APX™ TWO-WAY RADIOS
APX 7000XE
MODEL 3.5
INTERACTIVE END USER TOOLKIT (IEUTK)
DECLARATION OF CONFORMITY

Per FCC CFR 47 Part 2 Section 2.1077(a)

Responsible Party
Name: Motorola Solutions, Inc.
Address: Motorola Solutions, Inc., 1303 East Algonquin Road Schaumburg, IL60196, U.S.A.
Phone Number: 1-800-927-2744
Hereby declares that the product:
  Model Name: **APX 7000XE**
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.
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 6881095C99) to ensure compliance with RF energy exposure limits.

For a list of Motorola-approved antennas and other accessories, visit the following website: http://www.motorola.com/APX
All the features described in the following sections are supported by the radio's software version **R07.00.00** or later. See **Accessing Radio Information** to determine your radio's software version. Check with your dealer or system administrator for more details of all the features supported.

**Notice to Users (FCC and Industry Canada)**

This device complies with Part 15 of the FCC rules and RSS 210 of the Industry Canada rules per the conditions listed below:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. Changes or modifications made to this device, not expressly approved by Motorola, could void the user’s authority to operate this equipment.
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This Interactive End User Toolkit (IEUTK) covers the basic operation of the APX 7000XE Model 3.5. 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.

Adobe Flash player is required to run the demos included with this kit. Please refer to the Adobe website (http://get.adobe.com/flashplayer/) to update/download/install the Adobe Flash Player.

**Notations Used in This Tutorial**

Throughout the text in this toolkit, 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.

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

- Antenna
- Secondary Speaker
- 16-Position Select Knob*
- On/Off/Volume Control Knob
- 3-Position A/B/C Switch*
- Secondary Speaker
- 4-Way Navigation Button
- Main Display
- Menu Select Buttons
- Data Feature Button
- Home Button
- Keypad
- Microphone

* These radio controls/buttons are programmable.
RADIO PARTS AND CONTROLS

Top Side Button
- ZONE UP

Side Button 1
- Scan

Side Button 2
- Nuisance Delete

16-Position Select Knob*

On/Off/Volume Control Knob

Top (Orange) Button

Top Display

Push-to-Talk (PTT) Button
- to Talk (PTT) Button

Top (Orange)

Microphone

Main Speaker

Accessory Connector

Battery

Battery Latch

Antenna

* These radio controls/buttons are programmable.
RADIO PARTS AND CONTROLS

- 3-Position A/B/C Switch
  - Not Programmed
- On/Off/Volume Control Knob
- 16-Position Select Knob*
- 2-Position Concentric Switch
  - Position A = Talkaround / Direct
- Antenna
- LED
- Top Display
- Top (Orange) Button
  - Emergency

*Note: The Select Knob is labeled as Select Knob* in the image, indicating that it has a special function or setting.
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</table>
Charging the Battery

The Motorola-approved battery shipped with your radio is uncharged. Prior to using a new battery, charge it for a minimum of 16 hours to ensure optimum capacity and performance.

**Note:** When charging a battery attached to a radio, turn the radio off to ensure a full charge.

**Battery Charger**

To charge the battery, place the battery, with or without the radio, in a Motorola-approved charger. The charger’s LED indicates the charging progress; see your charger’s user guide.

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**To avoid a possible explosion:**
- **DO NOT** replace the battery in any area labeled “hazardous atmosphere”.
- **DO NOT** discard batteries in a fire.
Attaching/Removing the Battery

With the radio turned off, slide the battery into the radio’s frame until side latches click into place.

To remove the battery, turn the radio off. Squeeze the release latches at the bottom of the battery until the battery releases from the radio. Remove the battery from the radio.

**Note:** If your radio is preprogrammed with volatile-key retention, the encryption keys are retained for approximately 30 seconds after battery removal.

Check with your dealer or system administrator for more information.
Attaching/Removing the Antenna

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

To remove the antenna, turn the antenna counterclockwise. Make sure you turn off the radio first.
Attaching/Removing the Accessory Connector Cover

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

**Note:** To prevent damage to the connector, shield it with the connector cover when not in use. Accessory Connector Cover must be fully secured to meet the salt water submersion specification.

1. Slide the Accessory Connector Cover over the antenna and position at the base of the antenna.
2. Insert the hooked end of the cover into the slot above the connector.
3. Press downward on the cover’s top to seat it in the slot.
4. Once in place, tighten by rotating the thumbscrew clockwise by hand.

To remove the accessory connector cover, rotate the thumbscrew counterclockwise until it disengages from the radio. If the thumbscrew is too tight, use an Allen wrench to loosen it first. Rotate and lift the connector cover to disengage it from the radio.
Using the Carry Holder

Position the radio within the carry holder with the main speaker facing outward.

Slide the radio down into the carry holder until it clicks in place.

To remove the radio from the carry holder, place the tip of your fingers on the ledge of the carry holder and push at the bottom of the radio until the radio is released from it.
### Turning on/off the Radio

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

If the power-up test is successful, you see **SELFTEST** on the radio’s display momentarily, followed by the Home screen.

**Note:** If the power-up test is unsuccessful, you see **Error XX/YY** (**XX/YY** is an alphanumeric code). Turn off the radio, check the battery, and turn the radio back on. If the radio fails the power-up test again, record the **Error XX/YY** code and contact your dealer.

**Note:** If the power-up test is successful, but you see **Hardware board absent** or **Hw Board Mismatch**. Then, send the radio to the qualified technician to fix this error.

If the power-up test is successful, but you see, **Hw Board Failed** or **Man-Down Hw Error**, send the radio to the qualified technician to fix this error.

To turn off your radio, rotate the **On/Off/Volume Control Knob** counterclockwise until you hear a click.

*Any issues, please contact our Tech. Staff for assistance!*
Adjusting the Volume

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

To decrease the volume, turn this knob counterclockwise.

**Note:** Ensure that the main speaker is pointed towards you for increased loudness and intelligibility, especially in areas with loud background noises.
Accessing the Preprogrammed Functions

You can access various radio functions through one of the following ways:
- A short or long press of the relevant programmable buttons.
- Use the Menu Select Buttons ( , , and ).

Using the Menu Select Buttons

The Menu Select Buttons allow you to access the menu entries of features.

Note: Check with your dealer or system administrator for the list of features activated in your radio.

Your radio may be preprogrammed differently from the following example, but the steps for selecting a channel may appear as shown below:
- Press the Menu Select button ( ) directly below Chan.
Using the Navigation Buttons

Home Button

The button returns you to the Home (default) screen. 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.

4-Way Navigation Button

Use this button to scroll up, down, left or right. Press and release one of the button to scroll from one entry to the next one. Press and hold one of the button to have the radio toggles through the list automatically (release the button to stop).
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.
Status Icons

The 240 x 320 pixel front liquid crystal display (LCD) of your radio shows radio status, text entries, and menu entries. The top two display rows contain color icons that indicate radio operating conditions.

The following are the icons that appear on the radio’s display.

- **Receiving**
  - Radio is receiving a call or data.

- **Transmitting**
  - Radio is transmitting a call or data.

- **Battery**
  - For IMPRES battery operation only – the icon shown indicates the charge remaining in the battery.
  - For all battery operation – the icon blinks when the battery is low.

- **Received Signal Strength Indicator (RSSI)**
  - 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.

- **Direct**
  - **On** = Radio is currently configured for direct radio-to-radio communication (during conventional operation only).
  - **Off** = Radio is connected with other radios through a repeater.

- **Monitor (Carrier Squelch)**
  - Selected channel is being monitored (during conventional operation only).

- **Power Level**
  - **L** = Radio is set at Low power.
  - **H** = Radio is set at High power.
IDENTIFYING STATUS INDICATORS

Scan
Radio is scanning a scan list.

Priority Channel Scan
- **Blinking dot** = Radio detects activity on channel designated as Priority-One.
- **Steady dot** = Radio detects activity on channel designated as Priority-Two.

View/Program Mode
Radio is in the view or program mode.
- **On steady** = View mode.
- **Blinking** = Program mode.

Secure Operation
- **On** = Secure operation.
- **Off** = Clear operation.
- **Blinking** = Receiving an encrypted voice call.

AES Secure Operation
- **On** = AES Secure operation.
- **Off** = Clear operation.
- **Blinking** = Receiving an encrypted voice call.

Location Signal
- **On** = Location feature is enabled, and location signal is available.
- **Off** = Location feature is disabled.
- **Blinking** = Location feature is enabled, but no location signal is available.
LED Indicator

The LED indicator shows the operational status of your radio.
Solid red – Radio is transmitting.

Blinking red – Radio is transmitting at low battery condition.

Rapidly blinking red – Radio has failed the self test upon powering up or encountered a fatal error.

Solid yellow (Conventional Only) – Channel is busy.

Blinking yellow – Radio is receiving a secured transmission.

Solid green – Radio is powering up, or is on a non-priority channel while in the Scan List Programming mode.

Blinking green – Radio is receiving an individual or telephone call, or is on a Priority-Two channel while in the Scan List Programming mode.

Rapidly blinking green – Radio is on a Priority-One channel while in the Scan List Programming mode.

Note: No LED indication when the radio receives a clear (non-secured) transmission in trunking Mode.
Intelligent Lighting Indicators

This feature temporary changes the radio’s display backlight color and the alert text background color to help signal that a radio event has occurred.

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

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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.

The LED lights up solid red while the radio is transmitting. In conventional mode, the LED lights up solid yellow when the radio is receiving a transmission. In trunking mode, there is no LED indication when the radio receives a transmission.

If the radio is receiving a secure transmission, the LED blinks yellow.
Receiving and Responding to a Radio Call

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.

Procedure:

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 Press the **PTT** button to respond to the call.
   The LED lights up solid red.

3 Release the **PTT** button to listen.
Making a Radio Call

Making a Talkgroup Call

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

Procedure:

1. Turn the **16-Position Select Channel Knob** to select the channel with the desired talkgroup.

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

**ASTRO Conventional Only:**
The LED lights up solid red.
The display shows the talkgroup alias or ID.

**OR**

**Trunking Only:**
The LED lights up solid red.
Speak clearly into the microphone.
Release the **PTT** button to listen.
Scan lists are created and assigned to individual channels/groups.

Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.

Your radio supports different types of Scan Lists:
- Trunking Priority Monitor Scan List
- Conventional Scan List
- Talkgroup Scan List

Please refer to a qualified radio technician for the maximum number of Scan Lists can be programmed in your radio.

These lists must be preprogrammed by a qualified radio technician.
Scan Lists

Viewing a Scan List

Procedure:

1. Press the navigation buttons (left or right) to ScnL.
2. Press the Menu Select button directly below ScnL.
3. Press the navigation buttons (up or down) to view the members on the list.
4. Press the Home button to exit the current display and return to the Home screen.
Scan Lists

Editing the Scan List

This feature lets you change scan list members and priorities.

Procedure:

- **[Preprogrammed Button]**

1. Long press the preprogrammed Scan List Programming button (side button), or move the preprogrammed switch to programming position.
2. ▲ or ▼ to the entry you want to edit.
3. 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.
4. ▲ or ▼ to select more channels to be added or deleted.
   - OR
   - Use the 16-Position Select knob to select additional channels to be added or deleted.

OR

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

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

OR

- **[Menu]**

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 **16-Position Select knob** to select additional channels to be added or deleted.

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

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

**Priority Status**

Below the **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
Below the **Sel**, **Del**, and **Rcl** screen, press the **Sel** button one or more times to view and/or change the scan list status icon of the currently displayed channel.

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.
Scan

Turning Scan On or Off

This feature allows you to monitor traffic on different channels by scanning a preprogrammed list of channels.

Procedure:

[Preprogrammed Button]
1. Press the preprogrammed Scan button
Scan

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.

Procedure:

[Preprogrammed Button]
1 When the radio is locked onto the channel to be deleted, press the preprogrammed Nuisance Delete button. The radio continues scanning the remaining channels in the list.

OR
[Menu]
1 Or to Nuis.

2 Press the Menu Select button directly below Nuis. The radio continues scanning the remaining channels in the list.
Scan

Restoring a Nuisance Channel

Procedure:

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

- Turn the radio off and then turning it on again.
  
  OR

- Stop and restart a scan via the preprogrammed Scan button or menu.
  
  OR

- Change the channel via the 16-Position Select knob.
Emergency Operation

The Emergency feature is used to indicate a critical situation.

If the Top (Orange) button is preprogrammed to send an emergency signal, this signal overrides any other communication over the selected channel.

Your radio supports the following Emergency mode:
- Emergency Alarm with Emergency Call

Note: To exit emergency at any time in Analog mode, press and hold the preprogrammed Emergency button for about a second.
Emergency Operation

*Sending an Emergency Alarm with Emergency Call*

Procedure:

1. Press the preprogrammed **Emergency** button.

   The display shows **Emergency** and the current zone or channel.
   You hear a short, medium-pitched tone and the LED momentarily blinks red.
   **OR**
   You hear the radio sounds a short low-pitched tone to indicate the selected channel does not support emergency and rejects to launch emergency mode.
   The display shows **No emergency**, if the selected channel does not support emergency.

2. **The radio enters the Emergency Call state when:**
   You press the **PTT** button while in the Emergency Alarm mode.

3. Press and hold the **PTT** button.
   Speak clearly into the microphone.

4. Release the **PTT** button to end the transmission and wait for a response from the dispatcher.

5. Press and hold the preprogrammed **Emergency** button for about a second to exit the Emergency Call mode.
The Global Positioning System (GPS)

This feature uses information from the Global Positioning System (GPS) satellites orbiting the Earth to determine the approximate geographical location of your radio, expressed as latitude and longitude. The availability and accuracy of this location information (and the amount of time that it takes to calculate it) varies depending on the environment in which you are using the GPS feature.

For example, GPS location fixes are very difficult to obtain indoors, in covered locations, between high buildings, or in situations where you have not established a clear broad view of the sky.

Understanding the GPS Feature

The GPS technology uses radio signals from earth orbiting satellites, to establish the location coordinates, maximizing your view of clear unobstructed sky is essential for optimum performance.

Where adequate signals from multiple satellites are not available (usually because you cannot establish a view of a wide area of the sky), the GPS feature of your radio will not work. Such situations include but are not limited to:

- In underground locations
- Inside of buildings, trains, or other covered vehicles
- Under any other metal or concrete roof or structure
- Between tall buildings or under dense tree-cover
- In temperature extremes outside the operating limits of your radio

Even where location information can be calculated in such situations, it may take longer to do so, and your location estimate may not be as accurate. Therefore, in any emergency situation, always report your location to your dispatcher.
Note: Even where adequate signals from multiple satellites are available, your GPS feature only provides an approximate location, usually within 20 meters from your actual location, but sometimes further away. Keep in mind that the accuracy of the location information and the time it takes to obtain it varies depending upon circumstances, particularly the ability to receive signals from an adequate number of satellites.

Note: The satellites used by the GPS feature are controlled by the U.S. government and are subject to changes implemented in accordance with the Department of Defense GPS user policy and the Federal Radio Navigation Plan. These changes may affect the performance of the GPS feature on your radio.

Enhancing GPS Performance

Sometimes, the GPS feature may be unable to complete a location calculation successfully. You then see a message indicating that your radio cannot connect to enough visible satellites.

To maximize the ability of your radio to determine a fix, please note the following guidelines:
- For your initial fix, hold the radio in the face position.
- Stay in the open. The GPS feature works best where there is nothing between your radio and a large amount of open sky.
The Global Positioning System (GPS)

This feature allows you to determine your current location using a location menu, as well as your current distance and bearing in relation to another location. Radio location may be requested and reported over-the-air.

Your radio stores up to a maximum of sixty (60) programmable location coordinates, also known as waypoints. When the memory is full, the next waypoints automatically replaces the oldest waypoints in the radio.

<table>
<thead>
<tr>
<th>Programmable Waypoints</th>
<th>Preprogrammed Waypoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>User-configurable location coordinates.</td>
<td>Fixed location coordinates:</td>
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<tr>
<td></td>
<td>• Home</td>
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<tr>
<td></td>
<td>• Emergency</td>
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<tr>
<td></td>
<td>• Last Known Location</td>
</tr>
<tr>
<td></td>
<td>• Destination</td>
</tr>
<tr>
<td>Only the alias is editable, not the coordinates.</td>
<td>The Home and Destination coordinates are editable.</td>
</tr>
<tr>
<td>Coordinates can be deleted one at a time, or all at once.</td>
<td>Coordinates cannot be deleted.</td>
</tr>
</tbody>
</table>

Note: The radio automatically exits the feature, if the feature inactivity timer is enabled, when the radio is left idle and the timer expires. You will hear the Menu Inactive Exit Tone upon feature exit.
The Global Positioning System (GPS)

Accessing the Outdoor Location Feature

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

**Procedure:**

[Preprogrammed Button]

1. Press the preprogrammed **GPS** button to toggle the Outdoor Location feature on or off.

**OR**

[Menu]

1. **Loc.**

2. Press the **Menu Select** button directly below **Loc.** The display shows **Location off**.

3. Press the **Menu Select** button directly below **On** to obtain a location fix.

**OR**

Press the **Menu Select button directly below Optn.** **Optn.** to **Turn On GPS** and press the **Menu Select** button directly below **Sel.**

The front display shows the latitude, longitude, time and date of the last successful location fix.

4. Press the **Menu Select** button directly below **Rfsh** to obtain a new location fix. 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.

Once the location coordinates are fixed, the display shows the current latitude and longitude, along with the UTC (Zulu) time and date that the location fix was obtained.

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

**OR**

If the radio fails to get a location fix, the display shows **No service** and returns to the previous display.

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

**OR**

Press **home**, the **PTT** button, or the preprogrammed **GPS** button to return to the Home screen.

The radio also exits the menu if the emergency button is pressed.
The Global Positioning System (GPS)  
Saving a Waypoint

Procedure:

While in the current location display:

1. Press the Menu Select button directly below Optn.

2. Press ‡ or ‡ to Save as Waypt and press the Menu Select button directly below Sel.
   OR
   ‡ or ‡ to Save as Home and press the Menu Select button directly below Sel.
   OR
   ‡ or ‡ to Save as Dest. and press the Menu Select button directly below Sel.

3. A blinking cursor appears in the Save As Waypt screen. Use the keypad to edit the auto-generated waypoint, if required.
   Press ‡ to move one space to the left.
   Press ‡ to move one space to the right.
   Press the Menu Select button directly below Del to delete any unwanted characters.

   Press ‡ to add a space.
   Press ‡ to toggle between mixed case mode, uppercase mode, and lowercase mode.
   Press ‡ to toggle between numeric and letter mode.
   OR
   Press the Menu Select button directly below Cncl to return to the Location main screen.
   Press the Menu Select button directly below Ok once you are done.

4. The display shows Current loc saved as <Waypoint name>.
   OR
   The display shows Current loc saved as [Home].
   OR
   The display shows Current loc saved as [Destination].

5. Press the Menu Select button directly below Exit to exit the feature and return to the main screen.
   OR
   Press † , the PTT button, or the preprogrammed GPS button to return to the Home screen.
The Global Positioning System (GPS)

Viewing a Saved Waypoint

Procedure:

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.
   The display shows a list of waypoints.

4. ▲ or ▼ to scroll through the list.
   OR
   ▲ or ▼ to select a waypoint to view the location information in full.

5. Press the Menu Select button directly below Optn.

6. ▲ or ▼ to View.

7. Press the Menu Select button directly below Sel to view the latitude, longitude, time and date of the selected waypoint.

8. Press the Menu Select button directly below Back to return to the previous screen.
   OR
   Press ◄, the PTT button, or the preprogrammed GPS button to return to the Home screen.
The Global Positioning System (GPS)

Editing the Alias of a Waypoint

Procedure:

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.**
   The display shows a list of waypoints.

4. Or **to the required saved waypoint.**

5. Press the **Menu Select** button directly below **Optn.**

6. Or **to **Edit name.**

7. Press the **Menu Select** button directly below **Sel.**

8. 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 directly below **Del** to delete any unwanted characters.

Press **to add a space.
Press ** to toggle between mixed case mode, uppercase mode, and lowercase mode.
Press ** to toggle between numeric and letter mode.
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.

The display shows <Waypoint name> Updated and the radio returns to the Waypoints main screen.

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

OR

Press **, the PTT button, or the preprogrammed GPS button to return to the Home screen.
The Global Positioning System (GPS)

Editing the Coordinates of a Waypoint

Procedure:

While in the current location display:

1. Press the Menu Select button directly below Optn.

2. Press ▲ or ◼ to Waypoints.

3. Press the Menu Select button directly below Sel. The display shows a list of waypoints.

4. Press ▲ or ◼ to the required saved waypoint.

5. Press the Menu Select button directly below Optn.

6. Press ▲ or ◼ to [Home].
   OR
   ▲ or ◼ to [Destination].

7. Press the Menu Select button directly below Optn.

8. Press ▲ or ◼ to Edit Location.

9. Press the Menu Select button directly below Sel.

The first number blinks. Press ◼ to move to the previous number/coordinates. Press ▲ to move back to the next number/coordinates. Press the Menu Select button directly below Edit to change the number/coordinates.

10. 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 directly below Del to delete any unwanted characters.

11. 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.

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.
The Global Positioning System (GPS)
Deleting a Single Saved Waypoint

Procedure:

While in the current location display:
1. Press the Menu Select button directly below Optn.
2. Press the Menu Select button directly below Waypoints.
3. Press the Menu Select button directly below Sel.
The display shows a list of waypoints.
4. Press the Menu Select button directly below to the required saved waypoint.
5. Press the Menu Select button directly below Del.
The display shows <Waypoint name> confirm del?.
6. Press the Menu Select button directly below Yes to delete the waypoint.
   OR
   Press the Menu Select button directly below No to return to the Waypoints main screen.

The display momentarily shows <Waypoint name> deleted before the radio returns to the Waypoints main screen.
The Global Positioning System (GPS)

Deleting All Saved Waypoints

Procedure:

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**.
   The display shows a list of waypoints.
4. **▲** Or **▼** to a saved waypoint.
5. Press the **Menu Select** button directly below **Optn**.
6. **▲** Or **▼** to **Delete All**.
7. Press the **Menu Select** button directly below **Sel**.
   The display shows **All saved wayp confirm del?**.

8. Press the **Menu Select** button directly below **Yes** to delete all waypoints.
   **OR**
   Press the **Menu Select** button directly below **No** to return to the Waypoints main screen.

   The display momentarily shows **All saved wayp deleted** before the radio returns to the Waypoints main screen.
The Global Positioning System (GPS)

Measuring the Distance and Bearing from a Saved Waypoint

Procedure:

While in the current location display:
1. Press the **Menu Select** button directly below **Optn**.
2. Press the **Menu Select** button directly below **Dist frm here**.
3. Press the **Menu Select** button directly below **Sel**.
   The display shows a list of waypoints.
4. Press the **Menu Select** button directly below **Sel**.
   The display shows the distance and bearing from the current to the selected coordinates.
The Global Positioning System (GPS)

*Using the Location Feature While in Emergency Mode*

When the Emergency feature is activated by pressing the emergency button, the radio exits the Location menu and returns to the Home (default) screen so that you can see which channel the emergency signal is going out on.

However, you may re-enter the Location menu while still in emergency mode, provided that Silent Emergency has not been activated.

If you have turned Location off using the ON/OFF menu key, it automatically turns back on when Emergency is activated.

If there is a solid location signal during Emergency, the current location and the location information received is saved as Emergency and Last Known Location waypoints, respectively.

**NOTE:** The Department of Emergency Communications is still in the process of developing a Policy and Procedure for this feature.
Trunking System Controls

Using the Fail-soft System

The fail-soft system ensures continuous radio communications during a trunked system failure.

If a trunking system fails completely, the radio goes into fail-soft operation and automatically switches to its fail-soft channel.

Procedure:

1. During fail-soft operation, your radio transmits and receives in conventional operation on a predetermined frequency.

2. You hear a medium-pitched tone every 10 seconds and the display shows Fail-soft.

When the trunking system returns to normal operation, your radio automatically leaves fail-soft operation and returns to trunked operation.
Trunking System Controls

Going Out of Range

When your radio goes out of the range of the system, it can no longer lock onto a control channel.

Procedure:

1. You hear a low-pitched tone.
   **AND/OR**
   The display shows the currently selected zone/channel combination and **Out of range**.

Your radio remains in this out-of-range condition until:
- It locks onto a control channel.
- OR
- It locks onto a fail-soft channel.
- OR
- It is turned off.
Utilities

Turning Keypad Tones On or Off

You can enable and disable keypad tones, if needed.

Procedure:

1. Press the Menu button on the left to Mute.

2. Press the Menu Select button directly below Mute.
   The display momentarily shows Tones off, indicating that the keypad tones are disabled.
   **OR**
   The display momentarily shows Tones on, and you hear a short tone indicating that the keypad tones are enabled.
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.

**Procedure:**

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 LED goes out until you release the **PTT** button.

2. Release the **PTT** button.
   The timer resets.

3. Press the **PTT** button to re-transmit.
   The time-out timer restarts and the LED lights up solid red.