

# Quick Guide

14221-1510-1000

Rev. D, June 2020



EDACS®, Conventional, P25 XG-25M  
Mobile Radios



Figure 1: XG-25M Mobile Radio (Front View)



Status Icons (see table)

The name of the currently selected radio system appears on the top line of the display, except during menu operations. Also, various messages such as new volume level and transmit power level appear on the top line.

The name of the currently selected group or channel appears on the middle line of the display, except during menu operations.

Figure 2: Display (Generalized)

Copyright © 2012, 2014 - 2016,2020, L3Harris Technologies.

## Operating Controls and Indicators (See Figure 1)

<b>Power On/Off/Volume Control</b>	Turn the radio on by rotating this control clockwise out of the detent ("click") position. NOTE: The radio may be wired so an external switch such as the vehicle's ignition key must also be placed in a run or on position before the radio will turn on. Adjust volume as necessary by rotating this control (clockwise increases). Turn the radio off by rotating this control fully counter-clockwise until it returns to the detent position.
<b>System/Group/Channel Control</b>	This rotary control selects either radio systems or groups/channels, depending upon radio programming.
<b>A, B, and C Preset Buttons</b>	These buttons can be programmed for quick access to menu functions.
<b>+ and - Buttons</b>	<u>Primary Function:</u> Scrolls through available radio systems, groups, or channels, depending on radio programming. <u>Secondary Function:</u> During menu operations, changes the selected function within a menu list. Functions may vary per radio programming.
<b>SCAN Button</b>	With default radio programming, press the SCAN button to toggle group/channel scan on and off. Function may vary per radio programming.
<b>MENU Button</b>	With default radio programming, press the MENU button to activate the radio's menu function. This button also performs a select/choose function when the menu function is active.
<b>CLR Button</b>	In trunked mode, pressing the CLR button exits the current operation and removes all displays associated with it. In conventional mode, pressing the CLR button unmutes the radio so activity on the selected channel can be monitored.

## Operating Controls and Indicators (See Figure 1)

<b>OPT Button</b>	The OPT button is used for various different functions such as locking and unlocking the buttons.
<b>Home/Emergency Button</b>	Based on radio programming, when pressed, either changes the radio to a home radio system and group/channel, or declares an emergency.
<b>Display</b>	Indicates the currently selected radio system and group/channel, menu operations, and various messages. See Figure 2.
<b>Tx/Busy Indicator</b>	Indicates transmit (Tx) and receive status of the radio.
<b>Microphone Connector</b>	Connect a hand-held mic to this connector by positioning the small notch of the mic's plug in a straight-up (i.e., 12 o'clock position) at the connector, then gently push the plug into the connector. Latch the plug by rotating its locking ring in a clockwise direction.



Listed button functions assume default radio button programming. Functions may vary from radio-to-radio per specific radio programming.

## Status Icons (See Figure 2)

	<b>Transmit Icon:</b> Appears when the radio is transmitting.
	<b>Busy Icon:</b> Appears when the group/channel is "busy" (i.e., the radio is receiving a call on the indicated group/channel).
	<b>Type 99 Icon:</b> Appears when the selected analog channel has Type 99 (T99) signaling on/enabled.
	<b>Channel Guard Icon:</b> Appears when the selected analog channel has receive Channel Guard (CG) signaling enabled.
	<b>Low Power Transmit Icon:</b> Appears when the radio is set to transmit in low power mode.

## Status Icons (See Figure 2)

	<b>Encryption Icon:</b> Appears when the radio is set to transmit and receive encrypted voice calls. Clear voice (unencrypted) voice calls can also be received.
	<b>P25 Icon:</b> Appears when a Project 25 (P25) radio system and group/channel are selected. The radio is operating in P25 mode (trunked or conventional).
	<b>Digital Voice Icon:</b> Appears when a digital voice radio system and group/channel are selected. The radio is set to transmit and receive digital voice calls.
	<b>Analog Voice Channel Icon:</b> Appears when an analog voice channel is selected.
	<b>Bluetooth Icon:</b> Blinks when radio's Bluetooth feature is on but no device is connected/paired. Stays on when radio's Bluetooth feature is on and a device is connected/paired. See Operator's Manual for details.
	<b>Scan Icon:</b> Appears and rotates when the radio is scanning groups or channels.
	<b>Scan Non-Priority Icon:</b> Appears when the selected group/channel is on the scan list for non-priority scanning.
	<b>Scan Priority 2 Icon:</b> The selected group/channel is on the scan list for Priority 2 scanning.
	<b>Scan Priority 1 Icon:</b> The selected group/channel is on the scan list for Priority 1 scanning.
	<b>Special Call Mode:</b> Appears when the radio is in special call mode (i.e., for individual calls, etc.)



For detailed operating instructions, refer to the XG-25M Operator's Manual, publication number 14221-1510-2000.

### NOTICE!

The material contained herein is subject to U.S. export approval. No export or re-export is permitted without written approval from the U.S. Government. Rated: EAR99; in accordance with U.S. Dept. of Commerce regulations 15CFR774, Export Administration Regulations.

Alert Tones		
NAME	MODE*	DESCRIPTION
Call Originate	T, P25C, AC	<b>1 Short Mid-Pitched Tone</b> - Sounds after pressing the mic's Push-To-Talk (PTT) button. After pressing the PTT button and hearing this tone, speak into the mic to transmit a voice message. For trunked mode, this tone indicates the radio has been assigned a working channel for the transmission.
Call Queued	T	<b>1 High-Pitched Tone</b> - Sounds after pressing the PTT button indicating the system has placed the call request in the queue.
Autokey	T	<b>1 Mid-Pitched Tone</b> - This occurs after an attempted call is placed in a call queue or if the PTT button is released prior to a working channel assignment. The radio sounds this tone when it is clear to talk. Immediately press the PTT button to keep the assigned channel, and speak into the microphone.
Call Denied	T	<b>1 Low-Pitched Tone</b> - Sounds to indicate the radio is not authorized to operate on the currently selected radio system or group.
System Busy	T	<b>3 Short Mid-Pitched Tones</b> - Sounds if the radio is keyed when the system is busy, if no channels are available, if the call queue is full, or if an individual call is being attempted to a radio that is transmitting.
Button Press Alert	T, P25C, AC	<b>1 Short Mid-Pitched Tone</b> - Sounds when a radio button has been pressed and the radio has responded accordingly. A short low-pitched tone indicates no action was taken because the button is not active in the current mode.

About L3Harris Technologies

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

Alert Tones		
NAME	MODE*	DESCRIPTION
Carrier Control Timer	T, P25C, AC	<b>5 Short High-Pitched Tones Followed by 1 Long Low-Pitched Tone</b> - Sounds if the programmed time for continuous transmission has been exceeded. The transmitter shuts down shortly after the alert, interrupting communications. Release and re-key the PTT button to maintain communications.
Page	T (P25T Only)	<b>3 High-Pitched Tones</b> - In P25 trunked mode, if the receiving radio accepts a page, both the receiving and transmitting radios emit 3 high-pitched tones.
Out of Range	T	<b>1 Low-Pitched Tone</b> - Periodically sounds to indicate Wide Area Scan mode.

\* T = Trunked Mode; P25C = P25 Conventional Mode; AC = Analog Conventional Mode

Displayed Messages**	
QUEUED	Indicates the trunked radio system has placed the call in a call request queue.
SYS BUSY	Indicates the trunked radio system is busy, no working channels are currently available, or the call queue is full.
DENIED	Indicates the radio or talkgroup is not authorized to operate on the selected radio system or group.
UNKNOWN	An individual call is being received, but the caller's ID was not received.
REGISTER	Displayed when the radio is performing a registration/affiliation on a P25 trunking site.
CC SCAN	The radio is not receiving the trunked radio system's control channel and it has entered the Control Channel Scan mode.
WA SCAN	The radio has entered the Wide Area Scan mode to search for a new system.
BND SCAN	P25 Band Scan. See Operator's Manual for details.
SYS ALL	A system all-call has been received.
TALKARND	The radio is operating in conventional talk-around mode. In this mode, the radio's transmit and receive frequencies are the same (for the currently selected channel).

Displayed Messages**	
T99 ON	Type 99 receive decoding is enabled.
T99 OFF	Type 99 receive decoding is disabled.
*RXEMER*	An emergency call is being received by the radio.
*TXEMER*	An emergency call has been transmitted (i.e., declared) from the radio.
EM x	An emergency has been declared by the radio ID number that follows in the display. "EM 01201" for example.
VOL = xx	The current volume level. The volume level ranges from OFF (muted) to 40 (loudest).
DATA T/R	The radio is transmitting/receiving a data call.
DATA ON	The radio has been toggled to the data-enable state; displayed for 2 seconds.
DATA OFF	The radio is in the data-disabled state.
ALRM ON	The external alarm function of the radio is enabled.
ALRM OFF	The external alarm function of the radio is disabled.
MENU	Displayed in the top line of the display after pressing the MENU button to activate the menu function.
*GROUP*	A group call is in progress and is displayed on line 1 of the display (trunked and T99 modes only).
INDV = x	Indicates which item in the individual call list is being displayed. The name or ID of the item in the list is also displayed. Range = 1 to 99.
*INDV*	An individual call is in progress.
PHONE	A phone call is being received from the radio system/site. Message "INDV*" also appears since the radio interprets a received phone call as an individual call.
PHN = x	Indicates item number in the phone list. Range = 1 to 99.
*PHONE*	An initiated phone call is in progress. This is displayed on line 2 of the display.
SPKR ON	The external speaker is enabled.
SPKR OFF	The external speaker is disabled.

\*\* For a complete list of messages that may be displayed, refer to the *XG-25M Operator's Manual*, available online at <http://pspc.harris.com/Products/Mobile/XG-25M.aspx>.

## Trunked Mode Operations

### Receiving a Call on a Group

- Turn the radio on by rotating the Power On/Off/Volume control clockwise out of the detent position.
- Select the desired trunked radio system. CC SCAN (for Control Channel Scan) appears in the display until the radio has successfully obtained a trunked system control channel. If this message remains for an extended period, select a different trunked radio system within radio range.
- Select the desired group. The currently selected group is indicated in the middle line of the display. The radio is now ready to receive calls on the group.
- When a group call is received on the selected group, the radio unmutes, the calling radio's name or GR and the calling radio's unit ID appears in the display. Also, the **Y** (Busy) status icon appears in the display and the Tx/Busy indicator lights green.
- If necessary, adjust the volume by rotating the Power On/Off/Volume control.

### Transmitting a Call on a Group

- Set the radio to receive calls on the desired trunked radio system and group per the previous procedure.
- When the group is clear (i.e., no call is being received on it), press and hold the microphone's PTT button. The **U** (Transmit) status icon appears at the bottom of the display and the radio performs the necessary signaling required to obtain a working channel (i.e., communication radio channel) for the voice transmission.
- When the working channel is assigned by the radio system, the Tx/Busy indicator lights red and the Call Originate alert tone (1 short mid-pitched tone) sounds to indicate it is OK to begin speaking into the microphone. If two or more tones or a high-pitched tone is heard, the system may be busy and the call request has been placed in queue or the request has been denied for some reason.
- Hold the microphone approximately 2 inches from the mouth and speak into the microphone at a normal voice level. Never shout or whisper into the microphone.
- Release the PTT button when the transmission is complete, and listen for a reply.
- Repeat transmissions as necessary.

## Declaring an Emergency

Check with system administration personnel to ensure the radio is programmed with the emergency function. If so, declare (send) an emergency as instructed or as follows:

- Set the radio to receive calls on the desired/required radio system.
  - If the radio is programmed to transmit an emergency on the selected group/channel, select the desired/required group/channel.
  - Press and hold the red Home/Emergency button. After a short time, the radio transmits an emergency call request.
  - When the radio sounds a single beep (auto-key alert tone), it is ready for voice transmission. \*TXEMER\* displays until the emergency is cleared.
  - Press the mic's PTT button and speak into the mic.
  - Release PTT when the transmission is complete.
- If the radio is programmed to clear an emergency, clear it by pressing and holding the CLR button followed by pressing the Home/Emergency button, and then release both buttons.

## Conventional Mode Operations

### Receiving a Call on a Channel

- Power on the radio.
- Select the desired conventional radio system and channel.
- When the radio receives a call, it unmutes on the channel, the **Y** (Busy) status icon appears in the display, and the Tx/Busy indicator lights green. Optional: Press the CLR button to disable squelch and monitor any calls on the channel (with or without signaling).

### Transmitting a Call on a Channel

- Set the radio to receive calls on the desired conventional radio system and channel per the previous procedure.
- Verify the channel is not busy (i.e., no call currently exists on it) by observing for the lack of the **Y** (Busy) status icon. If this icon is present in the display, do not proceed until it disappears. The CLR button can be pressed to monitor for call activity.
- Press the mic's PTT button and hold the microphone approximately 2 inches from the mouth and speak into the mic. Never shout or whisper into the microphone.
- When the transmission is complete, release the PTT button and listen for a reply.
- Repeat transmissions as necessary.