2 Hold the microphone 1 to 2 inches (2.5 to 5.0 cm) from your mouth and press the **PTT** button to initiate a voice transmission on the Emergency group.

3 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.

*If your radio is set to Silent, it will not provide 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 will not initially provide any audio or visual indicators that the radio is in Emergency mode. However, your radio will un-mute for the transmissions of radios responding to your emergency. The emergency indicators will 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 will automatically exit silent operation after the Emergency Call is finished.

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 you needing to press 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.

Procedure:
To start a call on the Emergency group:

1 Press the programmed **Emergency** button. The Emergency Search Tone sounds. It is temporarily muted when the radio

transmits or receives voice. The tone stops when the radio exits Emergency mode.

NOTE: The Emergency Search Tone is an optional feature, it can be enabled or disabled via the CPS programming software. This feature is disabled, if Silent Emergency is enabled. The CPS can also program tone to sound to through the speaker of the radio (default) or wired accessory. Check with your dealer or system administrator to determine how your radio has been programmed.

2 Hold the microphone 1 to 2 inches (2.5 to 5.0 cm) from your mouth and speak.

3 Microphone will remain active for the “hot mic” time specified in your radio's codeplug programming. During this time, the LED lights up green.

4 Press and hold the **PTT** button to talk longer than the programmed duration.

Responding to an Emergency Call

Your radio does not show that you are receiving an Emergency call. Respond the same way as you would to group calls.

Exiting Emergency Mode

If you initiate an Emergency call by pressing the programmed **Emergency** button, your radio will automatically be assigned a channel 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 will be 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 will be discontinued after the Emergency Call Hang Time expires.

NOTE: 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 start over the process.

Initiating an Emergency Alert

Procedure:

To send an Emergency Alert on the Emergency group:

1 Press the orange Emergency button. The Emergency Search Tone sounds. It is temporarily muted when the radio transmits or receives voice. The tone stops when the radio exits Emergency mode.

NOTE: The Emergency Search Tone is an optional feature, it can be enabled or disabled via the CPS programming software. This feature is disabled, if Silent Emergency

is enabled. The CPS can also program tone to sound to through the speaker of the radio (default) or wired accessory. Check with your dealer or system administrator to determine how your radio has been programmed.

2 Once the Emergency Alert is successfully sent and is being broadcast for other radios to hear, a positive indicator tone is played.

NOTE: 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.

Man Down Alarms

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 will automatically start 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.

NOTE: Man Down Alarms are not supported when operating in Fallback mode. For more information see the ***Auto Fallback*** section on page 20.

Turning Man Down Alarms On and Off

If your radio has been 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.
- When using the programmable button to toggle the Man Down Alarms Off, your radio plays a tone that falls in pitch.

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.

Resetting the Man Down Alarms

If your radio has been programmed with a Man Down Alarms Reset button, it is possible to reset the Man Down Alarms without turning them On or Off.

Press the Man Down Alarms Reset button when you hear a Man Down Alert Tone. This will stop the Alert Tone, and it will also reset 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.

Beacon Feature

This section describes the 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.

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 section. If your radio does not have the programmable button, 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.)

Turning Beacon On and Off

If your radio has been 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.
- When using the programmable button to toggle the Beacon Off, your radio plays a tone that falls in pitch.

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.

Resetting the Beacon

If your radio has been programmed with a Beacon Reset button, press the Beacon Reset button to stop (cancel) the Beacon tone. This stops the Beacon tone while leaving the Beacon feature enabled.

Text Messaging Features

Sending a Quick Text Message

You can send Quick Text messages, programmed by your dealer, via the programmable button.

Procedure:

1. Press the programmed **One Touch Call** button to send a predefined Quick Text message to a predefined ID.
2. The LED lights up solid green.
3. If the text message is transmitted successfully, a positive indicator tone sounds.
   OR
   If the text message cannot be successfully transmitted, a negative indicator tone sounds.

Enhanced Privacy

If enabled, this feature helps to prevent eavesdropping by unauthorized users via a software-based scrambling solution. Only the voice portions of a call are scrambled. Your radio must have privacy enabled on the selected channel position to send a privacy-enabled transmission. While selected to a privacy-enabled channel position, the radio is still able to receive clear (unscrambled) transmissions. If your radio is configured with a matching Key ID and Key Value, it can correctly unscramble voice transmissions, even when transmit Privacy is not enabled for the current channel selector position.

There are several different ways that a channel selector position can become enabled (or disabled) for privacy. It can be enabled (or disabled) for privacy via radio programming, or it can be enabled (or disabled) for privacy by the radio user via the Privacy on/off button. When transmitting scrambled audio, the talk permit tone is slightly lower in pitch than it is when transmitting unscrambled audio.

LED Operation

When transmitting, the green LED displays solid green, regardless of whether the transmission is scrambled or unscrambled. When receiving scrambled transmissions, the green LED will blink at an uneven rate (flash, flash, pause). This pattern repeats for the duration of the transmission. If the transmission is clear, then the green LED blinks at an even rate (flash, flash, flash). This pattern repeats for the duration of the transmission.

Enable/Disable Privacy

Press the programmed Privacy On/Off button to toggle privacy on or off for the selected channel position.

When Privacy is toggled, “on”, the radio plays a tone that rises in pitch.

When Privacy is toggled, “off”, the radio plays a tone that falls in pitch.

NOTE: Toggling the privacy setting on or off affects the currently selected channel position only. The radio tracks the privacy setting (on or off) for each channel position separately.

Utilities

Setting the Power Level

You can toggle your radio's power setting between high or low for each channel.

Settings: **High** enables communication with radios located at a considerable distance from you. **Low** enables communication with radios in closer proximity.

Procedure:

1. Press the programmed **Power Level** button.
2. The radio plays a tone that rises in pitch when transmitting with high power.
   OR
   The radio plays a tone that falls in pitch when transmitting with low power.

Turning Radio Tones/Alerts On or Off

You can enable and disable all radio tones and alerts if needed.

Procedure:

1. Press the programmed **All Tones/Alerts** button.
2. You hear a single beep, indicating all tones and alerts are on.
   OR
   You do not hear any beep. This indicates that all tones and alerts has been turned off.

Checking the Battery Strength

You can check how much battery power you have left.

Settings: The LED Indicator in solid yellow indicates fair battery charge while solid green indicates full charge of the battery.

Procedure:
Press the programmed **Battery Strength** button to view the battery strength via the LED Indicator.

Setting the Text-to-Speech Feature

NOTE: The Text-to-Speech feature can only be enabled via the MOTOTRBO Customer Programming Software. 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

Procedure:

1 Press the programmed **Voice Announcement** button to toggle this feature on or off.

Accessories

Your radio is compatible with the accessories listed in this chapter. Contact your dealer for details.

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Carry Devices . . . . . page 34
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Earbuds and Earpieces . . . . . page 35
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Antennas

The diagram on the right shows the location of the color indicator for the following antennas. See the footnote at the end of the list for the colors.

- Combination VHF/GPS, 136 – 147 MHz, Helical Antenna[4] (PMAD4067_)
- Combination VHF/GPS, 147 – 160 MHz, Helical Antenna[3] (PMAD4068_)
- Combination VHF/GPS, 160 – 174 MHz, Helical Antenna[5] (PMAD4069_)
- VHF Wideband, 136 – 174 MHz, Double Helical Antenna[6] (PMAD4088_)
- VHF, 136 – 147 MHz, Stubby Antenna[4] (PMAD4093_)
- VHF, 147 – 160 MHz, Stubby Antenna[3] (PMAD4094_)
- VHF, 160 – 174 MHz, Stubby Antenna[5] (PMAD4095_)
- Combination UHF/GPS, 403 – 433 MHz, Folded Monopole Antenna[1] (PMAE4018_)
- Combination UHF/GPS, 403 – 433 MHz, Stubby Antenna[1] (PMAE4021_)
- UHF1, 403 – 470 MHz, Whip Antenna[3] (PMAE4022_)
- Combination UHF1/GPS, 430 – 470 MHz, Stubby Antenna[2] (PMAE4023_)
- Combination UHF1/GPS, 430 – 470 MHz, Folded Monopole Antenna[2] (PMAE4024_)
- Combination UHF2/GPS, 450 – 527 MHz, Stubby Antenna[7] (PMAE4048_)
- UHF2, 450 – 527 MHz, Whip Antenna[7] (PMAE4049_)
- Combination UHF2/GPS, 450 – 495 MHz, Folded Monopole Antenna[8] (PMAE4050_)
- Combination UHF2/GPS, 495 – 527 MHz, Folded Monopole Antenna[6] (PMAE4051_)

- Combination 800/900/GPS, 806 – 941 MHz, Helical Antenna[9] (PMAF4003_)
- Public Safety Microphone UHF Stubby Antenna[1], 403 – 433 MHz (PMAE4046_)
- Public Safety Microphone UHF Stubby Antenna[2], 430 – 470 MHz (PMAE4047_)
- Public Safety Microphone VHF Antenna[5], 150 – 174 MHz (PMAD4086_)
- Public Safety Microphone VHF Antenna[4], 136 – 153 MHz (PMAD4087_)

Color Code:

1 Red	**3** Black	**5** Blue	**7** Brown	**9** Purple
2 Green	**4** Yellow	**6** White	**8** Orange	

Batteries

- IMPRES Li-Ion, 1500 mAh Submersible (IP57) Battery (PMNN4066_)*
- IMPRES Li-Ion, 1400 mAh Submersible (IP57) Battery, Intrinsically Safe (FM) (PMNN4069_)
- IMPRES Li-Ion, 2200 mAh Submersible (IP57) Battery (PMNN4077_)
- NiMH, 1300 mAh Submersible (IP57) Battery (PMNN4065_)*

* Not applicable to the 800/900 band.

Carry Devices

- Belt Clip for 2-Inch Belt Width (PMLN4651_)
- Belt Clip for 2.5-Inch Belt Width (PMLN4652_)
- 2.5-Inch Replacement Swivel Belt Loop (PMLN5022_)
- 3-Inch Replacement Swivel Belt Loop (PMLN5023_)
- Nylon Carry Case with 3-Inch Fixed Belt Loop for Non-Display Radio (PMLN5024_)
- Soft Leather Carry Case with 2.5-Inch Swivel Belt Loop for Non-Display Radio (PMLN5025_)
- Soft Leather Carry Case with 3-Inch Swivel Belt Loop for Non-Display Radio (PMLN5026_)
- Soft Leather Carry Case with 3-Inch Fixed Belt Loop for Non-Display Radio (PMLN5027_)
- Hard Leather Carry Case with 2.5-Inch Swivel Belt Loop for Non-Display Radio (PMLN5028_)
- Hard Leather Carry Case with 3-Inch Swivel Belt Loop for Non-Display Radio (PMLN5029_)
- Hard Leather Carry Case with 3-Inch Fixed Belt Loop for Non-Display Radio (PMLN5030_)
- 1.75-Inch Black Leather Belt (4200865599)

Chargers

- IMPRES Multi-Unit Charger (WPLN4212_)
- IMPRES Multi-Unit Charger with Displays (WPLN4219_)
- IMPRES Single-Unit Charger (WPLN4232_)
- IMPRES Multi-Unit Charger, US Plug (WPLN4212_)
- IMPRES Multi-Unit Charger, Euro Plug (WPLN4213_)
- IMPRES Multi-Unit Charger, UK Plug (WPLN4214_)
- IMPRES Multi-Unit Charger, Argentina Plug (WPLN4216_)
- IMPRES Multi-Unit Charger with Display, US Plug (WPLN4219_)
- IMPRES Multi-Unit Charger with Display, Euro Plug (WPLN4220_)
- IMPRES Multi-Unit Charger with Display, UK Plug (WPLN4221_)
- IMPRES Multi-Unit Charger with Display, Argentina Plug (WPLN4223_)
- IMPRES Single-Unit Charger, US Plug (WPLN4232_)
- IMPRES Single-Unit Charger, UK Plug (WPLN4233_)
- IMPRES Single-Unit Charger, Euro Plug (WPLN4234_)
- IMPRES Single-Unit Charger, Argentina Plug (WPLN4236_)

Earbuds and Earpieces

- Receive-Only Earbud (AARLN4885_)
- D-Shell Receive-Only Earpiece (PMLN4620_)
- Receive-Only Earpiece (RLN4941_)
- Over-the-Ear Receiver for Remote Speaker Microphone (WADN4190_)
- D-Shell Earset (PMLN5096_)
- IMPRES Temple Transducer (PMLN5101_)
- Small Custom Earpiece for Surveillance Kits, Right Ear (RLN4760_)
- Medium Custom Earpiece for Surveillance Kits, Right Ear (RLN4761_)
- Large Custom Earpiece for Surveillance Kits, Right Ear (RLN4762_)
- Small Custom Earpiece for Surveillance Kits, Left Ear (RLN4763_)
- Medium Custom Earpiece for Surveillance Kits, Left Ear (RLN4764_)
- Large Custom Earpiece for Surveillance Kits, Left Ear (RLN4765_)
- Standard Earpiece, Black (RLN6279_)
- Standard Earpiece, Beige (RLN6280_)

- Replacement Foam Ear Pad and Windscreen (RLN6283_)
- Earpiece with Acoustic Tube Assembly, Beige (RLN6284_)
- Earpiece with Acoustic Tube Assembly, Black (RLN6285_)
- Earpiece with High Noise Kit, Beige (RLN6288_)
- Earpiece with High Noise Kit, Black (RLN6289_)

Headsets and Headset Accessories

- Ultra-Lite Headset (PMLN5102_)
- Heavy Duty Noise-Canceling Headset (FM) (PMLN5275_)
- Lightweight Headset (RMN5058_)

Remote Speaker Microphones

- Remote Speaker Microphone (PMMN4024_)
- IMPRES Remote Speaker Microphone (PMMN4025_)
- Remote Speaker Microphone, Submersible (IP57) (PMMN4040_)
- IMPRES Public Safety Microphone (PSM), 30-Inch Cable (PMMN4041_)*
- IMPRES Public Safety Microphone (PSM), 24-Inch Cable (PMMN4042_)*
- IMPRES Public Safety Microphone (PSM), 18-Inch Cable (PMMN4043_)*
- IMPRES Remote Speaker Microphone, with Volume, IP57 (PMMN4046_)
- IMPRES Submersible Public Safety Microphone, 30-Inch Cable (PMMN4047_)*
- IMPRES Submersible Public Safety Microphone, 24-Inch Cable (PMMN4048_)*
- IMPRES Submersible Public Safety Microphone, 18-Inch Cable (PMMN4049_)*
- IMPRES Remote Speaker Microphone, Noise-Canceling (PMMN4050_)
- Remote Speaker Microphone Replacement Coil Cord Kit (For Use with PMMN4024_ and PMMN4040_) (RLN6074_)
- Remote Speaker Microphone Replacement Coil Cord Kit (For Use with PMMN4025) (RLN6075_)

* Not applicable to the 800/900 band.

Surveillance Accessories

- IMPRES 3-Wire Surveillance, Black (PMLN5097_)
- IMPRES 3-Wire Surveillance, Beige (PMLN5106_)

- IMPRES 3-Wire Surveillance Kit with Clear, Comfortable Acoustic Tube, Black (PMLN5111_)
- IMPRES 3-Wire Surveillance Kit with Clear, Comfortable Acoustic Tube, Beige (PMLN5112_)
- Receive Only Surveillance Kit, Black (Single Wire) (RLN5878_)
- Receive Only Surveillance Kit, Beige (Single Wire) (RLN5879_)
- IMPRES 2-Wire Surveillance Kit, Black (RLN5880_)
- IMPRES 2-Wire Surveillance Kit, Beige (RLN5881_)
- IMPRES 2-Wire Surveillance Kit with Clear, Comfortable Acoustic Tube, Black (RLN5882_)
- IMPRES 2-Wire Surveillance Kit with Clear, Comfortable Acoustic Tube, Beige (RLN5883_)
- Surveillance Low Noise Kit (RLN5886_)
- Surveillance High Noise Kit (RLN5887_)

Miscellaneous Accessories

- Universal Chest Pack (HLN6602_)
- Waterproof Bag, Includes Large Carry Strap (HLN9985_)
- Shoulder Strap (Attaches to D-Rings on Carry Case) (NTN5243_)
- Small Clip, Epaulet Strap (RLN4295_)
- Break-A-Way Chest Pack (RLN4570_)
- Universal RadioPAK and Utility Case (Fanny Pack) (RLN4815_)
- Replacement Ear Tips, Clear, Pack of 25 (For Use with RLN5886_) (RLN6282_)
- Replacement Strap for RLN4570_ and HLN6602_ Chest Packs (1505596Z02)
- Accessory Dust Cover (1571477L01)
- Replacement Foam Plugs, Pack of 50 (For Use with RLN5887_) (5080384F72)
- Universal RadioPAK Extension Belt (4280384F89)

Batteries and Chargers Warranty

The Workmanship Warranty

The workmanship warranty guarantees against defects in workmanship under normal use and service.

All MOTOTRBO Batteries	One (1) Year
IMPRES Chargers (Single-Unit and Multi-Unit, Non-Display)	18 Months
IMPRES Chargers (Multi-Unit with Display)	18 Months

The Capacity Warranty

The capacity warranty guarantees 80% of the rated capacity for the warranty duration.

Nickel Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) Batteries	12 Months
IMPRES Batteries, When Used Exclusively with IMPRES Chargers	18 Months

Limited Warranty

MOTOROLA COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

MOTOROLA SOLUTIONS INC. (“MOTOROLA”) warrants the MOTOROLA 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:

DGP Series Digital Portable Radios	Two (2) Years
Product Accessories (Excluding Batteries and Chargers)	One (1) Year

MOTOROLA, 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.

This express limited warranty is extended by MOTOROLA 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. MOTOROLA assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of MOTOROLA.

Unless made in a separate agreement between MOTOROLA and the original end user purchaser, MOTOROLA does not warrant the installation, maintenance or service of the Product.

MOTOROLA cannot be responsible in any way for any ancillary equipment not furnished by MOTOROLA 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 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'S responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at MOTOROLA’s 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 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 through one of its authorized warranty service locations. If you first contact the company which sold you the Product (e.g., dealer or communication service provider), it can facilitate your obtaining warranty service.

V. WHAT THIS WARRANTY DOES NOT COVER:

A) Defects or damage resulting from use of the Product in other than its normal and customary manner.

B) Defects or damage from misuse, accident, water, or neglect.

C) Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.

D) Breakage or damage to antennas unless caused directly by defects in material workmanship.

E) A Product subjected to unauthorized Product modifications, disassembles or repairs (including, without limitation, the addition to the Product of non-MOTOROLA supplied equipment) which adversely affect performance of the Product or interfere with MOTOROLA's normal warranty inspection and testing of the Product to verify any warranty claim.

F) Product which has had the serial number removed or made illegible.

G) Rechargeable batteries if:

(1) any of the seals on the battery enclosure of cells are broken or show evidence of tampering.

(2) 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.

H) Freight costs to the repair depot.

I) A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with MOTOROLA’s published specifications or the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from MOTOROLA.

J) Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.

K) Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS:

MOTOROLA 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 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:

A) that MOTOROLA will be notified promptly in writing by such purchaser of any notice of such claim;

B) that MOTOROLA will have sole control of the defense of such suit and all negotiations for its settlement or compromise; and

C) should the Product or parts become, or in MOTOROLA's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit MOTOROLA, 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.

MOTOROLA 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, nor will MOTOROLA have any liability for the use of ancillary equipment or software not furnished by MOTOROLA which is attached to or used in connection with the Product. The foregoing states the entire liability of MOTOROLA with respect to infringement of patents by the Product or any parts thereof.

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VII. GOVERNING LAW:

This Warranty is governed by the laws of the State of Illinois, U.S.A.

Notes

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