



*LBI-38388B*

*Mobile Communications*

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TMX™ — 8825 (25 Watt)

TMX™ — 8810 (10 Watt)

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# Operator's Manual

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## OPERATING PROCEDURES

Two-way FM radio systems must be operated in accordance with the rules and regulations of the Federal Communications Commission (FCC). As an operator of two-way radio equipment, you must be thoroughly familiar with the rules that apply to your particular type of radio operation. Following these rules will help to eliminate confusion, assure the most efficient use of existing radio channels, and result in a smoothly functioning radio network.

When using your two-way radio remember these rules:

1. It's a violation of FCC rules to interrupt any distress or emergency message. And, as your radio operates in much the same way as a telephone "party line", always listen to make sure that the line is

clear-that no one else is on the air-before sending messages. If someone is sending an emergency message-such as reporting a fire, or asking for help in an accident-**KEEP OFF THE AIR!** Emergency calls have priority over all messages.

2. Use of profane or obscene language is prohibited by Federal law.
3. It is against the law to send false call letters, or a false distress or emergency message.
4. The FCC requires that you keep conversations brief and confine them to business. To save time, use coded messages whenever possible.
5. Using your radio to send personal messages (except in an emergency) is a violation of FCC rules. You may send only those messages that are essential for the operation of your business.
6. It is against the Federal law to repeat or otherwise make known anything you overhear on your radio. Conversations between others sharing your channel must be regarded as confidential.
7. The FCC also requires that you identify yourself at certain specific times by means of your call letters. Refer to the rules that apply to your particular type of operation for the proper procedure.

#### **NOTE**

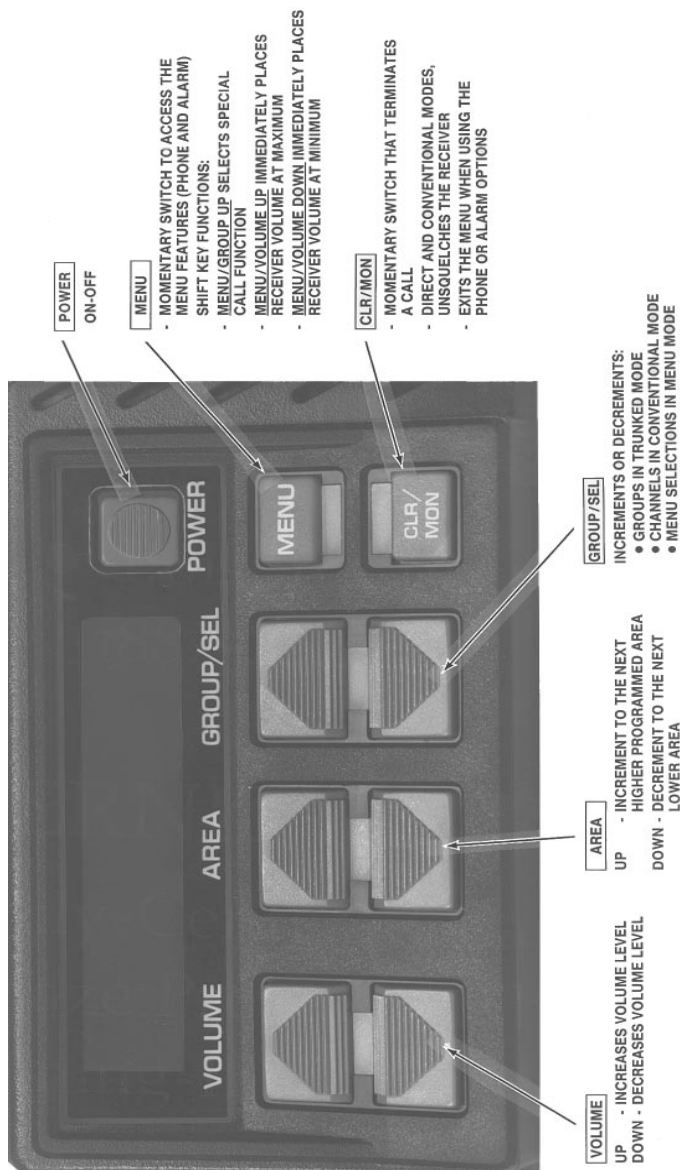
The GE-MARC system is already automatically identified and does not require identifying yourself.

8. No changes or adjustments shall be made to the equipment except by an authorized or certified electronic technician.

## **CONTROLS**

### **POWER**

Momentary switch. Press once to turn on the radio. Push again to turn off the radio. The radio will sound three beeps and the display will show PASSED followed by the area/group last selected.



## Controls

## **VOLUME**

Two momentary switches. **VOLUME UP** and **VOLUME DOWN**. Beeps are heard while stepping the volume on an inactive channel. No beeps are heard while receiving a channel.

## **AREA**

Two momentary switches. Push **AREA UP** to increment to the next higher programmed area. Push **AREA DOWN** to decrement to the next lower area.

## **GROUP/SEL** (GROUP/SELECT)

Two momentary switches.  
Increment or decrement groups, channels, or menu selections.

**TRUNKED MODE:** Increments or decrements the group. Inoperative in areas dedicated to direct mode GE-MARC channels.  
**NOTE:** The **SPECIAL CALL** function will not be selected when stepping through the groups. Press **MENU** and then simultaneously press **GROUP UP** to select **SPECIAL CALL**.

**CONVENTIONAL MODE:** Increments or decrements the conventional channels (up to 9 channels).

**MENU OPERATION:** Increments or decrements menu selections for the **ALARM** and **PHONE** menu features.

## **CLR/MON** (CLEAR/MONITOR)

Momentary switch.

**TRUNKED MODE:** Terminates a call.

**DIRECT AND CONVENTIONAL MODES:** Unsquelches the receiver to monitor any activity on the selected channel.

**MENU OPERATION:** Exits the menu when using the **PHONE** or **ALARM** options. Resets the display to the current area/group.

## **MENU**

Momentary switch. Accesses the menu features (PHONE and ALARM). Press **MENU** again to toggle between PHONE and ALARM. Press **CLR/MON** to exit the menu mode and return the display to the current area/group.

PHONE: Allows selecting up to 10 preprogrammed telephone numbers. Press **GROUP UP** or **GROUP DOWN** to step through the numbers.

ALARM: If the Horn Alert Option is present, press **GROUP UP** or **GROUP DOWN** to toggle between Yes or No.

## **SHIFT KEY FUNCTIONS**

### **MENU/GROUP UP**

Momentary switches. Selects the special call function for the area in the display (trinked mode only). Press **MENU** and then **GROUP UP** simultaneously. (**MENU** is acting as a "shift" key.)

### **MENU/VOLUME UP**

Momentary switches. Immediately places receiver volume at maximum. Press **MENU** and then **VOLUME UP** simultaneously.

**MENU/VOLUME DOWN** Momentary switches. Immediately places receiver volume at minimum. Press **MENU** and then **VOLUME DOWN** simultaneously.

## **DISPLAY INDICATORS**

A Liquid Crystal Display (LCD) provides the operational status of the radio. The display contains TX and BSY indicators and eight alphanumeric characters.

**TX**  
(TRANSMIT)

ON: Indicates the microphone  
Push-to-Talk (PTT) is pushed.

FLASHING: Indicates attempting to acquire a channel in trunked mode.

**BSY**  
(BUSY)

Trunked Mode:

FLASHING: Indicates radio is automatically retrying to acquire a channel while system is busy. (Radio must be preprogrammed for call retry option.

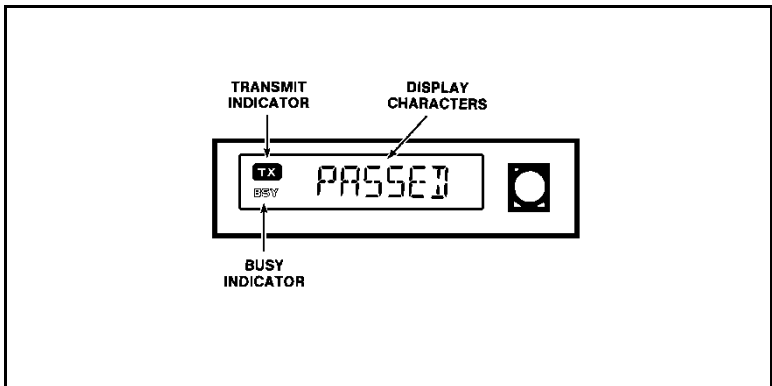
ON: Indicates out-of-range of the GE-MARC system.

Conventional Mode:

ON: Indicates the channel is busy.

**DISPLAY  
CHARACTERS**

Eight alphanumeric characters. Up to 4 characters may be used for the area name followed by 4 characters for the group name.



Display Indicators

## **AUDIBLE INDICATORS**

### **SELF CHECK TEST ALERT**

Three beeps are sounded a second after the radio is turned on to indicate that the radio has passed the self diagnostic test. The display will also show PASSED for one second.

### **CALL RECEIVED ALERT (Trunked mode only)**

A short, high frequency tone is sounded when you receive a group call. A two tone alert is sounded when receiving an individual call. NOTE: The radio can be preprogrammed to mute the Call Received Alert Tones.

### **CALL ORIGINATE ALERT (Trunked mode only)**

A three tone alert is sounded after originating a trunked call. The alert indicates a channel was acquired and is ready for normal conversation.

### **SYSTEM BUSY (Trunked mode only)**

A low frequency tone is sounded for one second after attempting to place a trunked call. The display also shows WAIT momentarily. This tone indicates the GE-MARC system is busy and you should try again later (the call retry option will try again automatically if preprogrammed).

### **OUT OF RANGE ALERT (Trunked mode only)**

Five beeps are sounded after attempting to place a trunked call. These beeps indicate that the radio is out of range of the GE-MARC system, or if the beeps sound when the radio is within known range of the system, the radio may need servicing (even though the self diagnostic test passed at power on).

### **INVALID CALL ORIGINATE ALERT (Trunked mode only)**

A low frequency tone is sounded for one second immediately after pressing the mic PTT. The display does not show WAIT. A call was attempted with a group that is not enabled for call originate.



## CARRIER CONTROL TIMER

(Trunked, Direct, and Conventional modes)

A pulsed tone signal is sounded when the microphone PTT is pressed continuously for a preprogrammed time. After nine seconds of pulsing the alert tone, the radio unkeys the transmitter and communications is interrupted. While the tone is pulsing, the user can release and press the PTT again to reset the timer and resume the conversation.

## GE-MARC SYSTEM TONES

The GE-MARC system may give other tones to alert the user of system time-out, etc. Contact your GE-MARC system operator for details about these alert tones.

# BASIC OPERATION

## TURNING THE RADIO ON

Push the **POWER** switch. A self diagnostic test is performed for 1 second. A 3 beep alert signal will then sound and the display will show **PASSED** for one second. The display will then show the **AREA** and **GROUP** which were last selected.

### NOTE

Should the 3 beep alert not sound and/or the display shows **ERROR**, contact your service representative.

Set the volume level using the **VOLUME UP** or **VOLUME DOWN** keys. A short beep will sound to show each volume level step. The beeps will stop when maximum or minimum volume are reached or while receiving a call.

### NOTE

Pushing **MENU** and then **VOLUME UP** simultaneously will immediately place the volume at maximum. Conversely, pressing **MENU** and **VOLUME DOWN** places the radio at minimum volume. The **MENU** key acts as a "shift" key for these functions.

## TURNING THE RADIO OFF

Push the **POWER** switch or if the radio is connected to the vehicle ignition switch, turn the vehicle ignition off. When the vehicle ignition is turned back on, the radio power and all other radio settings will return to the same condition last selected.

## PLACING A DISPATCH CALL (TRUNKED MODE OPERATION)

### NOTE

If you plan on a lengthy call (or several calls), the vehicle engine should be running to maintain battery charge.

1. Select the desired trunked mode AREA and GROUP using the **AREA** and **GROUP** keys. If the SPECIAL CALL (SPC) feature is desired, select the area followed by simultaneously pressing **MENU** and then **GROUP UP**. The display will show SPC after the area name. If the area has no programmed groups, SPC selection is automatic.
2. Momentarily press the microphone push-to-talk (PTT) switch to acquire a channel. The display will show WAIT momentarily. A 3 tone alert signal will then signal when you can begin the conversation. If the "off-hook call originate" option is preprogrammed, the radio will automatically attempt to acquire a channel when the microphone is removed from the hanger without pressing the PTT.

A steady one second low frequency tone will sound if the call cannot be completed due to all available channels busy. Press the PTT again later to retry the call.

### NOTE

If the call retry option has been preprogrammed in the radio, the radio will automatically try to acquire a channel every 5 seconds, for up to 15 times unless the area is changed or an out-of-range condition occurs.

A sequence of five beeps will sound if the radio cannot access a channel due to being out of range of the GE-MARC system or an inoperative radio. Any subsequent call request will be ignored for 20

seconds. However, if the area is changed, a call request may be initiated in the new area.

## **ENDING A CALL (TRUNKED MODE OPERATION)**

The call can be ended in one of three ways:

- a. pressing the **CLR/MON** key,
- b. returning the microphone to the hanger (if the preprogrammed option "on-hook call terminate" is enabled), or
- c. waiting for a channel disconnect or system time-out after 6 seconds of no channel activity (PTT).

### **NOTE**

If a channel disconnect occurs before the conversation has ended, the call must be initiated again. To avoid confusion, a procedure should be set up so that the originator of the call is the one designated to reestablish communications. Two or more operators originating a call simultaneously may acquire two different channels making communication impossible.

## **RECEIVING A CALL (TRUNKED MODE OPERATION)**

When a call is received by the radio, alert tones are sounded to inform the user of the incoming call (unless the "mute received alert tone" option has been preprogrammed).

A single tone alert indicates a group call. A two tone alert indicates an individual call. The display will flash the area and group of the received call. Press the microphone PTT to answer the incoming call.

Incoming telephone interconnect calls will be indicated with a two tone alert followed by telephone ringing tones. The display will show an individual decode call. Press the microphone PTT to answer the call.

## DIRECT MODE OPERATION

The Direct Mode provides short range, line of sight communications. In the Direct Mode, the radio is not operational on the GE-MARC system.

1. Press the **AREA UP** or **DOWN** keys to select the direct mode area. The **GROUP** keys have no affect in the Direct Mode.
2. Before making a call, determine if the channel is in use. Press **CLR/MON** to momentarily disable the squelch to monitor the channel. Also, removing the microphone from the hanger allows you to monitor the channel without disabling the squelch (Busy Tone is disabled). The BSY indicator in the display will also show if the channel is in use.

## CONVENTIONAL MODE OPERATION

1. Press the **AREA UP** or **DOWN** keys to select the conventional mode area. If more than one channel is available in the conventional area, press the **GROUP UP** or **DOWN** keys to select the channel (up to 9 channels may be available in one conventional area).
2. Before making a call, determine if the channel is busy. Press **CLR/MON** to momentarily disable the squelch to monitor the channel for any activity. Also, removing the microphone from the hanger allows you to monitor the channel without disabling the squelch (Channel Guard is disabled). The BSY indicator in the display will also show if the channel is in use.

## PLACING A TELEPHONE INTERCONNECT CALL

The radio may be preprogrammed with up to 10 telephone numbers. Each dialer number may contain up to 15 digits.

1. Select the AREA and GROUP which are valid for interconnect calls. If the SPECIAL CALL (SPC) feature is desired in trunked mode, select the area followed by simultaneously pressing **MENU** and then **GROUP UP**. The display will show SPC after the area name. If the area has no programmed groups, SPC selection is automatic.

2. Momentarily press the **MENU** key. If **ALARM** appears in the display, press **MENU** a second time until **PHONE** appears. **PHONE** will remain in the display for one second and then the telephone number which was last selected will be displayed. Use the **GROUP UP** or **GROUP DOWN** keys to step to the desired telephone number. If you desire to cancel the **PHONE** mode, press **CLR/MON** at any time to reset the display to the current area/group.

**NOTE**

If a number contains more than 7 digits, the radio displays the first digits of the number for one second followed by displaying the last 7 digits.

3. With the desired phone number in the display, momentarily press the microphone PTT. The radio will acquire a channel and dial the number. When using the trunked mode, the radio will give the same alert tones to show if a channel was not available as described under the section **PLACING A DISPATCH CALL (TRUNKED MODE OPERATION)**.

**NOTE**

After dialing the first number, if another number must now be sent (for credit card calls, etc.), first press **MENU**, select the other number using **GROUP UP** or **DOWN**, and then momentarily press the microphone PTT.

4. To end a call, momentarily push **CLR/MON** once to disconnect the telephone interconnect only. If desired, another interconnect call may now be placed before the system times out in 6 seconds by pressing **MENU** and selecting the number. Push **CLR/MON** a second time to disconnect from the system immediately.

**NOTE**

When the radio is first turned on, momentarily pressing **MENU** will always select **ALARM** first. Pressing **MENU** a second time will select the **PHONE** mode with the first of the 10 dialer numbers. While operating the radio, the radio will remember the menu mode and the dialer number last selected. However, after the radio is turned off, the menu mode will again be **ALARM** and the dialer number will be the first in the list.

## HORN ALERT OPTION

If the Horn Alert Option is present, the radio can be preprogrammed to beep the vehicle horn when a call is received (in trunked mode operation only).

To enable the Horn Alert Option, momentarily press the **MENU** key until **ALARM** appears in the display. (If **PHONE** appears, press **MENU** a second time.) Use the **GROUP UP** or **GROUP DOWN** keys to toggle between Y or N (Yes or No) to enable or disable the alarm.

If desired, after enabling the alarm, press the **CLR/MON** key to leave the menu mode and return the display to the current area/group. The alarm will remain enabled on the area/group selected in the display.

With the alarm enabled, when a call is received, the radio will first sound a pulsed alert warning tone for 3 seconds and then begin blowing the horn 5 times (1 second on, 3 seconds off, for 20 seconds). Pressing the microphone PTT during the pulsed alert tone will prevent blowing the horn. The horn alert will remain enabled for subsequent calls.

## **SAFETY INFORMATION**

The operator of any mobile should be aware of certain hazards common to the operation of vehicular radio transmissions.

A list of possible hazards are:

- Explosive Atmospheres

Just as it is dangerous to fuel a vehicle with the motor running, be sure to turn the radio off while fueling the vehicles. Do not carry containers of fuel in the trunk of the vehicle when the radio is mounted in the trunk.

- Interference To Vehicular Electronics Systems

Electronic fuel injection systems, electronic antiskid braking systems, etc., are typical of the types of electronic devices that may malfunction due to the lack of protection from radio frequency energy present when transmitting. If the vehicle contains such equipment, consult the dealer for the make of the vehicle and enlist his aid in determining if such electronic circuits perform normally when the radio is transmitting.

- Dynamite Blasting Caps

Dynamite blasting caps may be caused to explode by operating a radio within 500 feet of the blasting caps. Always obey the "Turn Off Two Way Radio" signs posted where dynamite is being used. When transporting blasting caps in your vehicle:

- a. Carry the blasting caps in a closed metal box with a soft lining.
- b. Leave the radio OFF whenever the blasting caps are being put into or removed from the vehicle.

- Radio Frequency Energy

To prevent burns or related physical injury from radio frequency energy, do not operate the transmitter when anyone outside of the vehicle is within two feet of the antenna.

## WARRANTY

- A. Ericsson GE Mobile Communications Inc. (hereinafter "Seller") warrants to the original purchaser for use (hereinafter "Buyer") that Equipment manufactured by Seller shall be free from defects in material, workmanship and title, and shall conform to its published specifications. With respect to any Equipment not manufactured by Seller (except for integral parts of Seller's Equipment to which the warranties set forth above shall apply), Seller gives no warranty, and only the warranty, if any, given by the manufacturer shall apply. Batteries are excluded from this warranty but are warranted under a separate Nickel-Cadmium Battery Warranty.
- B. Seller's obligations set forth in Paragraph C below shall apply only to failures to meet the above warranties (except as to title) occurring within the following periods of time from date of sale to the Buyer and are conditioned on Buyer's giving written notice to Seller within thirty (30) days of such occurrence:
1. for fuses, incandescent lamps, vacuum tubes and non-rechargeable batteries, operable on arrival only.
  2. for parts and accessories (except as noted in B.1) sold by Seller's Service Parts Operation, ninety (90) days.
  3. for all other Equipment of Seller's manufacture, one (1) year.
- C. If any Equipment fails to meet the foregoing warranties, Seller shall correct the failure at its option (i) by repairing any defective or damaged part or parts thereof, or (ii) by making available at Seller's factory any necessary repaired or replacement parts. Any repaired or replacement part furnished hereunder shall be warranted for the remainder of the warranty period of the Equipment in which it is installed. Where such failure cannot be corrected by Seller's reasonable efforts, the parties will negotiate an equitable adjustment in price. Labor to perform warranty service will be provided at no charge during the warranty period only for the Equipment covered under Paragraph B.3. To be eligible for no-charge labor, service must be performed by an authorized General Electric Service Station or other Servicer approved for these purposes either at its place of business during normal business hours, for mobile or personal equipment, or at the Buyer's location, for fixed location equipment. Service on fixed location equipment more than thirty (30) miles from the Service Station or other approved Servicer's place of business will include a charge for transportation. Equipment located outside the Continental United States is not eligible for no-charge labor.
- D. Seller's obligations under Paragraph C shall not apply to any Equipment, or part thereof, which (i) has been modified or otherwise altered other than pursuant to Seller's written instructions or written approval or, (ii) is normally consumed in operation or, (iii) has a normal life inherently shorter than the warranty periods specified in Paragraph B, or (iv) is not properly stored, installed, used, maintained or repaired, or, (v) has been subjected to any other kind of misuse or detrimental exposure, or has been involved in an accident.
- E. The preceding paragraphs set forth the exclusive remedies for claims (except as to title) based upon defects in or nonconformity of the Equipment, whether the claim is in contract, warranty, tort (including negligence), strict liability or otherwise, and however instituted. Upon the expiration of the warranty period, all such liability shall terminate. The foregoing warranties are exclusive and in lieu of other warranties, whether oral, written, expressed, implied or statutory. NO IMPLIED OR STATUTORY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL APPLY. IN NO EVENT SHALL THE SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT OR EXEMPLARY DAMAGES.

This warranty applies only within the United States.



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## NOTES

## NOTES

## NOTES

## EMERGENCY NUMBERS

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**Police**

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**State Police**

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**Fire**

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**Poison Control**

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**Ambulance**

**Life Saving and Rescue Squad**

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## OPERATING TIPS

The following conditions tend to reduce the effective range of two-way radios and should be avoided whenever possible.

Operating the radio in low areas of terrain or while under power lines or bridges.

Obstructions such as mountains or buildings between the vehicle sending and the system/person receiving the message.

In area where transmission or reception is poor, some improvements may be obtained by insuring that the antenna is vertical (particularly if a glass mount is used). Moving a few yards in another direction or moving to a higher elevation may also improve communications.



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