

Motorola® MaraTrac™

Advanced Control Head

Operating Instructions

To Receive:

Turn the control head **ON/OFF** switch to **ON**. A tone(s) sounds to indicate the radio condition (see TONE TABLE). The display indicates the receive mode. Adjust the volume with the **Vol** up/down rocker button. The **BUSY** indicator lights when the channel has activity.

To Transmit:

Scroll to the desired mode using the **Mode** up/down rocker button. Press and hold the PTT button; when the red **XMIT** indicator comes on, speak into the microphone in a normal voice. If a tone sounds when you press the PTT button, the system is alerting you to a certain condition (see TONE TABLE).

TONE TABLE

Tone	Cause	What To Do
1 High-Pitched Beep at Power-Up	Radio Passed Self-Test	No Action Necessary
Series of High-Pitched Beeps at Power-Up	Radio Did NOT Pass Self-Test	Radio Requires Service; Notify Service Personnel
1 Low-Pitched Beep Tone	Invalid Selection	Select Another Button
1 High-Pitched Beep "CHIRP"	Valid Selection	No Action Necessary
Low Constant Tone When Pressing PTT *	Transmitting MDC Data	Wait for Tone to Complete Before Talking
Low Constant Tone Upon Pressing PTT	Blank Transmit Frequency	Selected Mode is Receive-Only
Low Constant Tone While Transmitting	Time-Out Timer Has Expired	Transmission Terminated; Release PTT

* Optional tone dependent on radio programming

Talk-around:

Use the **Direct** button for talk-around operation. When the **Dir** indicator is not lit, the programmed transmit frequency and squelch information are used. By momentarily pressing **Dir** (indicator lights), talk-around is enabled and the receive frequency and squelch code are used for talk-around transmit frequency information. To turn talk-around off, momentarily press **Dir** again.

Multiple PL Codes:

Momentarily press the **MPL** button to turn on multiple PL feature. The **MPL** indicator lights and the selected code is momentarily displayed. When **MPL** is active, the selected code overrides the mode-slaved Tx and Rx squelch codes. To turn **MPL** off, momentarily press **MPL** again. To change the selected **MPL** code, press and hold the **MPL** button until a "chirp" sounds and the **MPL** indicator flashes to indicate you are in the **MPL** "configuration" mode. Use the **Mode** up/down rocker button to scroll to the desired **MPL** code. The new displayed **MPL** code pair becomes

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immediately active (even before exiting the configuration mode). To exit the configuration mode, press either the **MPL** or the **Home** button.

Monitor VHF/UHF:

The system defaults to coded-squelch operation on power-up. To change to carrier squelch, momentarily press the **Mon** button; a single "chirp" sounds and the **Mon** indicator lights up. Return to coded-squelch by momentarily pressing **Mon** again. To un-squelch the radio, press and hold **Mon** until a second "chirp" sounds. Adjust the volume with the **Vol** up/down rocker button. Momentarily press **Mon** again to return to coded squelch operation.

Low Band Radio with Adjustable Squelch:

The adjustable squelch control feature allows the operator to adjust the squelch threshold, via a squelch control knob located on the control head.

- **Coded-Squelch Operation**

The radio defaults to coded squelch operation upon powering up. To change to adjustable carrier squelch, if Private-Line® (PL) or Digital Private-Line® (DPL) is programmed, momentarily press the **Mon** button; a single "chirp" sounds and the **Mon** indicator lights. Return to coded squelch by momentarily pressing **Mon** again. To un-squelch the radio, press and hold **Mon** until a second "chirp" sounds. Adjust the volume with the **Vol** up/down rocker button. Momentarily press **Mon** again to return to coded squelch operation.

- **Carrier-Squelch Operation**

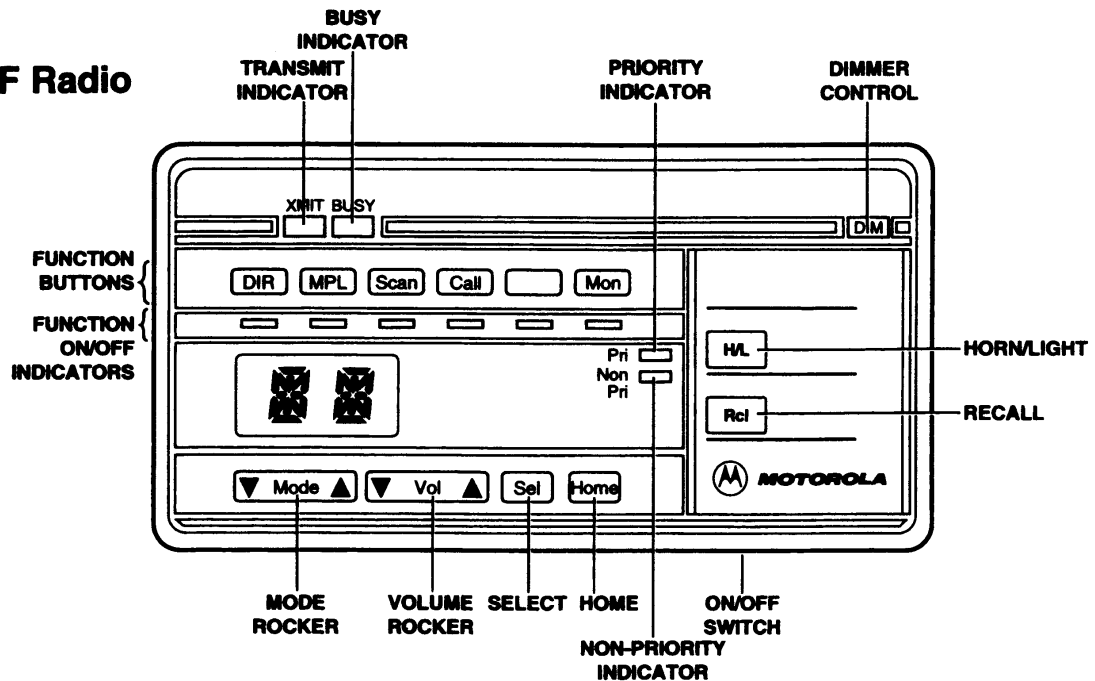
Rotate the squelch-control knob to the fully counterclockwise position. When the channel is clear, slowly rotate the squelch-control knob clockwise until the noise stops. This is the threshold squelch setting. The operator may adjust the squelch knob to reduce interference when necessary.

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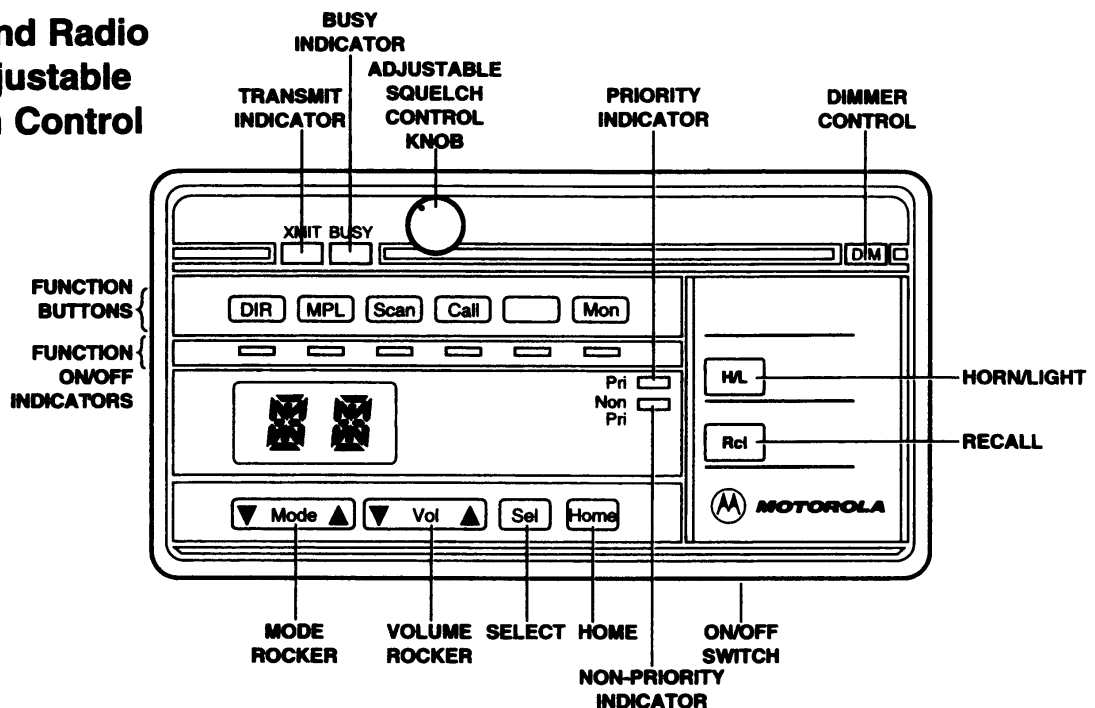
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VHF/UHF Radio



Low Band Radio with Adjustable Squelch Control Knob



Scan:

Press the **Scan** button to turn scan on; a "chirp" sounds and the **Scan** indicator lights (solid) indicating the system is scanning. Momentarily press **Scan** again to

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turn scan off. When on a preset internal scan list or an operator selectable scan list the radio scans for activity. While scanning, if activity on the priority mode is detected, the **Pri** indicator flashes. When activity is detected on a non-priority mode, the **Non-Pri** indicator lights up solid.

Scan with talkback:

When talkback scan is enabled by programming, after activity has ceased, the radio will suspend scan and stay on the same channel for the duration of receive talkback hang-time. Priority sampling will continue. The **Priority** indicator/**BUSY** indicator will show priority information. Whenever the PTT button is released and the radio de-keys, scan will be suspended and stay on the same channel for the duration of transmit talkback hang-time. Priority sampling will continue. If the PTT button is pressed while scan is suspended in hang-time, the radio will key up on the last mode that had activity. Priority indicators will show priority information. The display will show the channel that had activity. After the talkback hangtime is expired, the radio will resume scan.

Edit User's Scan List:

Press and hold the **Scan** button until a "chirp" sounds. The **Scan** indicator flashes to indicate scan "configuration" mode. Use the **Mode** up/down rocker button or **Rcl** (recall) to review the user's scan list. The **Pri** indicator flashes when the priority mode has been selected or the **Non-Pri** indicator lights solid when a non-priority mode has been selected. Use the **Sel** button to scroll from "not-in-the-list" to "non-priority" to "priority" and back to "not-in-the-list". The effect each **Sel** button press has on a selected mode's scan list is explained in the following table.

If Condition Is:	One Sel Press Will:	Indicators Change To:
Selected Mode NOT in the List	Add Mode to the List as Non-Priority	Non-Pri lights (Pri Off)
Selected Mode in List as Non-Priority	Raise Mode's Status to Priority *	Pri flashes (Non-Pri off)
Selected Mode in List as Priority	Delete Mode from List	Both lights off

* If another mode was previously designated as a priority mode, the previously designated priority mode's status is lowered to non-priority when you exit the configuration mode.

To exit the configuration mode and simultaneously save the scan list changes, momentarily press the **Scan** or the **Home** button.

Home Mode:

Use the **Home** button to select the internally programmed **Home** mode and to exit any configuration mode.

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Dimmer Button:

Pressing the **DIM**mer button once dims the display's brightness. Pressing the **DIM**mer button a second time returns the display back to full brightness.

Standard Features Note:

PL Channel Scan™, talk-around, Quik-Call II™ and Stat-Alert™ decode features are shipped from the factory disabled and require field programming. Refer to the MaraTrac Radio Service Software and Radio Signaling Options manuals for programming instructions.

Stat-Alert™ and Quik-Call II™ Operation Procedures:

- **Call Alert™**

When a Call Alert is received, four beeps sound every five seconds and the armed external alarms* will operate. The display flashes "CA". To clear the alarms, take the microphone off-hook or press the Mon button. The display shows the current mode number. If scan was on the display shows the priority mode. To reply to the Call Alert, press the PTT button.

- **Selective Call**

When a Selective Call is received, the radio will beep twice. The display flashes "SC". A voice message will follow.

Wait until the voice message is complete. The display stops flashing and shows the current mode number. Pick up the microphone, press the PTT button and reply to the Selective Call.

Telephone Interconnect:

Requires DTMF Microphone and DTMF Decoder Kit installed

When a phone call comes in, telephone-type ringing sounds and the armed external alarms* will operate. The display flashes "PH".

To respond, pick up the DTMF microphone and enter the connect code (normally the "*" button), press the PTT button, and speak into the microphone. To listen, release the PTT button. Explain to the land-line caller that they must wait until you release the PTT button (indicated by a soft beep) before they can speak.

When the call is complete, enter the disconnect code (normally the "#" button) and hang up the microphone.

* External Alarms:

When the external alarms option is installed in a VHF or UHF MaraTrac radio, the horn and lights can be activated by pressing the **H/L** button. To change this

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configuration, press and hold the **H/L** button until the radio enters the select mode (a single "chirp" will sound). Use the **Mode** up/down rocker button to change the desired horn and lights setting. Once the desired setting has been selected, press the **Home** or **H/L** button to exit and return to normal operation. When a Call Alert is received, the external alarms will respond with your selected alarm setting.

On a low band radio with adjustable squelch, pressing the H/L button activates both the horn and lights; they are not independently selectable.

Single Tone™ Encode:

Requires Single Tone Kit installed

- **To Select Single Tone:**
To select Single Tone, momentarily press the **ST** button on the control head. The radio sounds one beep and displays the selected tone for two seconds. The red indicator under the **ST** button will light.
- **To Send Single Tone:**
Press the PTT button. The talk inhibit side-tone will be heard if it is programmed to enable. The selected tone will be displayed for the duration of the tone if the display tone on PTT is programmed to enable. Wait for the Single Tone to complete, then speak normally in to the microphone.
- **To Turn Off Single Tone:**
To turn off Single Tone, momentarily press the **ST** button on the control head. The radio will sound one beep and the red indicator light under the **ST** button will be off.
- **To Enter Configuration Mode:**
To enter the configuration mode, press and hold the **ST** button on the control head until the radio beeps and the red indicator under the **ST** button flashes. The display will show the selected tone. Use the **Mode** up/down button to scroll through the available tones.
- **To Select a Tone and Exit Configuration Mode:**
Press the **ST** button, or the **Home** button, to exit configuration mode and to select the Single Tone currently displayed.

NOTE

If Single Tone is selected, and you scroll to a non-Single Tone mode, the **ST** indicator will be off until you reach a mode with Single Tone.