

UNITY® XG-100M Mobile Radio
With CH-100 Control Head
Full-Spectrum Multiband Radio



Radio Overview



POWER ON/OFF VOLUME CONTROL	Turn clockwise to power on the radio and increase volume. Turn counter-clockwise to decrease volume and power off the radio. Minimum volume levels may be programmed into the radio.
NOISE MICROPHONE	Used in conjunction with a handheld microphone and Harris' built-in noise suppression algorithm.
GROUP/CHANNEL SELECTION	Selects the available groups or channels.
MICROPHONE CONNECTOR	Connection for hand-held, hands-free, speaker-mic, or headset
AMBIENT LIGHT SENSOR (Future Use)	The radio automatically adjusts the display and button backlight brightness level based on ambient light. Do not block this sensor.
HOME BUTTON	Toggles through three available main screens or allows you to quickly navigate back to the main screen from a submenu.
EMERGENCY BUTTON	Declares an emergency.

Main Display Overview

One of three available main displays appears after power up or after exiting from the menus. While on the main screen, press the Home button to toggle through these displays. A sample display is shown below:



To select an item, touch the desired area of the screen with your finger.

Never touch the screen with any metal or sharp objects, as this can damage the screen!

Lock/Unlock Display

- From the Main Display, select **SHORTCUTS**.
- Select **DISPLAY LOCKOUT**. A padlock appears on the display. Press the Home button to unlock the display.

Select Zone/System

- At main display, select the currently selected zone. Or Select **MAIN MENU** and then **ZONES**.
- Select the desired zone from the list. **P25** indicates P25 Conventional, **T** indicates P25 Trunked, **C** indicates Command Tactical Zone, and **M** indicates Mixed System/Zone. See the operator manual for more information.

Icons

	Trunked Signal Strength		Bluetooth On
	Transmitting		Bluetooth Paired
	Receive Signal Strength		Encrypted Channel
	Channel Idle		Global Encryption
	Transmitting Encrypted		GPS Tracking
	Failsoft		Monitor On
	Nuisance Channel		OTAR Disabled
	Receiving Data		OTAR Registered
	Transmitting Data		OTAR Registering
	Virtual Site		OTAR Rekeying
	Vote Scanning		Talkaround Enabled
	Scanning Enabled		Transmit Power
	Alert(s) Present		RX Only
	Emergency		VDOC
	Noise Cancelling Enabled		

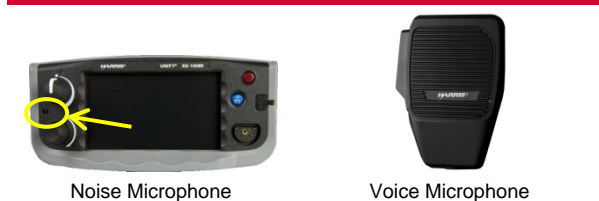
Enable Noise Cancellation

- From the main display, select MAIN MENU → SETTINGS → AUDIO SETTINGS.
- Select NOISE CANCELLATION to toggle noise cancellation to ENABLED or DISABLED. The NC icon is displayed in the top of the display when noise cancellation is enabled.

Using Noise Cancellation

- Verify the NOISE CANCELLATION option is enabled (see above).
- Talk within two (2) inches of the Voice Microphone. Noise cancellation makes the level of your voice diminish quickly as you move the Voice Microphone away from your mouth. In essence, the radio starts to see your voice as surrounding noise. Whereas you may be comfortable speaking up to a foot away from the Voice Microphone on a normal radio, noise cancellation requires that you keep the Voice Microphone close to your mouth.
- Speak clearly, loudly, and with authority.
- Ensure that the Voice Microphone and the control head's Noise Microphone are not covered or obstructed.
- In very noisy environments, it is okay to yell into the radio. The radio can handle very loud input levels.

Microphone Locations



Noise Microphone Voice Microphone


Start/Stop Scan

1. From the main display, select **START SCAN**.
2. The green **START SCAN** text changes to red **STOP SCAN**.

Or

1. From the main display, select **MAIN MENU**.
2. Select **SCAN**.
3. Select **START SCAN**. The green **START SCAN** text changes to red **STOP SCAN**.

Setup Scan

1. From the main display, select **MAIN MENU**.
2. Select **SCAN**.
3. Select **Scan LIST**. Next to the name of the desired list, select .
4. Select a channel. A pop-up is displayed. From here, you can **SET PRIORITY 1**, **SET PRIORITY 2**, **DELETE CHANNEL**, or **ADD CHANNEL**. You can also select **NUISANCE** to temporarily remove the channel from scan list.

Adjust Settings

1. From the main display, select **MAIN MENU**.
2. Select **SETTINGS**.
3. From here you can adjust settings for audio, display, GPS, Bluetooth, and the clock. Refer to the Operator Manual for more information about each of these options.

Message Menu

From the message menu, you can send status conditions, radio messages, and view faults/alerts when the alert icon is displayed on the main screen. Note that the alert icon goes away after viewing unless new faults occur.

See the operator manual for more information about each of these options.

Lights and Sirens

The lights and sirens feature allows you to activate the siren/light combination defined for the corresponding button. The siren and light functions are programmable for any combination of siren and lights.

1. From the main display, select **MAIN MENU**.
2. Select **LIGHTS**.
3. Select the desired option.

NOTE: The Lights and Sirens feature requires an external lights and sirens controller.

Telephone Interconnect

1. From the main display, select **MAIN MENU**.
2. Select **CALL**.
3. Select **PHONE CALL**.
4. Select **SYSTEM LISTING** to select from a list of pre-programmed numbers for the active system, select **USER LISTING** to select from a list of user-defined numbers for all systems, or select **DIRECT DIAL** to enter the number directly. Direct Dial entry can have up to 31 characters (0-9, *, #, or a space; the space correlates to a pause).
5. Press PTT to make the call.

For detailed operating instructions, refer to Operator's Manual 14221-1200-2010, available online at www.pspc.harris.com.

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Select a new Talkgroup



1. From the main display, select the current talkgroup.
2. Select the desired talkgroup from the list. After selecting the new talkgroup, the radio returns to the main display.
3. Press PTT to make the call.

OR

1. From the main display, select **MAIN MENU**.
2. Select **CALL**.
3. Select **CHANGE TALKGROUP**.
4. Select the talkgroup from the list. After selecting the new talkgroup, the radio returns to the main display.
5. Press PTT to make the call.

Transmit Individual Calls

1. From the main display, select **MAIN MENU**.
2. Select **CALL**.
3. Select **INDIVIDUAL CALL**.
4. Select the unit to call.
5. Press PTT to make the call.

Receive Individual Calls

1. When receiving an Individual Call, the radio displays the calling radio's name or Unit ID.
2. Press the PTT button to respond.
3. The radio rings and indicates a missed call if you do not respond to an incoming Individual Call. The ring sounds continuously until you press PTT, select the missed call indication, or power cycle the radio.

Activate/View Mission Plan

Mission plans contain radio programming information such as frequencies, channels, stations, and talk groups. Up to 10 different mission plans can be stored in the radio, but only one can be activated at a time.

1. From the main display, select **MAIN MENU**.
2. Select **PROGRAM**.
3. Select the desired mission plan to open a popup menu.
 - Select **ACTIVATE PLAN** to activate the selected mission plan. An arrow indicates the active mission plan.
 - Select **VIEW PLAN INFO** to display information for the selected mission plan.

If a plan is activated, the radio displays series of screens indicating status. When complete, the radio returns to the main display with the first channel in the first zone/system selected.

NOTE: You cannot activate a plan when the radio is transmitting an emergency.

A **MISSION PLAN FAILED** message may be displayed for errors such as invalid syntax in the fill or some other invalid parameter.

Emergency Operation

Press and hold the emergency button on the front of the control head to declare an emergency. The length of time to hold the button is programmable.

- For digital channels, the radio transmits the talkgroup or radio ID to the dispatch console and receiving radio.
- The radio can be programmed to have a dedicated emergency channel, which can get activated from analog or digital channels.
- The radio can also be programmed to send an Emergency Alarm in addition to, or in place of, the emergency call (P25 modes).
- The radio will go through transmit and receive cycles if so configured. Speak into the microphone while the radio is transmitting or press PTT to talk.

Radio Status Messages

MESSAGE	DESCRIPTION
PTT DENIED	P25 Trunked - The radio or talkgroup is not authorized to operate on the selected system and/or talkgroup.
CALL QUEUED	P25 Trunked - The system has placed the call in a request queue.
SYSTEM BUSY	P25 Trunked - The system is busy, no channels are currently available, the queue is full, or an individual call is being attempted to a radio that is currently transmitting.
SCANNING	Indicates the radio is scanning.
TX EMERGENCY	P25 modes only - An emergency call is being transmitted.
RX EMERGENCY	P25 modes only - An emergency call is being received.
WIDE AREA SCAN	P25 Trunked - Indicates the radio has entered the Wide Area Scan mode to search for a new system.
INVALID TALKGROUP	P25 Trunked - The current talkgroup is not valid for the current system.
REGISTERING	P25 Trunked - The radio is performing a registration on a P25 trunked site.
CONTROL CHANNEL SCAN	P25 Trunked - The control channel is lost and the radio has entered Control Channel Scan to search for the control channel (usually out of range indication).
BAND SCANNING	P25 Trunked - Only displayed if the P25T system is configured for "EnhancedCC" mode of operation. When the radio cannot find a Control Channel in either the trunked frequency set or the list of discovered adjacencies, the radio is able to perform a full spectrum frequency scan to find a new Control Channel.