

ASTRO® XTL™ 2500 Digital Mobile Radio with M5 Control Head

M5 Quick Reference Card

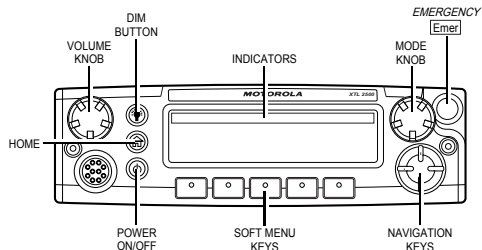
Product Safety and RF Exposure Compliance



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.



BASIC OPERATION

Turning the Radio On and Off

Press the **Pwr** button once.

Setting the Volume and Squelch

- 1 Turn the **Vol** knob clockwise to increase volume or counterclockwise to decrease volume as desired.
- 2 On conventional modes with Private-Line or Digital Private-Line, press **MON** softkey to defeat the coded squelch.
- 3 Press **MON** softkey again to return to coded-squelch operation.
- 4 To adjust squelch level, hold **MON** softkey until a tone sounds.
- 5 Rotate the **Mode** knob clockwise to increase squelch level or counterclockwise to decrease squelch level.
- 6 Press **Home** button to save the squelch level.

Changing Modes

Rotate the **Mode** knob to select the desired mode.

OR

Press **Home** button to access the preprogrammed Home mode.

Transmitting

- 1 Press and hold the microphone **PTT** button.
- 2 When the transmit light comes on solid and no alert tones sound (or a talk-permit tone or ID sidetone sounds), speak into the microphone in a normal voice.
- 3 State your FCC call sign at the beginning of each transmission.

Transmitting (Conventional Modes)

- 1 Press **Dir** (Direct) softkey. The **Dir** indicator lights.
- 2 Press **Dir** softkey again to return to repeater operation.

Activating Scan

- 1 Press **Scan** softkey to start a scan. If no activity exists, the display shows your selected mode. When a scanned channel or talkgroup becomes active, the display shows the active mode name. The **PRI** and **NPRI** indicators show priority.
- 2 Press **Scan** softkey again to stop scanning.

Programming a Scan List

- 1 Press **Prog** softkey followed by **Scan** softkey until the scan list is being displayed and the scan indicator blinks.
- 2 Use the navigation keys to select the mode you want to program.
- 3 Press the **Sel** softkey as indicated in the table below to add or remove the displayed mode from the scan list.
- 4 Repeat the previous steps to continue editing the list.
- 5 Press **Home** button to exit.

Press Sel	Mode	Indicator
One time	Non-Priority	NPRI lit
Two times	Second Priority	PRI lit
Three times	First Priority	PRI blinks
Four times	Delete from List	No indicator

Selecting Scan Mode Priority

- 1 Press the **Sel** softkey as indicated in the table above to designate up to two modes as priorities.
- 2 Press **Home** or **Scan** to end scan list selection.

Sending an Emergency Alarm or Call

Press the emergency actuator (**Emer** button, footswitch, hidden pushbutton) to begin an emergency transmission.

For conventional modes, a silent or non-silent emergency alarm data transmission is sent.

For trunked modes, emergency call (priority access to a voice channel), silent or non-silent emergency alarm, or emergency alarm and call are entered.

Depending on your radio's programming, one of the emergency sequences described in the table below occur.

Alarm Type	Indications/Actions
Non-Silent	A tone sounds and the display alternates between EMERGENCY and the zone/channel. When acknowledged, four more tones sound and the display shows ACK RECEIVED , then the radio returns to normal operation.
Silent	The audio is muted and no display changes take place during the alarm. Press the PTT button, or press and hold the emergency button to stop the emergency condition and unmute the radio.
Call (Trunked Modes only)	A tone sounds and the display alternates between EMERGENCY and the zone/channel. Press the PTT button and talk. After completing the call, press and hold the emergency actuator until a tone sounds to return to normal operation.

Alarm Type	Indications/Actions
Alarm and Call	After ACK RECEIVED (see Non-Silent Alarm above) is displayed, the radio has priority voice-channel access. Press the PTT button and talk. After completing the call, press and hold the emergency actuator until a tone sounds to return to normal operation.

Sending a Status Transmission

- 1 Press **Sts** softkey. The display shows the last acknowledged status or first status name.
- 2 Use the navigation keys to select other statuses.
- 3 Press the **PTT** button to send the transmission. The display flashes the selected status/message name until the dispatcher acknowledges, at which time alert tones sound and the display shows **ACK RECEIVED**. The radio then returns to normal operation.

Sending a Direct-Entry Enhanced Private Conversation Call

- 1 Press the **PTT** button. A single tone sounds and the display changes to **PLEASE WAIT**, followed by telephone-type ringing if the receiving unit is in service.
- 2 If the receiving unit answers, press the **PTT** button to identify yourself and proceed with your call.

OR

If the called unit does not respond, press **Sel** or the **PTT** button again to leave a Call Alert page message and your ID.

A single tone followed by four tones sounds if the called unit acknowledges the page.

Initiating a Call Alert Page

- 1 Press the **Page** softkey.
- 2 Follow the instructions for initiating a Private Conversation to select a unit ID.
- 3 Press **Sel** or the **PTT** button to send a Call Alert page to the displayed ID,

OR

To send a Call Alert page following an Enhanced Private Conversation attempt, follow the instructions for sending a direct-entry Enhanced Private Conversation call.

Answering a Call Alert Page

Four tones sound and **PAGE RCV** flashes on the display. The tone and display repeat every five seconds.

- 1 Press the **PTT** button,

OR

Initiate an Enhanced Private Conversation call to the caller.


Selecting a Zone/Mode (Optional)

- 1 Press the **Zone** softkey and then the arrow key **▶** or **◀** to scroll to the desired zone.
- 2 Rotate the **Mode** knob to select the mode.

Selecting a Home Zone/Home Mode

Press the **Home** button.

Selecting Secure Mode

Press and release the **SEC** softkey. The  indicator lights up.

Selecting an Encryption Key

- 1 Press and hold the **SEC** softkey until a tone sounds.
- 2 Use the navigation keys to scroll to **KEY SEL**.
- 3 Press **Sel** to enter the Key Selection Menu.
- 4 Use the navigation keys to select desired key.
- 5 Press **Sel** to select key.
- 6 Press **Home** or the **PTT** button to quit.

Selecting a Key Index

- 1 Press and hold the **SEC** softkey until a tone sounds..
- 2 Use the navigation keys to scroll to **INDX SEL**.
- 3 Press **Sel** to enter the Index Selection Menu.
- 4 Use the navigation keys to select desired index.
- 5 Press **Sel** to select index.
- 6 Press **Home** or the **PTT** button to quit.

Erasing an Encryption Key

- 1 Press and hold the **SEC** softkey until a tone sounds.
- 2 Use the navigation keys to scroll to **ERASE KY**.
- 3 Press **Sel** to enter the Key Erase Menu.
- 4 Use the navigation keys to select desired index.
- 5 Press **Sel** to select index.
- 6 Press **Home** or the **PTT** button to quit.

DISPLAY AND LIGHT INDICATORS

<i>Display/Light</i>	<i>Meaning</i>
BUSY light on	Displayed conventional mode has activity on it, or selected trunked system is currently busy. Wait for callback.
XMIT light on	Indicates you are transmitting.
Dir indicator lit	Radio is in direct (mobile-to-mobile) operation.
PRI, NPRI indicators lit	Display shows a mode in the scan list with the indicated priority level.
P displayed	Telephone dialing pause. Press Sel softkey to continue the dialing.
NO ACKNOWLEDGE displayed	Unit being called with the Enhanced Private Conversation or Call Alert Page feature is not in service, or emergency alarm or status/message transmission is not acknowledged by dispatcher.
PHONE BUSY displayed	Trunked phone interconnect is busy.
NO ANSWER displayed	Unit being called with Enhanced Private Conversation or Call Alert Page does not respond, but is operational.
EMERGENCY displayed	Radio is in emergency alarm or call state.
NO EMERGENCY displayed	A mode incapable of emergency transmission has been selected.
OUT OF RANGE displayed	Radio is out of range of the trunking system.

ALERT TONES

Type of Tone	Name	Explanation
1 Low-Pitched Tone	Invalid Key Alert	Feature button pressed is not valid in selected mode, or a Call Alert or emergency alarm was not acknowledged.
1 High-Pitched Tone	Central Acknowledge or Valid Key	Central controller has received request for Call Alert or emergency alarm transmission. You pressed a valid key.
4 High-Pitched Tones	Dispatcher or Mobile Unit Acknowledge	Dispatcher is acknowledging your emergency transmission. Mobile unit has received your Call Alert.
5 High-Pitched Tones		The above two acknowledge tones, heard in tandem.
2 High-Pitched Tones	Private Conversation	You have an incoming call. Press Call , then the PTT button, then talk.
4 High-Pitched Tones every 6 seconds	Call Alert Page	Call Alert page has been received.
Phone-Type Busy Tone (when pressing the PTT button)	System Busy	All system radio channels in use. Release the PTT button, and wait for callback.

ALERT TONES (Continued)

Type of Tone	Name	Explanation
A series of low-pitched tones followed by a series of high-pitched tones.	Scan Alert On	Indicates that Scan feature is activated through the pre-programmed button or 3-Position Rotary Switch.
A series of high-pitched tones followed by a series of low-pitched tones.	Scan Alert Off	Indicates that Scan feature is deactivated through the pre-programmed button or 3-Position Rotary Switch.
Unique chirping sound	Dynamic Reprogramming	Indicates that a dynamic ID is assigned.
Unique, low-pitched chirping sound	New Message	Indicates the arrival of a new message.
Unique, high-pitched chirping sound	Priority Message	Indicates the arrival of a priority message.
2 Short High-Tones (after requesting a busy channel) upon pressing the PTT button)	Automatic Call Back or Talk Permit	Channel is available for previously requested transmission. System is accepting your transmission.

ALERT TONES (Continued)

Type of Tone	Name	Explanation
Low-Pitched Tone (upon pressing the PTT button during Transmit) (Operation Error)	Talk Prohibit/ Out-of-Range or Time-Out Timer or Illegal Mode	Out of trunked radio system range or system is out of service. Present transmission will soon be disabled. You have entered a mode where normal system traffic will be missed, or you attempted something that is not allowed. (See examples below.)
High-Pitched Tone every 10 seconds in unmuted receive condition	Failsoft	System central controller failure. The radio reverts from trunked operation to operation similar to a conventional repeater. Others may share the channel.

Examples: Not exiting phone mode after a call (radio cannot receive fleet or subfleet calls), transmitting in receive-only conventional mode, trying to select a dynamic mode when no dynamic ID assignment has been made.