



**City of Winchester  
Fire & Rescue Department  
STANDARD OPERATING PROCEDURE**



<b>Section:</b> Communications	<b>SOP:</b> 6.3
<b>Subject:</b> Subscriber Unit Usage	<b>Executed:</b> September 7, 2016 <b>Revised:</b>
 Allen W. Baldwin, Fire Chief	

**SCOPE**

To outline the proper use of Winchester Fire and Rescue Department (WFRD) portable and mobile 800 MHz and UHF radio equipment.

**PURPOSE**

All users of the department radio system must understand the talkgroup programming and functions of the supplied department radio communication hardware (subscribers).

**RESPONSIBILITY**

It shall be the responsibility of all personnel that operate on the Winchester Fire and Rescue Department (WFRD) and Winchester Emergency Communications Center (ECC) radio communication system to understand and use this Standard Operating Procedure (SOP) for all radio communications. Refer to SOP 6.7 Radio Talkgroups/Zones for programming options.

**POLICY**

- All WFRD career and volunteer personnel shall only utilize department issued Motorola 800 mHz dual band equipment for two-way communications on the radio system. At **NO** time are personal 800mhz or VHF radios authorized for programming or use unless expressly authorized by the Fire Chief and the City radio systems manager.
- The WFRD portable subscriber equipment is programmed in a manner to include specific unit identification to the ECC in the event of an emergency. This ID system is defined by riding positions in the apparatus therefore it is imperative that portables are not removed from the apparatus unless you are assigned to that specific riding position. **THERE ARE NO EXCEPTIONS TO THIS PRACTICE.**

- A Leather strap system shall be supplied with each portable for the purpose of carrying the portable radio on the hip and extending the remote speaker microphone to the person's upper torso. For use with firefighting PPE; It is recommended that all portables setups be utilized under PPE jackets with the remote speaker microphone extended up and out of the top front opening of the jacket only exposing the portion necessary for successful operation of the microphone. Care shall be taken so that SCBA or other equipment does not interfere with the proper operation of the RSM.
- Batteries for all portables on **ALL** station apparatus shall be recycled each morning during apparatus checks and after 75% usage as indicated on the portable power indicators.

## **SUCCESSFUL COMMUNICATION PRACTICES**

- The transmit button should be depressed for (1) second prior to speaking to ensure radio communications are not cutoff and additional radio traffic generated.
- In noisy environments, turn away from the source of the noise to block the sound.
- Use plain language when communicating so that everyone understands.
- Stay calm and collected and keep transmission short and to the point. Speak in a normal voice.
- Hold remote speaker microphone (RSM) or portable unit 1"-2" away from your mouth so that voice transmission is not muffled.
- Communications with breathing apparatus on should be with the microphone placed on the SCBA mask vent port for the most effective transmission of voice.
- Antennas should always be pointing in the upward direction.

# PORTABLE RADIOS

The WFRD utilizes Motorola APX 7000 dual-band radios with oversized RSM's as the standard portable device. Refer to the quick reference chart below for basic operations.



## ASTRO® APX™ 7000 Series Digital Portable Radios Quick Reference Card

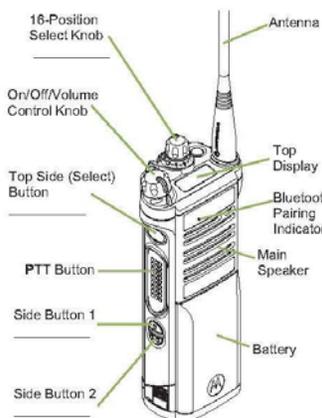
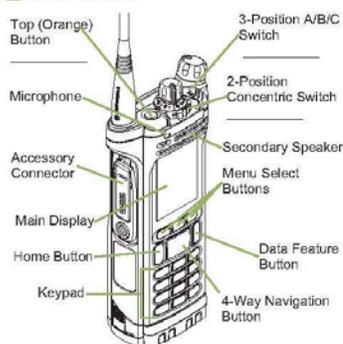
### RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE TWO-WAY RADIOS

**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 guide enclosed with your radio which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

#### Radio Controls



#### Radio On/Off

- **On** – On/Off/Volume knob clockwise.
- **Off** – On/Off/Volume knob counterclockwise.

#### Zones and Channels

- **Zone** – Zone switch to desired zone.
- **Channel** – Channel switch to desired channel.

#### Receiving and Transmitting

- 1 Select zone/channel.
- 2 Listen for a transmission.  
OR  
Press and hold **Volume Set** button.  
OR  
Press **Monitor** button and listen for activity.
- 3 Adjust volume, if necessary.
- 4 Press the **PTT** button to transmit; release to receive.

#### Sending an Emergency Alarm

- 1 Press and hold the **Emergency** button\*.
- 2 The display shows **Emergency** and the current zone/channel. Radio sounds a short, medium-pitched tone, and the LED blinks red momentarily.
- 3 When acknowledgment is received, you hear four beeps; alarm ends; and radio exits emergency.

\* **Default emergency button press timer is set to 1 second.** This timer is programmable, see page 67 in the user guide for details.

To exit emergency at any time, press and hold the **Emergency** button.



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English

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#### Sending an Emergency Call

- 1 Press the **Emergency** button.
- 2 Press and hold the **PTT** button. Speak clearly into the microphone.
- 3 Release the **PTT** button to end call.
- 4 Press and hold **Emergency** button to exit emergency.

To exit emergency at any time, press and hold the **Emergency** button.

#### Sending a Silent Emergency Call

- 1 Press the **Emergency** button.
- 2 The display does not change; the LED does not light up, and there is no tone.
- 3 Silent emergency continues until you:  
Press and hold the **Emergency** button to exit emergency state.  
OR  
Press and release the **PTT** button to exit the Silent Emergency Alarm mode and enter regular dispatch or Emergency Call mode.

To exit emergency at any time, press and hold the **Emergency** button.

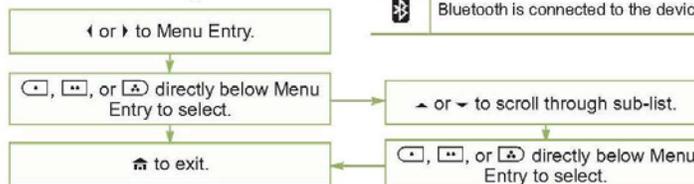
#### Display Status Icons

	Receiving a call or data.
	Transmitting a call or data.

English

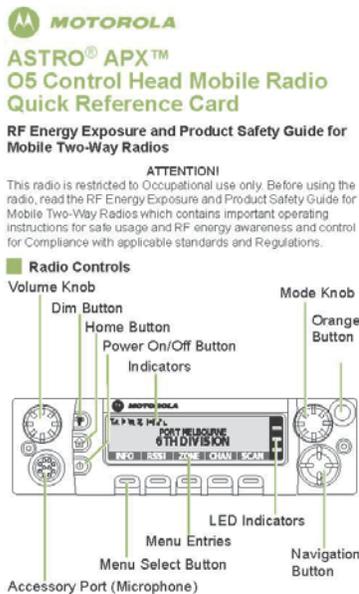
	Blinks when the battery is low.		<b>On</b> = Secure operation. <b>Off</b> = Clear operation. <b>Blinking</b> = Receiving an encrypted voice call.
	The more stripes, the stronger the signal strength for the current site (trunking only).		<b>On steady</b> = View mode <b>Blinking</b> = Program mode
	Direct radio to radio communication or connected through a repeater. <b>On</b> = Direct <b>Off</b> = Repeater		<b>On</b> = AES Secure operation. <b>Off</b> = Clear operation. <b>Blinking</b> = Receiving an encrypted voice call.
	This channel is being monitored.		<b>On</b> = feature enabled, and signal available. <b>Off</b> = feature disabled. <b>Blinking</b> = feature enabled, but signal unavailable.
	<b>H</b> or <b>L</b> <b>L</b> = Radio is set at Low power. <b>H</b> = Radio is set at High power.		<b>On</b> = User is currently associated with the radio. <b>Off</b> = User is currently not associated with the radio. <b>Blinking</b> = Device registration or user registration with the server failed due to an invalid username or pin.
	Scanning a scan list.		Data activity is present.
	<b>Blinking dot</b> = Detects activity on the Priority-One Channel during scan. <b>Steady dot</b> = Detects activity on the Priority-Two Channel during scan.		Bluetooth is ready.
	The vote scan feature is enabled.		Bluetooth is connected to the device.

#### Menu Navigation



# MOBILE RADIOS – Pumpers, Aerials, Ambulances, Command Vehicles

WFRD apparatus have been installed with the Motorola APX 7500, 800/VHF dual-band mobile radios for communicating to communication centers, other apparatus, and portable radios. Refer to the quick reference chart below for basic operations.



### Radio On/Off

Press the Power On/Off button to toggle the power on or off.

### Adjusting Volume

Turn the Volume Knob clockwise to increase volume or counterclockwise to decrease the volume.

### Selecting a Zone

- 1 Press **▶** or **◀** to ZONE.
- 2 Press **▶** or **◀** button until the desired zone is displayed.
- 3 Press **↵** or the PTT button to confirm the selected zone number.
- 4 Press the PTT button to begin transmitting on the displayed zone channel.

### Selecting a Channel

- 1 Press and hold **▶** to scroll to CHAN and press the Menu Select button directly below CHAN. The display shows the current zone and channel.
- 2 Rotate the Mode knob to the desired channel.
- 3 Press **↵** or the PTT button to confirm the channel.
- 4 Press the PTT button to transmit on the displayed zone channel.

### Receiving and Transmitting

- 1 Take the microphone off hook.
- 2 Select zone/channel.
- 3 Listen for a transmission.  
OR  
Turn the Volume Knob.  
OR  
**▶** or **◀** to MON then press the Menu Select button directly below MON and listen for activity.
- 4 Adjust volume, if necessary.
- 5 Press the PTT button to transmit; release to receive.

### Sending an Emergency Alarm

- 1 Press the 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 Press and hold the emergency button or the PTT button to return to normal operation.

To exit emergency at any time, press and hold the Emergency button.

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English

### Sending an Emergency Call (Trunking Only)

- 1 Press Emergency button.
- 2 A tone sounds and the display alternates EMERGENCY and the home display.  
OR  
A talk prohibited tone sounds when the selected channel does not support emergency.
- 3 Press and hold the PTT button. Speak clearly into the microphone.
- 4 Release the PTT to end the transmission.

To exit emergency at any time, press and hold the Emergency button.

### Sending a Silent Emergency Alarm

- 1 Press the preprogrammed Emergency button to activate the silent alarm feature.
- 2 The display does not change; the LED does not light up, and there is no tone.

If silent emergency alarm is used with emergency call, pressing the PTT button exits the silent mode and initiates the emergency call.

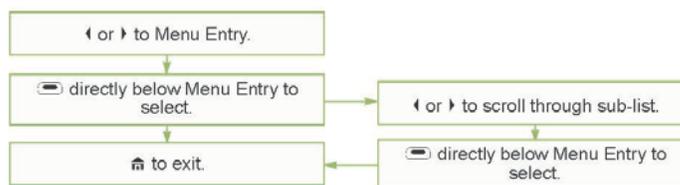
### Display Status Icons

	Receiving a call or data.
	Transmitting a call or data.
	The more stripes, the stronger the signal strength for the current site (trunking only).

	Direct radio-to-radio communication or communication through a repeater. On = Direct Off = Repeater
	This channel is being monitored.
	Voice muting the affiliated trunking talkgroup or selected conventional channel. On = Enabled Off = Disabled
	L = Radio is set at Low power. H = Radio is set at High power.
	Scanning a scan list.
	Blinking dot = Detects activity on the Priority-One Channel during scan. Steady dot = Detects activity on the Priority-Two Channel during scan.
	The vote scan feature is enabled.

	On = Secure operation. Off = Clear operation. Blinking = Receiving an encrypted voice call.
	On = AES Secure operation. Off = Clear operation. Blinking = Receiving an encrypted voice call.
	On = Location feature enabled, and location signal available. Off = Location feature disabled. Blinking = Location feature enabled, but location signal unavailable.
	On = User is currently associated with the radio. Off = User is currently not associated with the radio. Blinking = Device registration or user registration with the server failed due to an invalid username or pin.
	Data activity is present.
	Indicates that the text entry is currently in hexadecimal mode.

### Menu Navigation



English

# MOBILE RADIOS – Admin., Serv, Utilities Vehicles

WFRD support vehicles have been installed with the Motorola APX 4500, 800 Mhz mobile radios for communicating to communication centers, other apparatus, and portable radios. Refer to the quick reference chart below for basic operations.

## MOTOROLA ASTRO® APX™ O2 Control Head Mobile Radio Quick Reference Card

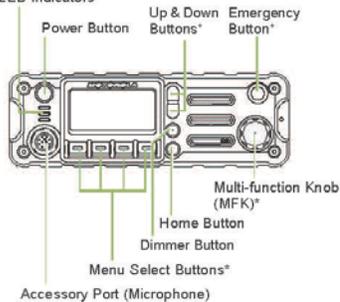
### RF Energy Exposure and Product Safety Guide for Mobile Two-Way Radios

#### ATTENTION!

This radio is restricted to Occupational use only. Before using the radio, read the RF Energy Exposure and Product Safety Guide for Mobile Two-Way Radios which contains important operating instructions for safe usage and RF energy awareness and control for Compliance with applicable standards and Regulations.

#### Radio Controls

##### LED Indicators



\*These controls/buttons are programmable.

#### Radio On/Off

Press the **Power** button to turn the radio on or off.

#### Adjusting Volume

If volume is set as the primary mode,

1 Turn the **MFK** clockwise to increase volume or counterclockwise to decrease the volume.

If volume is not set as the primary mode, press the **MFK** once and repeat step 1.

#### Selecting a Zone

If zone is set as the primary mode,

1 Turn the **MFK** until the display shows the desired zone and press the **PTT** button to begin transmitting on the displayed zone.

If zone is not set as the primary mode, press the **MFK** once and repeat step 1.

OR

2 **▶** or **◀** (on the keypad mic.) to scroll to Zone.

3 Press the **Menu Select** button directly below Zone.

4 Rotate the **MFK** or **▼** or **▲** to the desired zone.

5 Press the **Menu Select** button directly below **Sel** or the **✓** button (on the keypad mic.) to confirm the selected zone number.

6 Press the **PTT** button to begin transmitting on the displayed zone.

#### Selecting a Channel

If channel is set as the primary mode,

1 Turn the **MFK** until the display shows the desired channel and press the **PTT** button to begin transmitting on the displayed channel.

If channel is not set as the primary mode, press the **MFK** once and repeat step 1.

OR

2 **▶** or **◀** (on the keypad mic.) to scroll to Chan.

3 Press the **Menu Select** button directly below Chan.

4 Rotate the **MFK** or press **▼** or **▲** to the desired channel.

5 Press the **Menu Select** button directly below **Sel** or the **✓** button (on the keypad mic.) to confirm the channel.

6 Press the **PTT** button to transmit on the displayed channel.

#### Receiving and Transmitting

1 Take the microphone off the hook.

2 Select zone/channel.

3 Listen for a transmission.

OR

**▶** or **◀** (on the keypad mic.) to **Mon** then press the **Menu Select** button directly below **Mon** and listen for activity.

4 Adjust volume, if necessary.

5 Press the **PTT** button to transmit; release to receive.

#### Sending an Emergency Alarm

1 Press the **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.

To exit emergency at any time, press and hold the **Emergency** button or the **PTT** button.



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#### Sending an Emergency Call (Trunking Only)

1 Press **Emergency** button.

2 A tone sounds and the display alternates **Emergency** and the home display.

OR  
A short low-pitched tone sounds when the selected channel does not support emergency.

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

4 Release the **PTT** to end the transmission.

To exit emergency at any time, press and hold the **Emergency** button.

#### Sending a Silent Emergency Alarm

1 Press the preprogrammed **Emergency** button to activate the silent alarm feature.

2 The display does not change; the LED does not light up, and there is no tone.

If silent emergency alarm is used with emergency call, pressing the **PTT** button exits the silent mode and initiates the emergency call.

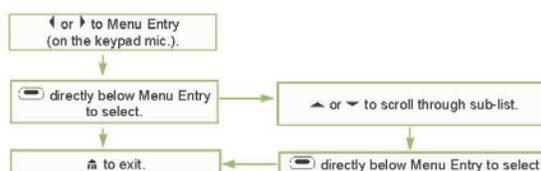
#### Display Status Icons

	Receiving a call or data.
	Transmitting a call or data.
	Received an Individual Call.
	The more stripes, the stronger the signal strength for the current site (trunking only).

	Direct radio-to-radio communication or communication through a repeater. On = Direct Off = Repeater
	This channel is being monitored.
	Voice muting the affiliated trunking talkgroup or selected channel. On = Enabled Off = Disabled
	L = Radio is set at Low power. H = Radio is set at High power.
	Scanning a scan list.
	Blinking dot = Detects activity on the Priority-One Channel during scan.
	Steady dot = Detects activity on the Priority-Two Channel during scan.
	The vote scan feature is enabled.

	On = Secure operation. Off = Clear operation. Blinking = Receiving an encrypted voice call.
	On = AES Secure operation. Off = Clear operation. Blinking = Receiving an encrypted voice call.
	On = Location feature enabled, and location signal available. Off = Location feature disabled. Blinking = Location feature enabled, but location signal unavailable.
	Inverted = User is currently associated with the radio. On = Packet data is activated. Off = Packet data is deactivated. Blinking = Device registration or user registration with the server failed due to an invalid username or pin.
	Data activity is present.
	MFK is in Mode Change feature Turn the MFK to change channel.
	MFK is in Volume Change feature Turn the MFK to adjust the volume.

#### Menu Navigation



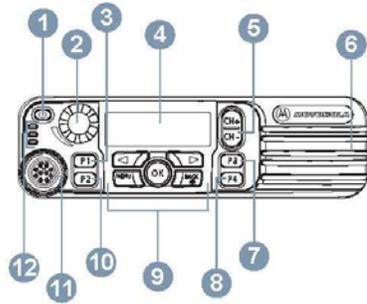
English

# MOBILE RADIOS – Med Radios

WFRD ambulances have been installed with the Motorola XPR4550 UHF mobile radios for communicating to communication center at the Winchester Medical Center. Refer to the quick reference below for basic operations.

**MOTOROLA**  
**XPR Series Digital Mobile Radios**  
**Quick Reference Card**

**Radio Controls**

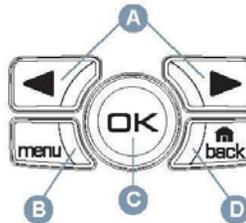


Record your radio's programmable button functions in the blanks provided. **SP** represents Short Press, **LP** represents Long Press.

- 1 On/Off Button
- 2 Volume Knob
- 3 Front Button P1 (Programmable)  
 SP: \_\_\_\_\_ LP: \_\_\_\_\_

- 4 Display
- 5 Channel Rocker
- 6 Speaker
- 7 Front Button P3 (Programmable)  
 SP: \_\_\_\_\_ LP: \_\_\_\_\_
- 8 Front Button P4 (Programmable)  
 SP: \_\_\_\_\_ LP: \_\_\_\_\_
- 9 Menu Navigation Buttons
- 10 Front Button P2 (Programmable)  
 SP: \_\_\_\_\_ LP: \_\_\_\_\_
- 11 Accessory Connector
- 12 LED Indicators

**Menu Navigation Buttons**



- A Left/Right Navigation Buttons
- B Menu Button
- C OK Button
- D Back/Home Button

**Display Icons**

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

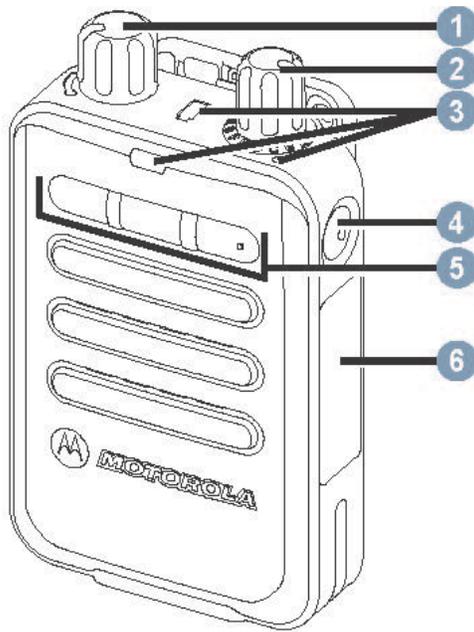
- The number of bars displayed represents the radio signal strength. Four bars indicates the strongest signal. This icon is only displayed while receiving.
- Selected channel is being monitored.
- Radio is currently set at Low Power (L) or High Power (H).
- Tones are set off.
- The Option Board is enabled.
- The Option Board is disabled.
- The GPS feature is enabled. The icon stays lit when a position fix is available.



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## **FIRE PAGERS**

ALL fire stations of the WFRD are equipped with Motorola Minitor VI pagers in amplified bases to control the house alarms. In addition, these units are assigned to command officers as an alerting alternative to carrying a portable radio. Refer to the quick reference below for basic operations.



## Pager Controls

- 1 On/Off/Volume Control Knob
- 2 Function Switch
- 3 LED Indicators
- 4 Reset Button
- 5 Stored Voice Operation Controls
- 6 Identification Label Area

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English

## LED Indicators

The pager provides an audiovisual indication to acknowledge device power up, an incoming message, unread message(s), the battery status, and the Scan mode.

### Power Up

Device power up is indicated by audible beeps and simultaneous blinking of the red and yellow LEDs for four times.

### Incoming Message

When an encoded message is received, the red LED blinks and an audible alert is heard and/or the pager will vibrate depending on programming.

## Unread Message(s)

Unread message(s) is indicated by the red LED and it remains lit until the pager is power cycled or all new messages are played back.

If programmed, an audio reminder will be played every couple of minutes to indicate the unread message(s).

## Battery Status

At any time, press and release the Reset button to view the battery status.

- Solid Green - Indicates that the battery level is high.
- Solid Yellow - Indicates that the battery level is medium.
- Solid Red - Indicates that the battery level is low.

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English

- **Blinking Red** - Indicates that the battery level is critically low. The red LED and the battery LED will blink simultaneously every 2 minutes with a beep to remind you to charge and/or replace the battery.

When the battery is completely discharged, the pager will play an audible alert before powering down.

**Note:** If the Battery Level Announcement option is enabled, the pager will also announce the battery level status when you press and release the Reset button.

#### **Unprogrammed Channel**

When the Function Switch is moved to an unprogrammed channel, the pager will play a low frequency tone.

#### **Message Management**

The yellow LED is turned on while in message management. There are four different tones defined within message management.

During message rewind, a tone is played after each 10 seconds skipback.

During message delete, a periodic tone is played to indicate that deletion is in progress until all unlocked messages are deleted.

While in Standby mode, if the fast forward or rewind button is pressed, the pager plays a tone to indicate that the buttons are not functional.

Message Management is not a feature of WFRD equipment.