

**BUCKS COUNTY**

**9-1-1**  
**EMERGENCY**

**POLICE - FIRE - EMS**

*APX™ Two-Way Radios*

APX6500 05





## ❑ System Requirements

Component	Requirement
<b>Computer and processor</b>	Intel® Pentium® II 450MHz or faster processor.
<b>Memory</b>	128 megabytes (MB) of RAM or greater.
<b>Drive</b>	CD-ROM or DVD drive.
<b>Display</b>	Super VGA (800 × 600) or higher-resolution monitor.
<b>Operating system</b>	Microsoft® Windows Vista®. Microsoft Windows XP. Microsoft Windows 2000 with Service Pack 3 (SP3).
<b>Other</b>	Microsoft Office PowerPoint 2003 or above. Adobe Flash Player 9.0 or above.

Adobe Flash Player is required to run demos in this module.

Please download and install Adobe Flash Player from <http://get.adobe.com/flashplayer/>



This declaration is applicable to your radio **only** if your radio is labeled with the FCC logo shown below.

### 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: **APX 6500 O5**

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.



## ❑ Computer Software Copyrights

The Motorola products described in this manual may include copyrighted Motorola computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted computer programs, including, but not limited to, the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Motorola computer programs contained in the Motorola products described in this manual may not be copied, reproduced, modified, reverse-engineered, or distributed in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola, except for the normal non-exclusive license to use that arises by operation of law in the sale of a product.

## ❑ Documentation Copyrights

No duplication or distribution of this document or any portion thereof shall take place without the express written permission of Motorola. No part of this manual may be reproduced, distributed, or transmitted in any form or by any means, electronic or mechanical, for any purpose without the express written permission of Motorola.

## ❑ Disclaimer

The information in this document is carefully examined, and is believed to be entirely reliable. However, no responsibility is assumed for inaccuracies. Furthermore, Motorola reserves the right to make changes to any products herein to improve readability, function, or design. Motorola does not assume any liability arising out of the applications or use of any product or circuit described herein; nor does it cover any license under its patent rights, nor the rights of others.



## ❑ Product Safety and RF Exposure Compliance



### Caution

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet enclosed with your radio.

### ATTENTION!

**This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements.**

Before using this product, read the RF energy awareness information and operating instructions in the Product Safety and RF Exposure booklet enclosed with your radio (Motorola Publication part number 6881095C98) to ensure compliance with RF energy exposure limits.

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

<http://www.motorola.com/governmentandenterprise>



This Interactive End User Toolkit (IEUTK) covers the basic operation of the **APX™ 6500 O5 Mobile Radio**. 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.

## □ Notations Used in This Tutorial

Throughout the text in this tutorial, you will notice the use of **WARNING**, **Caution**, and **Note**. These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.



**WARNING**

An operational procedure, practice, or condition, etc., which may result in injury or death if not carefully observed.



**Caution**

An operational procedure, practice, or condition, etc., which may result in damage to the equipment if not carefully observed.

**Note:** An operational procedure, practice, or condition, etc., which is essential to emphasize.



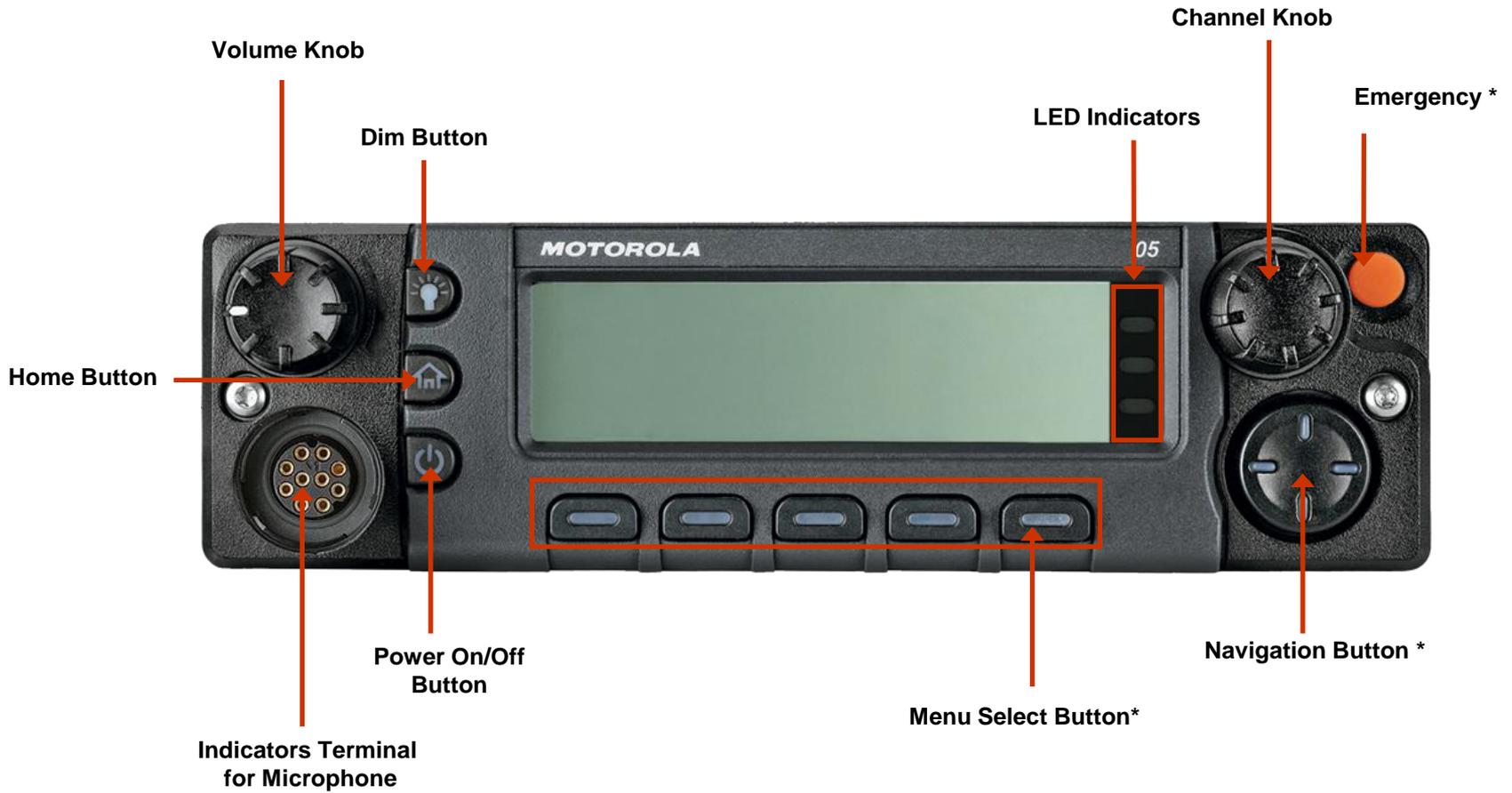
The following special notations identify certain items:

Example	Description
<p><b>Home</b> button or </p>	<p>Buttons and keys are shown in bold print or as an icon.</p>
<p><b>PHONE</b></p>	<p>Menu entries are shown similar to the way they appear on the radio's display.</p>
<p></p>	<p>This means "Press the right side of the 4-way Navigation button."</p>



# Home







Fleetmap

	Z1	Z2	Z3	Z4	Z5	Z6
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						
C9						
C10						
C11						
C12						
C13						
C14						
C15						
C16						



## □ Turning on the Radio

Press the **Power On/Off Button** briefly to power on the radio.

After a short time, the red, yellow and green LEDs light up. The display then shows Zone and channel text, and menu items display on the screen.

The backlight will turn on to the last selected dim level.

**Note:** Pressing the **Power On/Off Button** before the LED lights up will be ignored.

If **FAIL ###/##** appears in the display, the radio will not function until the condition has been corrected.

If **ERROR ###/##** appears, some non-critical data has been changed.

If **CH MISMATCH** appears, means that either the Control Head has been connected to an incompatible transceiver, or vice versa.

If your radio does not power up, contact your dealer.

*To turn off the radio, press the **Power On/Off Button** after the LEDs light up.*





## ❑ Validating Compatibility During Power Up

The radio validates and updates the software and hardware of your control head(s) during power up. Follow the procedure below when your radio runs this task.

**1** The display shows **MAINTENANCE MODE REMOTE DEVICE**; promptly followed by other maintenance statuses.

**2** The display shows **UPDATE DONE PLEASE RESET** upon completion.

### OR

The display shows **UPDATE FAILED PLEASE RESET** when it fails to update.

**3** Press the **Power On/Off Button** to reset. The radio runs the usual power up operation if the software update are complete.

### OR

The radio runs the Maintenance Mode if the update is not complete and repeat step 1.

**Note:** If **SW INCOMPLETE** appears, use Flashport Recovery Tool to update the control heads before you power on the radio again.





## □ Adjusting the Volume

To increase the volume, rotate the **Volume Knob** clockwise to increase the volume.

To decrease the volume, rotate the **Volume Knob** counterclockwise.





## ❑ Accessing the Preprogrammed Functions

### ❑ Using the Advance Programmable Buttons

**Mode Select Button** – Programs the current zone and channel to a Mode Select button with a long press on the Mode Select button. After the buttons are programmed, you can return to the preprogrammed zone and channel with a short press on the programmed Mode Select button.





## ❑ Accessing the Preprogrammed Functions (3/3)

### ❑ Using the Navigation Buttons

#### **Home Button**

The  button returns you to the home (default) display. In most cases, this is the current mode.

For selected radio features, the  button is also used to save user-edited radio settings or information before returning you to the Home screen.

**Note:** Some features do not require you to press  to go to the Home screen. Refer to the individual feature sections in this manual for further details on saving user-edited radio settings or information.

The  button also can revert to home channel. Check with your dealer or system administrator for more information.

#### **Data Feature Button**

Use this button to access data-related features, such as the Text Messaging Service (TMS) feature screen.

#### **4-Way Navigation Button**

Use this button to scroll through the radio's lists of **ZONES**

#### **Volume Knob**

Use this Volume Knob to adjust the volume of the speakers by turning it clockwise or counterclockwise.

#### **Channel Knob**

Use this Channel Knob to scroll the channels by turning it clockwise or counterclockwise.



## ❑ Status Icons (1/2)

	<b>Receiving</b> Radio is receiving a call or data.
	<b>Transmitting</b> Radio is transmitting a call or data.
	<b>Call Received</b> Radio has received an Individual Call.
	<b>Received Signal Strength Indicator (RSSI)</b> The number of bars displayed represents the received signal strength for the current site, for trunking only. The more stripes in the icon, the stronger the signal.
	<b>Direct</b> <ul style="list-style-type: none"> <li>• <b>On</b> = Radio is currently configured for direct radio to radio communication (during conventional operation only).</li> <li>• <b>Off</b> = Radio is connected with other radios through a repeater.</li> </ul>
	<b>Power Level</b> <ul style="list-style-type: none"> <li>• <b>L</b> = Radio is set at Low power.</li> <li>• <b>H</b> = Radio is set at High power.</li> </ul>

	<b>Priority-One Channel Scan</b> <ul style="list-style-type: none"> <li>• <b>Blinking dot</b> = Radio detects activity on channel designated as Priority-One.</li> <li>• <b>Steady dot</b> = Radio detects activity on channel designated as Priority-Two.</li> </ul>
	<b>Scan</b> Radio is scanning a scan list.
	<b>AES Secure Operation</b> <ul style="list-style-type: none"> <li>• <b>On</b> = AES Secure operation.</li> <li>• <b>Off</b> = Clear operation.</li> <li>• <b>Blinking</b> = Receiving an encrypted voice call.</li> </ul>
	<b>Location Signal</b> <ul style="list-style-type: none"> <li>• <b>On</b> = Location feature is enabled, and location signal is available.</li> <li>• <b>Off</b> = Location feature is disabled.</li> <li>• <b>Blinking</b> = Location feature is enabled, but no location signal is available.</li> </ul>
	<b>User Login Indicator (IP Packet Data)</b> <ul style="list-style-type: none"> <li>• <b>On</b> = User is currently associated with the radio.</li> <li>• <b>Off</b> = User is currently not associated with the radio.</li> <li>• <b>Blinking</b> = Device registration or user registration with the server failed due to an invalid username or pin.</li> </ul>



❑ Status Icons (2/2)

	<p><b>In-Call User Alert</b></p> <ul style="list-style-type: none"> <li>• <b>On</b> = The feature is enabled. Voice muting of the affiliated trunking talkgroup or selected conventional channel is activated.</li> <li>• <b>Off</b> = The feature is disabled. Voice muting of the affiliated trunking talkgroup or selected conventional channel is deactivated.</li> </ul>
	<p><b>Vote Scan Enabled</b> The vote scan feature is enabled.</p>
	<p><b>Secure Operation</b></p> <ul style="list-style-type: none"> <li>• <b>On</b> = Secure operation.</li> <li>• <b>Off</b> = Clear operation.</li> <li>• <b>Blinking</b> = Receiving an encrypted voice call.</li> </ul>
	<p><b>Data Activity</b> Data activity is present.</p>
	<p><b>View/Program Mode</b> Radio is in the view or program mode.</p> <ul style="list-style-type: none"> <li>• <b>On steady</b> = View mode</li> <li>• <b>Blinking</b> = Program mode</li> </ul>



## ❑ LED Indicators

The LED indicator shows the operational status of your radio.

<b>Solid red</b>	Radio is transmitting.
<b>Rapidly blinking red</b>	Radio has failed the self test upon powering up or encountered a fatal error.
<b>Solid yellow</b>	Channel is busy.
<b>Blinking yellow</b>	Radio is receiving a secured transmission.
<b>Solid green</b>	Radio is powering up, or is on a non-priority channel while in the Scan List Programming mode.
<b>Blinking green</b>	Radio is receiving an individual or telephone call, or is on a Priority-Two channel while in the Scan List Programming mode.
<b>Rapidly blinking green</b>	Radio is on a Priority-One channel while in the Scan List Programming mode.





## ❑ Intelligent Lighting Indicators

This feature temporary changes the backlight of the top display screen and the keypad, and adds a color bar to the main display screen to help signal that a radio event has occurred.

**Note:** This feature must be preprogrammed by a qualified radio technician.

Backlight and Bar Color	Notification	When
<b>Orange</b>	<b>Emergency Alerts</b>	The radio initiates an emergency alarm or call.
		The radio receives an emergency alarm or call.
<b>Red</b>	<b>Critical Alerts</b>	The radio is out of range.
		The radio enters failsoft mode.
		The radio is unable to establish a full connection with the system.
<b>Green</b>	<b>Call Alerts</b>	The radio receives a private call.
		The radio receives a phone call.
		The radio receives a call alert.
		The radio receives a selective call.

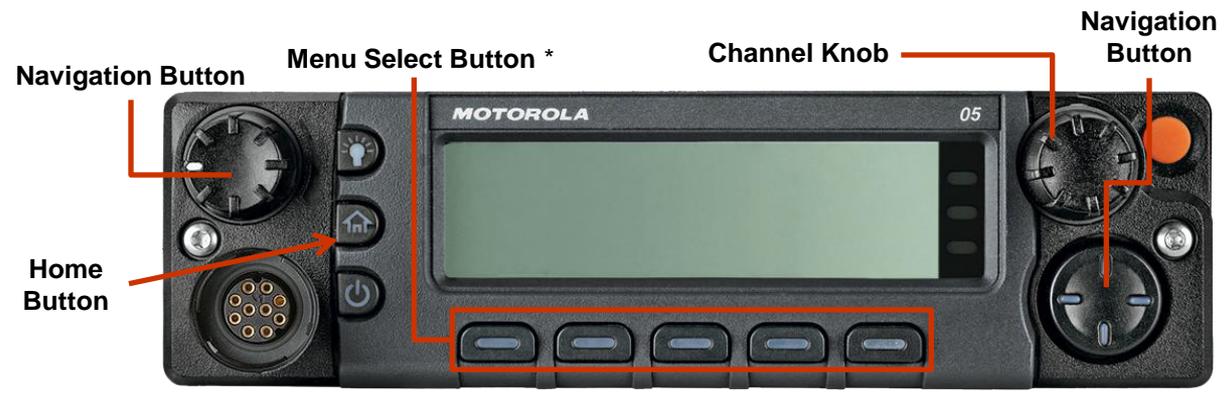


### ❑ Selecting a Zone

A zone is a group of channels.

**Note:** Your radio must be preprogrammed to allow you to use these features.

1  Or  for ZONE UP / ZONE DOWN on Navigation Button



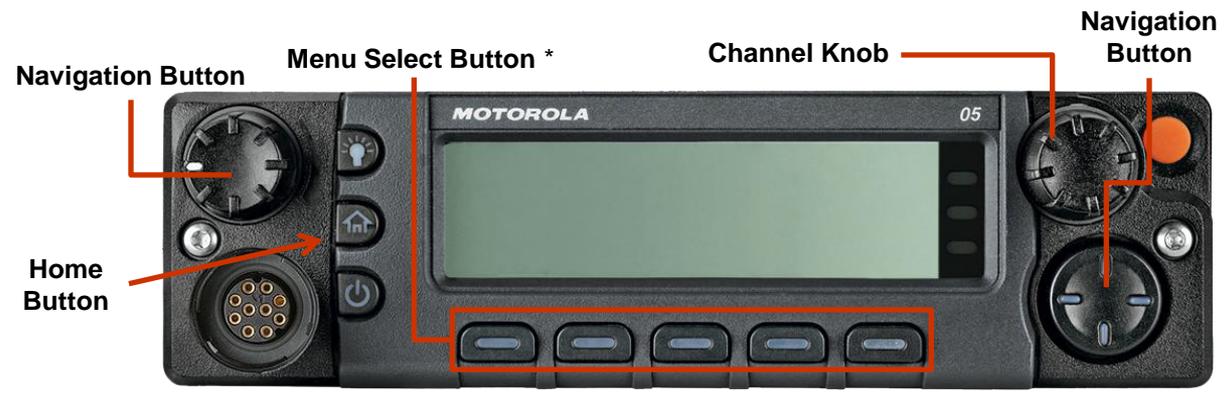


### ❑ Selecting a Radio Channel

A channel is a group of radio characteristics, such as transmit/ receive frequency pairs.

**Note:** Your radio must be preprogrammed to allow you to use this feature. If you select a channel that is not within the preprogrammed band, the radio indicates that it is on an unsupported frequency with both audio and visual warnings.

Rotate the **Channel knob** until the display shows the desired channel.





## ❑ Receiving and Responding to a Radio Call

Once you have selected the required channel and/or zone, you can proceed to receive and respond to calls.

*You see solid red while the radio is transmitting, and solid yellow when the radio is receiving a transmission (conventional mode only). There is no LED indication when the radio receives a transmission in trunking mode.*

*If the radio is receiving a secure transmission, the LED blinks yellow.*



## ❑ Receiving and Responding to a Talkgroup Call

To receive a call from a group of users, your radio must be configured as part of that talkgroup.

When you receive a talkgroup call (while on the Home screen), depending on how your radio is preprogrammed:

### 1 **ASTRO Conventional Only:**

The LED lights up solid yellow. The display shows the talkgroup alias or ID, and the caller alias or ID.

**OR**

### **Trunking Only:**

The display shows the caller alias or ID.

- 2 Hold the microphone vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
- 3 Press the **PTT** button to respond to the call. The LED lights up solid red.
- 4 Release the **PTT** button to listen.





❑ Repeater or Direct Operation

The **REPEATER** operation increases the radio’s range by connecting with other radios through a repeater. The transmit and receive frequencies are different.

The **DIRECT** or “talkaround operation” allows you to bypass the repeater and connect directly to another radio. The transmit and receive frequencies are the same.

Press the preprogrammed **Repeater/Direct** switch to toggle between talkaround and repeater modes.

- 1 ◀ or ▶ to **DIR**.
- 2 Press the **Menu Select** button directly below **DIR**.
- 3 The display shows **REPEATER MODE** if the radio is currently in Repeater mode.





❑ Requesting a Reprogram (Trunking, Digital Mode Only)

This feature lets you notify the dispatcher that you want a new dynamic regrouping assignment.

Press the preprogrammed **Reprogram Request** button to send reprogram request to the dispatcher and proceed to Step 3.

**OR**

1 ◀ or ▶ to **RPGM**.

2 Press the **Menu Select** button directly below **RPGM** to send reprogram request to the dispatcher.

3 The display shows **REPROGRAM RQST** and **PLEASE WAIT**.

4 If you hear five beeps, the dispatcher has acknowledged the reprogram request. The display shows **ACK RECEIVED** and the radio returns to the Home screen.

**OR**

If the dispatcher does not acknowledge the reprogram request within six seconds, a low-pitched alert tone sounds and the display shows

**NO ACKNOWLEDGE.**

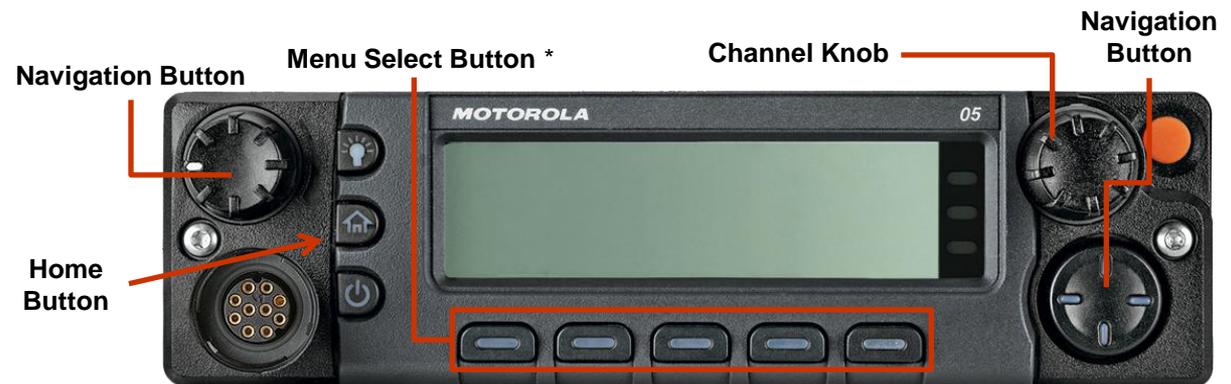
Try again or press  to cancel and return to the Home screen.





## □ Viewing a Scan List

- 1 ◀ OR ▶ to **SCNL**.
- 2 Press the **Menu Select** button directly below **SCNL**.
- 3 ◀ OR ▶ to view the members on the list.
- 4 Press the 🏠 to exit the current display and return to the Home screen.





## □ Editing the Scan List

This feature lets you change scan list members and priorities.

Long press the preprogrammed **Scan List Programming** button and proceed to Step 3.

**OR**

1 ◀ or ▶ to **SCNL**.

2 Press the **Menu Select** button directly below **SCNL**.

The display shows the lists that can be changed.

3 ◀ or ▶ to the entry you want to edit.

4 Press the **Menu Select** button directly below **SEL** to add and/or change the priority of the currently displayed channel in the scan list.

**OR**

Press the **Menu Select** button directly below **DEL** to delete the currently displayed channel from the scan list.

**OR**

Press the **Menu Select** button directly below **RCL** to view the next member of the scan list.

5 ◀ OR ▶ to select more channels to be added or deleted.

**OR**

Use the keypad to go directly to additional channels to be added or deleted.

**OR**

Use the **Channel Knob** to select additional channels to be added or deleted.

6 Press  to exit scan list programming and return to the Home screen.



❑ Changing the Scan List Status

- 1 Long press the preprogrammed **Scan** side button.
  - 2 The display shows the programming mode icon and the first list member.
  - 3 ◀ or ▶ to the number you want to edit.
  - 4 Press the ✓ button or press the **Menu Select** button directly below **SEL** once to add the currently displayed channel to the scan list.
- OR**
- Press the ✓ button or press the **Menu Select** button directly below **SEL**, one or more times to change the scan list status icon of the currently displayed channel.

- 5 ◀ OR ▶ to select more list members whose scan status you want to change.
- OR**
- Use the keypad to go directly to that scan list member.
- OR**
- Use the **Channel Knob** to select another scan list member.
- 6 Press 🏠 to exit scan list programming and return to the Home screen.





❑ Viewing and Changing the Priority Status

1 At the below **SEL**, **DEL**, and **RCL** screen, press the **Menu Select** button directly below **SEL** to view and/or change the priority status of the currently displayed channel.

**OR**

At the below **SEL**, **DEL**, and **RCL** screen, press the ✓ button or press the **Menu Select** button directly below **SEL**, one or more times to view and/or change the scan list status icon of the currently displayed channel.

2 A Scan icon indicates that the current channel is in the scan list as a non-priority channel. The LED lights up solid green.

**OR**

A Priority-Two Channel Scan icon indicates that the current channel is in the scan list as the Priority-Two channel. The LED blinks green.

**OR**

A Priority-One Channel Scan icon indicates that the current channel is in the scan list as the Priority-One channel. The LED rapidly blinks green. You hear all traffic on the Priority- One channel, regardless of traffic on non-priority channels.

**OR**

No icon indicates that the current channel is deleted from the scan list.





### Turning Scan On or Off

Press the preprogrammed **Scan** button.

**OR**

1 ◀ or ▶ to **SCAN**.

2 Press the **Menu Select** button directly below **SCAN**.

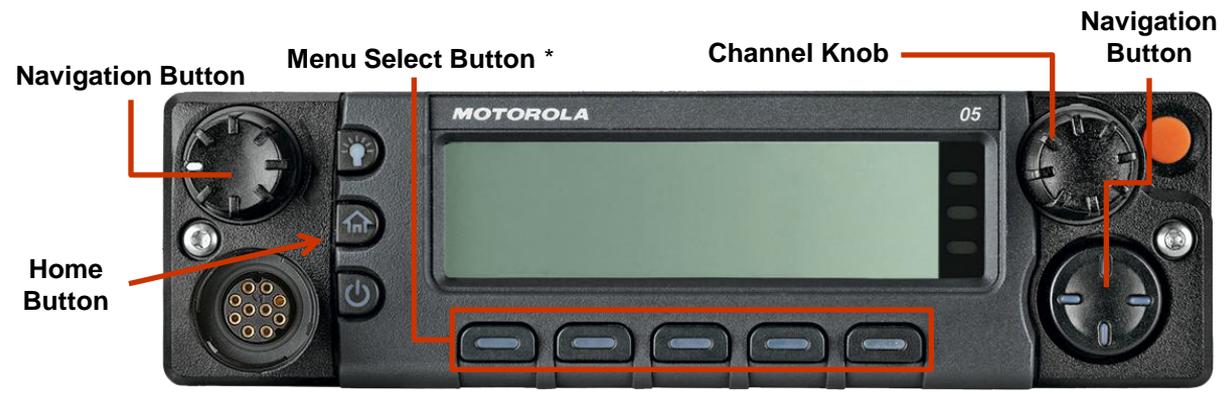
3 The display shows **SCAN OFF** if scan is disabled.

Press the **Menu Select** button directly below **SCAN** to enable scan.

**OR**

The display shows **SCAN ON** and the scan status icon if scan is enabled. Press the **Menu Select** button directly below **SCAN** to disable scan.

4 The radio returns to the Home screen.



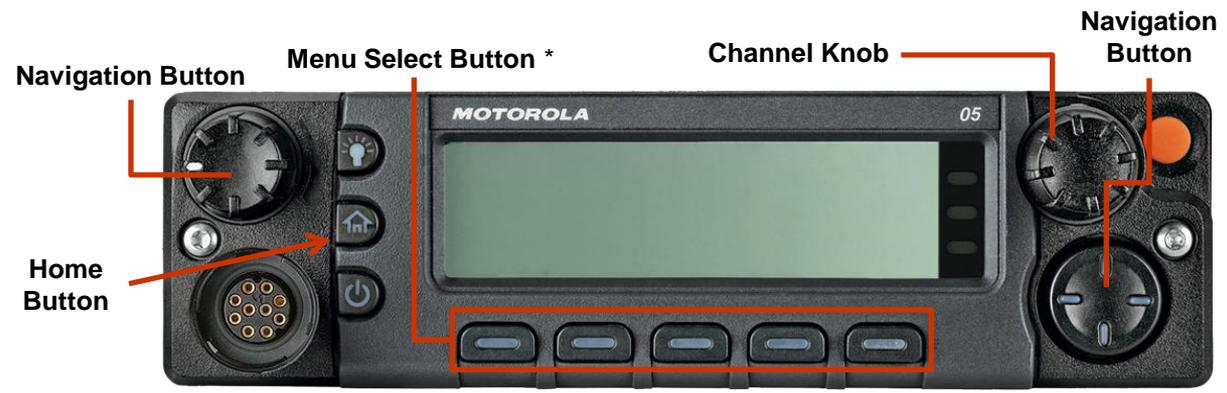


### ❑ Transmitting While the Scan is On

#### **Radio Programmed for Non-Talkback Scan**

- 1 Press the **PTT** button at any time to transmit on the selected channel or fixed channel.

To make a Call Alert page, or Private Conversation call while scanning, press either the **Menu Select** button directly below **PAGE** or **CALL**. The call is entered on the selected channel and scanning is halted until the call is exited by pressing  or pressing the **Menu Select** button below either **PAGE** or **CALL**.





## ❑ Deleting a Nuisance Channel

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 priority channels or the designated transmit channel.

- 1 When the radio is locked onto the channel to be deleted,  
◀ or ▶ to **NUIS**.
- 2 Press the **Menu Select** button directly below **NUIS**.
- 3 Press the **Menu Select** button directly below **DELETE**.





## ❑ Restoring a Nuisance Channel

To restore the deleted nuisance channel, do **one** of the following:

- Turn scan off, then on.

**OR**

- Change modes.

**OR**

- Turn off the radio, and then turn it back on.

*Nuisance mode delete can be disabled by the system administrator.*



## □ Sending an Emergency Alarm

This feature allows you to send a data transmission, which identifies the radio sending the emergency, to the dispatcher.

1 Press preprogrammed **Emergency** button. A tone sounds and the display alternates **EMERGENCY** and the home display.

2 A dispatcher acknowledgment **ACK RECEIVED** display follows.

### **AND, Trunking Only:**

A high-pitched tone indicates that the alarm has been received by the trunked system's central controller.

3 The radio automatically returns to normal operation. No further action is required.





## □ Sending an Emergency Alarm with Emergency Call

This feature allows you send an Emergency Alarm to another radio. Upon acknowledgement, both radios can communicate over a preprogrammed Emergency channel.

If the radio has both emergency call and alarm features, it automatically proceeds to the call mode after the alarm is acknowledged.

- 1 Press the preprogrammed **Emergency** button to activate the emergency call/alarm feature.
- 2 The display alternates **EMERGENCY** and the home display.
- 3 A high-pitched tone sounds, indicating that the alarm has been received by the trunked system's central controller.

A dispatcher acknowledgment (four high-pitched tones) follows, accompanied by an **ACK RECEIVED** display.

- 4 Hold the microphone vertically 1 to 2 inches (2.0 to 2.5 cm) from your mouth.
- 5 Press and hold the **PTT** button. Speak clearly into the microphone.
- 6 Release the **PTT** to end the transmission.
- 7 Press and hold the preprogrammed Emergency button until a tone sounds to exit Emergency mode.

*Turning the radio off also cancels the emergency state.*



## ❑ Special Considerations for Emergencies

- If you press the emergency button while in a channel that has no emergency capability, a low-pitched tone sounds.
- If the unit is out of the range of the system and/or the emergency alarm is not acknowledged, a tone sounds and the display shows **NO ACKNOWLEDGE**.
- If you press the emergency button, then change to a mode that has no emergency capability, the display shows **NO EMERGENCY** and a continuous low-pitched tone sounds until a valid emergency mode is selected or until the emergency is cancelled.
- When an emergency is active, changing to another mode where emergency is enabled (trunked or conventional) causes an emergency alarm and/or emergency call to be active on the new mode.





## □ The Outdoor Location Feature (Using GPS)

### *Accessing the Outdoor Location Feature (1/2)*

**Note:** An **ON** menu key may be present on the location menu if it is preprogrammed by the dealer or system administrator.

1 ◀ or ▶ to **LOC**.

2 Press the **Menu Select** button directly below **LOC**.

The display shows

**LOCATION OFF <LATITUDE>**.

3 ◀ or ▶ to check the longitude, time and date of the last successful location fix.

4 Press the **Menu Select** button directly below **ON** to turn on the GPS. The display shows

**PREVIOUS LOC <LATITUDE>**.

5 Press the **Menu Select** button directly below **RFSH** to obtain a new location fix.

6 The top line temporarily displays **PLEASE WAIT** while the new location is being determined.

While the new location is being determined, the location signal can be a solid or blinking icon.

7 Once the location coordinates are fixed, the display shows the current latitude. Toggle to see the longitude, time and date.

The location coordinates are updated automatically every five seconds while the location signal is present.

8 Press the **Menu Select** button directly below **EXIT** to exit the feature and return to the main screen.

**OR**

Press  or the **PTT** button (if preprogrammed) to exit this menu.



## ❑ The Outdoor Location Feature (Using GPS)

### Accessing the Outdoor Location Feature (2/2)

OR

Follow the procedure below to turn off the GPS (This feature is enabled by a qualified radio technician.):

- 1 ◀ Or ▶ to **LOC**.
- 2 Press the **Menu Select** button directly below **LOC**.  
The display shows **PREVIOUS LOC**  
**<LATITUDE>**.
- 3 ◀ Or ▶ to check the longitude, time and date of the last successful location fix.
- 4 Press the **Menu Select** button directly below **OPTN**.
- 5 ◀ Or ▶ to **TURN OFF GPS** (if preprogrammed).
- 6 Press the **Menu Select** button directly below **SEL** to turn off the GPS. The display shows **LOCATION OFF**.

- 7 Press the **Menu Select** button directly below **EXIT** to exit the feature and return to the main screen.

OR

Press  or the **PTT** button (if preprogrammed) to exit this menu.

*The radio also exits the menu if the emergency button is pressed.*



## ❑ The Outdoor Location Feature (Using GPS)

### ***Saving a Waypoint***

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ or ▶ to **SAVE AS WAYPT** and press the **Menu Select** button directly below **SEL**.
- 3 A blinking cursor appears in the screen. Use the keypad to type the alias via multi-tap.  
Press ◀ to move one space to the left.  
Press ▶ to move one space to the right.  
Press the **Menu Select** button below **DEL** to delete any unwanted characters.  
Press (\*) to add a space.  
Press (0) to toggle between mixed case mode, uppercase mode, and lowercase mode.

Press (#) to toggle between numeric and letter mode.

- 4 Press the **Menu Select** button directly below **OK** once you are done. The display shows **SAVED AS <WAYPOINT NAME>**.  
**OR**  
Press the **Menu Select** button directly below **CNCL** to return to previous screen.
- 5 Press 🏠 or the **PTT** button (if preprogrammed) to exit this menu.  
**OR**  
Press **PTT** button (if preprogrammed) to return to **Home** screen.



❑ The Outdoor Location Feature (Using GPS)

**Viewing a Saved Waypoint**

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ or ▶ to **WAYPOINTS**.
- 3 Press the **Menu Select** button directly below **SEL**.
- 4 ◀ Or ▶ to desired waypoint.
- 5 Press the **Menu Select** button directly below **OPTN**.  
The display shows **VIEW**.
- 6 Press the **Menu Select** button directly below **SEL**.
- 7 ◀ Or ▶ again to view longitude, time and date the waypoint was detected.

- 8 Press the **Menu Select** button directly below **BACK** to return to previous Waypoint screen.

**OR**

Press  or the **PTT** button (if preprogrammed) to exit this menu.





## □ The Outdoor Location Feature (Using GPS)

### *Editing the Alias of a Waypoint*

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ or ▶ to **WAYPOINTS**.
- 3 Press the **Menu Select** button directly below **SEL**.
- 4 ◀ or ▶ to desired waypoints.
- 5 Press the **Menu Select** button directly below **OPTN**.
- 6 ◀ or ▶ to **EDIT NAME** and press the **Menu Select** button directly below **SEL**.
- 7 A blinking cursor appears in the **Edit Name** screen.  
Use the keypad to edit the alias.  
Press ◀ to move one space to the left.  
Press ▶ to move one space to the right.  
Press the **Menu Select** button below **DEL** to delete

any unwanted characters.

Press (★) to add a space.

Press (0) to toggle between mixed case mode, uppercase mode, and lowercase mode.

Press (#) to toggle between numeric and letter mode.

- 8 Press the **Menu Select** button directly below **OK** once you are done.

**OR**

Press the **Menu Select** button directly below **CNCL** to return to the Waypoints main screen.

- 9 The display shows <WAYPOINT NAME>

**UPDATED.**

- 10 Press 🏠 or the **PTT** button (if preprogrammed) to exit this menu.



❑ The Outdoor Location Feature (Using GPS)

**Editing the Coordinates of a Waypoint (1/2)**

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ or ▶ to **WAYPOINTS** and press the **Menu Select** button directly below **SEL**.
- 3 ◀ Or ▶ to desired waypoints.
- 4 Press the **Menu Select** button directly below **OPTN**.
- 5 ◀ Or ▶ to **EDIT Location** and press the **Menu Select** button directly below **SEL**.
- 6 The first number blinks.  
 Press ◀ to move to the next number/coordinates.  
 Press ▶ to move back to the previous number/coordinates.  
 Press ▲ or ▼ to change the North (N), South (S), East (E) or West (W) direction.

Press the **Menu Select** button below **EDIT** to change the number/coordinates.

- 7 A blinking cursor appears in the **Edit Location** screen.  
 Press ◀ to move one space to the left.  
 Press ▶ to move one space to the right.  
 Press the **Menu Select** button below **Del** to delete any unwanted characters.
- 8 Press the **Menu Select** button directly below **OK** once you are done.  
**OR**  
 Press the **Menu Select** button directly below **CNCL** to return to the previous screen.
- 9 Press the **Menu Select** button directly below **OK** once you are done with the new coordinates.





## ❑ The Outdoor Location Feature (Using GPS)

### *Editing the Coordinates of a Waypoint (2/2)*

10 The display shows **[HOME] UPDATED** and the radio returns to the Waypoints main screen.

**OR**

The display shows **[DESTINATION] UPDATED** and the radio returns to the Waypoints main screen.

11 Press the **Menu Select** button directly below **CNCL** to return to the Waypoints main screen.

**OR**

Press  or the **PTT** button (if preprogrammed) to exit this menu.





❑ The Outdoor Location Feature (Using GPS)

**Deleting a Single Saved Waypoint**

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ or ▶ to **WAYPOINTS**.
- 3 Press the **Menu Select** button directly below **SEL**.
- 4 ◀ or ▶ to desired waypoints.
- 5 Press the **Menu Select** button directly below **OPTN**.  
**OR**  
Press the **Menu Select** button directly below **DEL** and then skip to step 7.
- 6 ◀ or ▶ to **DELETE**.
- 7 The display shows <WAYPOINT NAME> **CONFIRM DEL?**.

- 8 Press the **Menu Select** button directly below **YES** to delete.

The display shows <WAYPOINT NAME> **DELETED**.

- 9 Press the **Menu Select** button directly below **NO** to return to previous Waypoint screen.

**OR**

Press or the **PTT** button (if preprogrammed) to exit this menu.





❑ The Outdoor Location Feature (Using GPS)

**Deleting All Saved Waypoint**

- 1 ◀ Or ▶ to **LOC**.
- 2 Press the **Menu Select** button directly below **LOC**.
- 3 Press the **Menu Select** button directly below **OPTN**.
- 4 ◀ Or ▶ to **WAYPOINTS**.
- 5 Press the **Menu Select** button directly below **SEL**.
- 6 ◀ or ▶ to desired waypoints.
- 7 Press the **Menu Select** button directly below **OPTN**.
- 8 ◀ Or ▶ to **DELETE ALL**. The display shows **ALL SAVED WAYP CONFIRM DEL?**.
- 9 Press the **Menu Select** button directly below **YES** to delete.  
The display shows **ALL SAVED WAYP DELETED**.

- 10 Press the **Menu Select** button directly below **BACK** to return to previous Waypoint screen.  
**OR**  
Press or the **PTT** button (if preprogrammed) to exit this menu.





❑ The Outdoor Location Feature (Using GPS)

**Measuring the Distance and Bearing from a Saved Waypoint**

While in the current location display:

- 1 Press the **Menu Select** button directly below **OPTN**.
- 2 ◀ Or ▶ to **DIST FRM HERE** and press the **Menu Select** button directly below **SEL**.
- 3 ◀ or ▶ to the required waypoint, and press the **Menu Select** button directly below **SEL**.
- 4 The display shows the distance and bearing from the current to the selected coordinates.

- 5 Press the **Menu Select** button directly below **BACK** to return to the previous Waypoint screen.

**OR**

Press  or the **PTT** button (if preprogrammed) to exit this menu.





## ❑ Using the Failsoft System

The failsoft system ensures continuous radio communications during a trunked system failure. If a trunking system fails completely, the radio goes into failsoft operation and automatically switches to its failsoft channel.

The failsoft condition is indicated by a faint beeping tone every nine seconds (radio unquenched) until the trunking system returns to normal operation.

To continue, in Failsoft, to communicate with other talkgroups, refer to the following procedure.

- 1 Rotate the **Channel Knob** to change to a different repeater frequency.
- 2 Press the **PTT** button to talk, and release the button to listen.

*When the trunking system returns to normal operation, your radio automatically leaves failsoft operation and returns to trunked operation.*





## ❑ Going Out-of-Range

**OUT OF RANGE** when your radio goes out of the range of the system, it can no longer lock onto a control channel.

1 A low-pitched tone sounds.

**AND/OR**

The display shows the currently selected zone/channel combination and **OUT OF RANGE**.

2 Your radio remains in this out-of-range condition until:

It locks onto a control channel.

**OR**

It locks onto a failsoft channel.

**OR**

It is turned off.



## ❑ Controlling the Display Backlight

You can enable or disable the radio's display backlight as needed, if poor light conditions make the display difficult to read.

Depending on how your radio is preprogrammed, you can also maintain a minimum backlight level on the radio's display.

**Note:** The backlight setting also affects the Menu Select buttons, the Menu Navigation buttons and the keypad backlighting accordingly.

Press the  button to toggle the backlight off or on.

**OR**

Press any key of the keypad, the **Menu Select** or **Menu Navigation** buttons, or any programmable radio controls or buttons to turn the backlight on.





## ❑ Using the Time-Out Timer

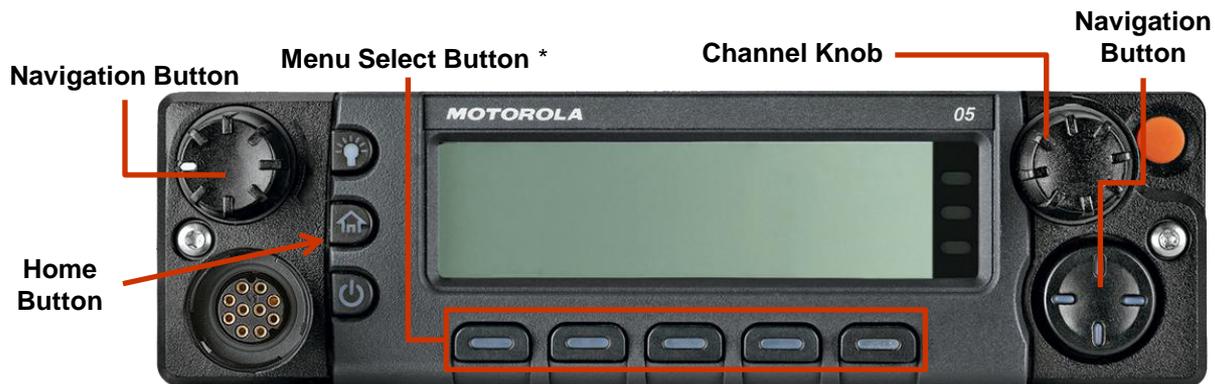
This feature turns off your radio's transmitter. You cannot transmit longer than the preset timer setting.

If you attempt to do so, the radio automatically stops your transmission, and you hear a talk-prohibit tone.

The timer is defaulted at 60 seconds, but it can be preprogrammed from 3 to 120 seconds, in 15-second intervals, or it can be disabled entirely for each radio mode, by a qualified radio technician.

**Note:** You will hear a brief, low-pitched, warning tone four seconds before the transmission times out.

- 1 Hold down the **PTT** button longer than the preprogrammed time. You hear a short, low-pitched warning tone, the transmission is cut-off, and the LEDs goes out until you release the **PTT** button.
- 2 Release the **PTT** button. The LEDs relight and the timer resets.
- 3 Press the **PTT** button to re-transmit. The time-out timer restarts and the red LED lights up.

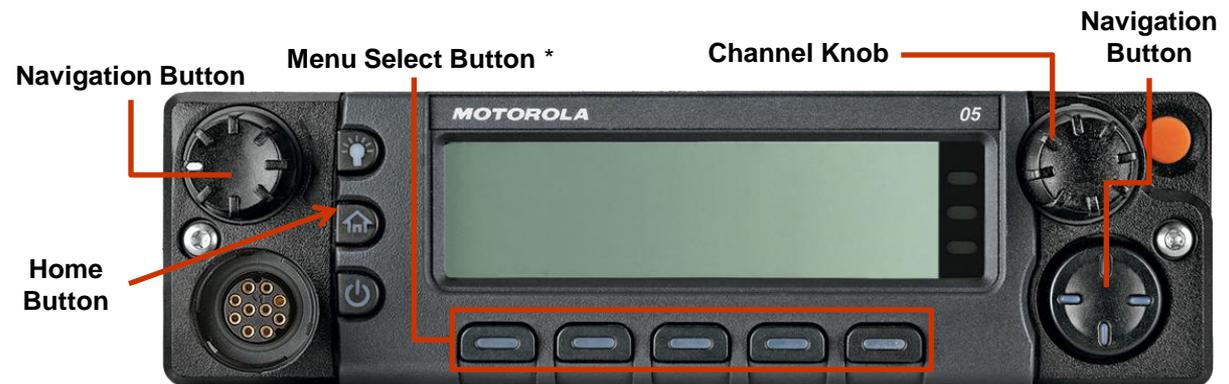




## □ Accessing General Radio Information

### *Accessing Radio Information (2/2)*

- 1 ◀ or ▶ to **INFO**.
  - 2 Press the **Menu Select** button directly below **INFO**.
  - 3 ◀ or ▶ to **RADIO INFO** and press the **Menu Select** button directly below **SEL**.
  - 4 The display shows the Information screen.
  - 5 ◀ or ▶ to scroll through the various information.
- OR**
- Press the **Menu Select** button directly below **BACK** to return to previous screen.
- OR**
- Press  to exit and return to the home display.





❑ Accessing General Radio Information

**Viewing IP Information**

This feature displays the device name, IP address, and status of your radio.

**Note:** The device name of your radio is preprogrammed. Check with your dealer or system administrator for more information.

Press the preprogrammed Info button and proceed to Step 3.

**OR**

1 ◀ OR ▶ to **INFO**.

2 Press the **Menu Select** button directly below **INFO**.

3 ◀ OR ▶ to **IP INFO** and press the **Menu Select** button directly below **SEL**.

4 ◀ OR ▶ to scroll through the various information.

**OR**

Press the **Menu Select** button directly below **BACK** to return to previous screen.

**OR**

Press  to exit and return to the Home display.





❑ Accessing General Radio Information

**Viewing IP Information**

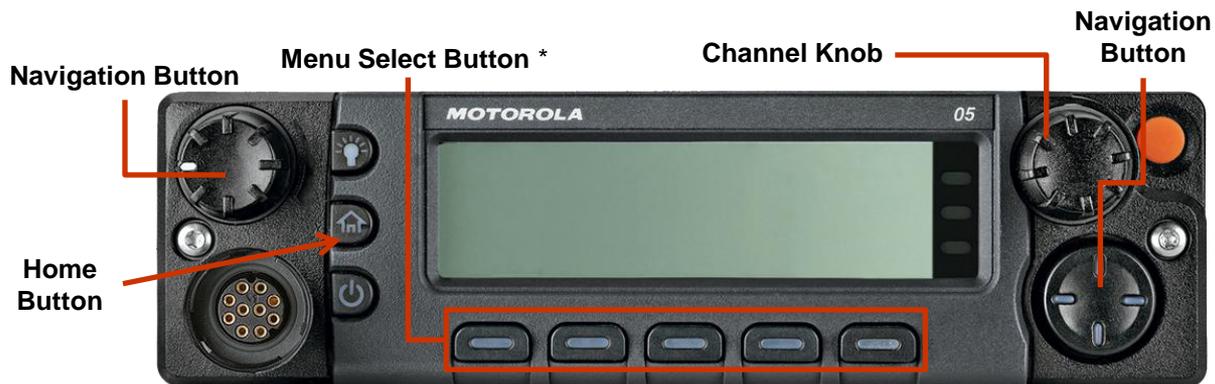
This feature displays the device name, IP address, and status of your radio.

**Note:** The device name of your radio is preprogrammed. Check with your dealer or system administrator for more information.

Press the preprogrammed Info button and proceed to Step 3.

**OR**

- 1 ◀ OR ▶ to **INFO**.
  - 2 Press the **Menu Select** button directly below **INFO**.
  - 3 ◀ OR ▶ to **IP INFO** and press the **Menu Select** button directly below **SEL**.
  - 4 ◀ OR ▶ to scroll through the various information.
- OR**
- Press the **Menu Select** button directly below **BACK** to return to previous screen.
- OR**
- Press  to exit and return to the Home display.





## □ Viewing Control Assignments

This feature displays the programmable radio functions assigned to the controls of your radio for the currently selected channel.

1 ◀ Or ▶ to **INFO**.

2 Press the **Menu Select** button directly below **INFO**.

3 ◀ Or ▶ to **CONTROL MAP** and press the **Menu Select** button directly below **SEL**.

4 ◀ Or ▶ to scroll through the various information.

**OR**

Press the **Menu Select** button directly below **BACK** to return to previous screen.

**OR**

Press  to exit and return to the Home display.





## □ Viewing Control Assignments

### *Editing the Soft ID*

This feature allows you to change your username.

**Note:** Your radio must be preprogrammed to allow you to use this feature.

Press the preprogrammed **Info** button and proceed to Step 3.

**OR**

1 ◀ Or ▶ to **INFO**.

2 Press the **Menu Select** button directly below **INFO**.

3 ◀ Or ▶ to **SOFT ID** and press the **Menu Select** button directly below **SEL**.

4 The display shows the current Soft ID.

5 Press the **Menu Select** button directly below **EDIT** to edit the current Soft ID.

**OR**

Press the **Menu Select** button directly below **BACK** to return to the previous screen.

6 A blinking cursor appears in the **EDIT SOFT ID** screen.

Use the keypad to edit the text.

Press ◀ to move one space to the left.

Press ▶ to move one space to the right.

Press the **Menu Select** button below **DEL** to delete any unwanted characters.

Press (★) to add a space.

Press (0) to toggle between mixed case mode, uppercase mode, and lowercase mode.

Press (#) to toggle between numeric and letter mode.

7 Press the **Menu Select** button directly below **OK** to save the new Soft ID and return to the previous screen.

**OR**

Press the **Menu Select** button directly below **CNCL** to return to the previous screen.