Operator's Manual

EDACS®

Monogram Series

MOBILE RADIO 800 MHz

ERICSSON

TABLE OF CONTENTS

NOTICE!

This manual covers Ericsson and General Electric products manufactured for and sold by Ericsson Inc.

NOTICE!

Repairs to this equipment should be made only by an authorized service technician or at a facility designated by the supplier. Any repairs, alterations or substitutions of recommended parts made by the user to this equipment not approved by the manufacturer could void the user's authority to operate the equipment in addition to the manufacturers warranty.

NOTICE!

SAFETY INFORMATION

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

A list of the possible hazards are:

1. **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 vehicle. Do Not carry containers of fuel in the trunk of the vehicle when the radio is mounted in the trunk.

2. **Interference To Vehicular Electronic Systems**

   Electronic fuel injection systems, electronic anti-skid breaking systems, electronic cruise control 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 vehicle and enlist his aid in determining if such electronic circuits perform normally when the radio is transmitting.

3. **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.

4. **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.

CAUTION

Before jump starting or changing the vehicle battery, it is strongly suggested that the 10A fuse located in the Red lead (IGN A+) be removed. This will insure that the radio is protected from damage during the battery charging process. Replace fuse when charging is completed.

5. Liquefied (LP) Gas Powered Vehicles

Mobile radio installations in vehicles powered by liquefied petroleum gas with the LP gas container in the trunk or other sealed-off space within the interior of the vehicle must conform to the **N**ational **F**ire **P**rotection **A**ssociation standard (**NEPA**) **58** which requires that:

a. The space containing the radio equipment shall be isolated by a seal from the space containing the LP gas container and its fittings.

b. Outside filling connections shall be used for the LP gas container.

c. The LP gas container shall be vented to the outside of the vehicle.

SAFE DRIVING RECOMMENDATIONS FOR USERS OF MOBILE RADIOS*

Read the literature on the safe operation of the radio.

- Keep both hands on the steering wheel and the microphone in its cradle whenever the vehicle is in motion.
- Place calls only when vehicle is stopped. Use recall dialing to speed the time it takes to call.
- When talking from a moving vehicle is unavoidable, drive in the slower lane. Keep conversations brief.
- If conversation requires taking notes or complex thought, stop the vehicle in a safe place and continue the call.

Whenever using a mobile radio exercise caution.

*As recommended by the AAA

OPERATING PROCEDURES

Two-way **FM** radio systems must be operated in accordance with the rules and regulations of the Federal Communications Commission (FCC). Operators of two-way radio equipment must be thoroughly familiar with the rules that apply to the intended 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 this two-way radio remember these rules:

1. It is a violation of FCC rules to interrupt any distress or emergency message. As the 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 in 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 other 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 conversations be kept brief and confined to business. To save time, use coded messages whenever possible.
5. Using a radio to send personal messages (except in an emergency) is a violation of the FCC rules. Send only those messages that are essential for business operation.
6. It is against Federal law to repeat or otherwise make known anything overheard on the radio. Conversations between others sharing a channel must be regarded as confidential.
7. The FCC requires the operator to identify himself at certain times by means of call letters. Refer to the rules that apply to the particular type of operation for the proper procedure.

NOTE

The GE-MARC and EDACS trunking environments have automatic identification features built in and do not require the user to identify by means of call letters.

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

INTRODUCTION

This manual describes how to use the EDACS Monogram Mobile Radio. The radio is a synthesized, microprocessor-based, FM mobile radio providing reliable two-way communications in the **E**nhanced **D**igital **A**ccess **C**ommunications **S**ystem (**EDACS**) trunking environment, GE-MARC trunking system and conventional communications systems.

In the EDACS or trunked system mode, the user selects a communications system and group. In this mode, channel selection is transparent to the user and is controlled via digital communication with the system controller. This provides advanced programmable features and fast access to communication channels.

In the conventional mode, the user selects a channel and directly communicates on that channel. In this mode, a system refers to a set of channels. A channel is a transmit/receive radio frequency pair.

The exact operation of the radio will depend on the operating mode, the radio's programming and the particular radio system. Most features described in this manual may be enabled or disabled through programming. Consult the system administrator for the particular features that are programmed into the radio.

This manual provides instructions for operating in either of the three systems (EDACS, GE-MARC, Conventional). A separate section is provided for each system with a complete set of instructions for operating the radio within that system.

NOTE

This radio allows the operator to switch between an EDACS, GE-MARC and Conventional system. Special attention should be given to the system selected and the operating characteristics of the radio working within that system.

USER INTERFACE

The operating controls are located on the radio's front panel (see Figure 1). A liquid crystal display (LCD) displays the radio status information. The microphone connector is also located on the front panel. The front panel provides a **POWER ON-OFF/VOLUME** control, a ramp up/down control, a **SYS**tem select button, a **CL**ea**R** button, a **SC**a**N** button for on-off control of scan operation, a **HOM**e button and a **SP**ecial **C**all button.

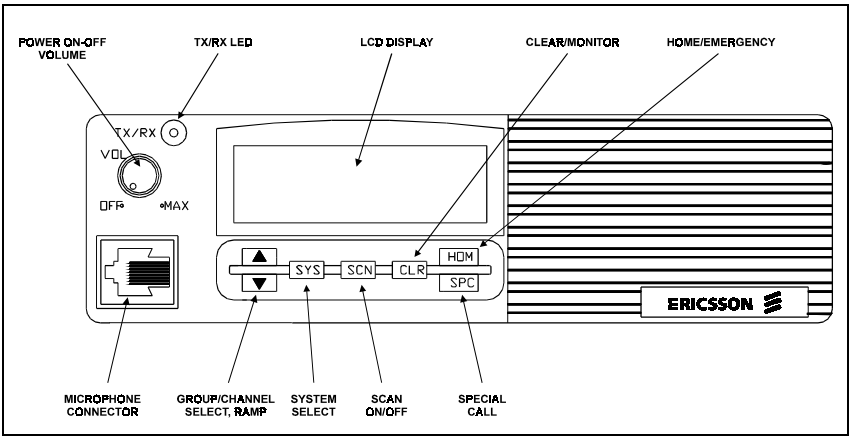


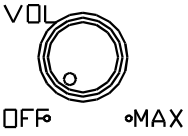
Figure 1 - Front Panel

The LCD display provides seven alphanumeric characters to show the operational mode of the radio. The display also provides eleven status indicators. A dual function indicator lamp provides the red indicator **TX** when the radio is in the transmit mode and a green indicator **RX** when a signal is being received.

An optional DTMF microphone is available to permit manual telephone interconnect calls, storing of numbers, etc.

CONTROLS

POWER ON-OFF/VOLUME



This rotary control applies power to the radio and adjusts the receiver volume. Rotating the control clockwise out of detent applies power to the radio. A single alert tone sounds (if enabled through programming) to indicate the radio is operational.

Rotating the control clockwise increases the volume level.

GROUP/CHANNEL SELECT

The primary function of this button is to scroll through the Group list or Channel list depending upon programming. Pressing the SYS button and then the ▲ or ▼ button will increment or decrement the System selection. The secondary function is to increment or decrement items with a list (scan list, phone list, system, etc.). Press ▲ to scroll in increasing order and press ▼ to scroll in decreasing order. To auto-ramp, press and hold the button.

SYSTEM SELECT

This button permits selection of the desired System when used in conjunction with the ▲, ▼ buttons. Momentarily pressing the SYS button and then either of the ▲ or ▼ buttons within two seconds will permit scrolling of the programmed systems. Only those systems programmed can be selected.

SCAN ON/OFF

This button is used to toggle scan operation on and off. When the radio is scanning, the **SCAN** status flag will be shown in the LCD display and all groups or channels in their respective scan list of the currently selected system will be scanned. A secondary function of this button, when used with the SYS button, permits the lockout of the selected group or channel from the scan list.

CLEAR

This button performs several functions depending on the selected radio system . When in the EDACS or GE-MARC radio system, pressing this button once will exit the special call mode and return to the normal System/Group display. When in the conventional radio system, pressing this button once will enable monitoring the channel for activity by unsquelching the receiver. All transmissions will be heard, even if Channel Guard protected.

HOME/EMERGENCY

HOM

This button is used to automatically select a desired Group and/or System by pressing and holding the key for a programmed duration. This button may also be programmed to function as an emergency button to declare an emergency by pressing and holding for a programmed duration. Emergency messages may only be transmitted in EDACS systems. The button must be programmed either for Home or Emergency, not both.

SPECIAL CALL

SPC

This button is used to place the radio in the Special Call mode. From the Special Call mode, the radio is able to make individual and interconnect calls in an EDACS or GE-MARC system.

INDICATORS

The seven character alphanumeric display identifies the selected System/Group and operating modes or error conditions. There are also 11 status indicators to indicate radio or system status.

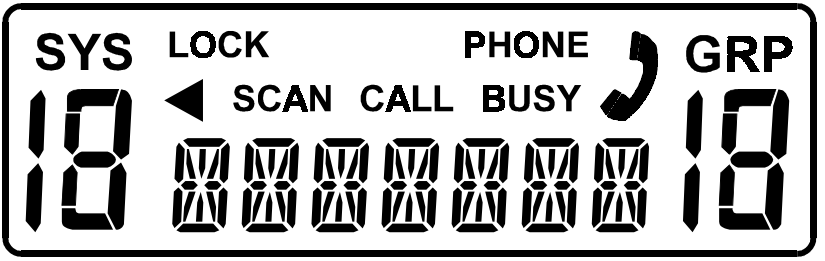


Figure 2 - LCD Display

SYS The System display indicates the number of the current EDACS, GE-MARC or Conventional system selected.

GRP The Group display indicates the number of the current Group in an EDACS or GE-MARC System.

LOCK This indicator will only be present when the optional DTMF microphone is used. When displayed, the keypad is locked on the DTMF microphone to prevent accidental transmission of tones by pressing of any of the keys on the keypad.

BUSY The Channel Busy status flag is on when the radio receives a call or when a conventional channel is in use. The flag is also on when transmitting on a trunked channel.

PHONE In EDACS or GE-MARC system, the **PHONE** and ☎ status flags will be illuminated when the radio is placed in the Special Call mode.

CALL This status flag will be illuminated when the radio receives an individual call in EDACS or GE-MARC systems.

SCAN This status flag will be on when scan function is enabled.

◀ This status flag indicates when a trunked group or conventional channel is scan enabled.

☎ This status flag indicates when the radio is in a Special Call or Interconnect mode. Also on when **PHONE** is displayed.

MESSAGES

During radio operation, various messages are displayed in the LCD display. Typical messages include radio operation (radio in programming mode) and error messages (radio failure).

MESSAGE	NAME	DESCRIPTION
NC	Out of range	Indicates no connection between radio and system site. Incorrect system selected, out of coverage area, etc.
EMRGNCY	Emergency	Flashing indicates that radio is sending an emergency signal (if programmed).
AGENCY	Agency Call	Indicates an agency call.
ALLCALL	All Call	Indicates an all call message.
INDV	Individual Call	Indicates an individual call.
CONV FS	Conventional Failsoft	Displayed when a failure of the EDACS system occurs. All communications will be in conventional mode.
PROGRAM	PC Programming	Indicates radio is in the programming mode.
SYN LOC	Synthesizer Lock	Indicates that the synthesizer is unable to load and lock on the channel properly.

ALERT TONES

The radio generates a number of alert (beeps) tones to indicate various events or operating conditions. These alert tones can be enabled or disabled by programming.

Power-Up

If programmed, a tone will sound on power-up after the radio passes the self test.

Carrier Control Timer

If the programmed time for continuous transmission is exceeded, five short high-pitched warning tones followed by a long low-pitched tone will be heard. The transmitter will shut down shortly after the alert tones are heard, interrupting communications. Release and re-key the **PTT** button to maintain communications. This will reset the carrier control timer and turn the transmitter back on.

Key Press

A short low-pitched tone sounds to indicate a key/button has been pressed. May be disabled through programming.

TONES FOR TRUNKED OPERATION ONLY

Out-Of-Range

EDACS — A single pitched tone will sound immediately after the **PTT** button is pressed, indicating the radio is out of range of the repeater. The radio will try to place a call for a short period (3 seconds) after the initial attempt. The radio will generate a second low pitched tone when it gives up trying to place a call. The system may be off the air or the radio requires servicing when the radio is within the calling range and these tones are heard.

GE-MARC — Five beeps will sound shortly after the **PTT** button is pressed when the radio is out of range of the repeater or the radio is inoperative. If the “Call Retry” is active, the radio will try the channel at twenty second intervals for five minutes.

System Busy

EDACS — Three short, medium pitched tones will sound when the **PTT** button is pressed to indicate that the receiving party is already engaged in another call or the system is busy and its queue is full. You must rekey later to access the system.

GE-MARC — A low pitched tone will sound when the **PTT** button is pressed to indicate that all channels are busy.

Clear To Talk

A short burst tone indicates that the radio has acquired a channel and the user may proceed to talk. A programmable option.

Available System

A short low pitched tone indicates the radio is attempting to connect to the first available repeater. A continuous high pitched pulsed tone for two seconds indicates when a repeater is available and the radio is attempting to connect.

TONES IN CONVENTIONAL SYSTEM

Receive Only Channel

A warbling tone sounds when a transmit attempt is made on a receive only channel.

EDACS OPERATION

TURNING ON THE RADIO

Rotate the **POWER ON-OFF/VOLUME** control clockwise, out of detent, to turn on the radio. A short beep (if enabled through programming) indicates the radio is ready for operation. The display indicates the last selected System and Group.

In the EDACS trunked environment, if communications with the system's control channel cannot be established, the **NC** message will be displayed. This may occur if, for example, the radio is out of range of the trunking site. It may be necessary to move to another location or select another trunking system to re-establish the control channel link for trunked mode operations.

The radio will automatically transmit a "log-in" message whenever the radio is turned on or whenever the radio roams into a new system when changing the Group selection. This "log-in' message includes the Logical ID and the Group ID for that radio.

RECEIVING A CALL

1. Turn on the radio as indicated in paragraph ***TURNING ON THE RADIO***.
2. Adjust the **POWER ON-OFF/VOLUME** control clockwise to the desired audio level.
3. Select the desired System by pressing the SYS button and then using the ▲ or ▼ ramp button to scroll to the desired System. Only Systems programmed can be selected.
4. Select the desired Group by pressing the ▲ or ▼ ramp button to scroll to the desired Group. Only Groups programmed can be selected.
5. The radio is now ready to receive calls.

Individual Call

1. If an Individual Call (call directed only to your radio) is received, the radio unsquelches on the assigned Group. The **BUSY** status flag will light.

2. If programmed ON, the individual call received tones (one high followed by one low pitched tone) will sound and the originator's ID or just "ID" (dependent upon programming) is displayed for a short time.

3. To answer the call, press the **PTT** button and begin talking if caller's ID is still in display. If caller's ID is no longer in display, press the SPC button to display caller's ID, then press **PTT** and begin talking.

Group Call

1. When the radio receives a Group Call, it unsquelches on the assigned channel and the **BUSY** status flag lights.

2. If programmed ON, the Group Call receive tone (single tone) will sound. The Group name originator's ID (if programmed) will be shown in the display.

Interconnect Call

1. When the radio receives an Interconnect Call (telephone call directed to your radio), the radio unsquelches on the assigned channel and the **BUSY** status flag turns on.

2. If programmed ON, the Interconnect Call received tones (one high followed by one low pitched tone) will sound. The **PHONE** and) status flags will be displayed.

3. Press the PTT button and begin talking.

Sending A Call

1. Turn the radio on and select the desired System and Group as indicated in paragraph ***TURNING ON RADIO***.

2. Observe the display for the absence of the **BUSY** status flag to ensure that no one is transmitting on the selected System and Group and ensuring radio is in service area.

3. Press and hold the **PTT** button. The radio will perform the necessary signalling required to obtain a communications channel. If the signalling is unsuccessful, the radio will sound the appropriate alert tone(s).

4. When the channel has been acquired, the red TX indicator lights and the **BUSY** status flag is displayed. If programmed, the clear to talk tone will sound.
5. Hold the microphone about 3 inches from your mouth and speak normally into the microphone.
6. Release the **PTT** button to listen for a reply.

Sending A Special Call

1. Press the SPC button to place the radio into the Special Call mode and provide access to a pre-programmed special call alphanumeric list. Each selection from the list is pre-programmed with either an Individual Call or an Interconnect number. If programmed, the special call alphanumeric will be displayed. The **PHONE** and status flags will be displayed while in the Special Call mode.
2. Use the ▲ or ▼ button to scroll through the Special Call list.
3. Once the desired Individual/Interconnect Call number is displayed, press and hold the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.
4. **INDIVIDUAL** - When the signalling is successfully completed, the **BUSY** status flag is displayed and the clear to talk tone sounds. Speak directly into the microphone. Release the **PTT** button to listen to a reply.

   INTERCONNECT - When the signalling is successfully completed, the **BUSY** status flag is displayed and the proper DTMF tones will be sent and heard at the speaker. When someone answers, press the **PTT** button and speak directly into the microphone. Release the **PTT** button to listen to a reply. Messages cannot be received when the **PTT** button is pressed.

   If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).
5. To return to the normal System/Group, press the CLR button to exit the Special Call mode.

SCAT OPERATION

A SCAT (Single Channel Autonomous Trunking) System operates with the same set of features as a standard EDACS system. The only significant user change relates to the **BUSY** status flag. Since only one channel, operating as both control and working channel, exists in a SCAT System, the **BUSY** status flag will be displayed when the SCAT channel is in the working channel mode. When the transmission on the channel is completed, the **BUSY** status flag will not be displayed and indicates the return of SCAT control channel signalling.

CONVENTIONAL FAILSOFT

In the unlikely event of a failure of the EDACS System, communications may take place in conventional failsoft mode. The radio will be automatically directed to a communications channel set up for this purpose. During this mode of operation, **CONV FS** will be displayed in the alphanumeric LCD display. An increase in activity on the channel during conventional failsoft operation may be noticed, so be careful not to transmit until the channel is clear.

Operation during conventional failsoft will be same as operation on a conventional system, except that it will not be possible to select a communications channel or use emergency and special call features. When trunking is restored, the radio will automatically be returned to normal operation.

NOTE

Emergency and Special Call features are not operational during conventional failsoft.

HOME/EMERGENCY OPERATION

The HOM button can be pre-programmed in one of the following configurations:

1. Home Enabled and Emergency Disabled - The radio will switch to the home System and/or Group.
2. Home Disabled and Emergency Disabled - The button is not active.
3. Home Disabled and Emergency Enabled - The radio will send an emergency transmission on the current System/Group.

Home Operation

The radio can be programmed to automatically switch to a home System/Group by pressing and holding the HOM button for the programmed duration.

Emergency Operation (Optional)

The radio's ability to declare an emergency, clear an emergency, remain locked on an emergency and group and the emergency audio and visual display can each be enabled or disabled through programming. When an emergency is declared, scanning will stop and restarts only after the emergency has been cleared.

Receiving An Emergency Call

When receiving an emergency call from the selected System/Group, an alert beep is heard and the **BUSY** status flag is displayed. The message **EMRGNCY** flashes in the display until the emergency condition is cleared. Follow standard emergency procedures.

Declaring An Emergency Call (Optional Feature)

To send an emergency call to the selected System/Group (or to an optionally pre-programmed emergency group), proceed as follows:

1. Press and hold the HOM button for a pre-programmed duration (check with the system administrator for duration time). The radio will transmit an emergency call request with the radio ID until an emergency channel assignment is received.
2. When the working channel assignment is received, the radio sounds a single beep (programmable) indicating it is ready for voice transmission. **EMRGNCY** (programmable) flashes in the display until the emergency is cleared.
3. Press the **PTT** button and speak into the microphone in a normal voice. Release the **PTT** button to listen for a reply.
4. The emergency can be cleared (if programmed) by pressing momentarily the CLR button and then pressing the HOM button.

SCAN OPERATION

Wide Area System Scan (Optional)

The radio may be programmed for wide area system scan operation for multi-site applications. Upon the loss of the currently selected system's control channel, radios may be programmed to automatically scan the control channels of other systems. If a new control channel is found, the radio will switch to the new system and sound an alert tone.

Priority System Scan (Optional)

The radio may also be programmed for priority system scan. A priority system may be assigned among the systems programmed into the radio. Radios programmed in this manner will check for the priority trunked system's control channel at a programmable rate ranging from 1 to 16 minutes. This priority scan timer is reset each time the **PTT** button is pressed or a call is received. If the priority system control channel is found, the radio will automatically switch to the priority system.

Group Scan

Only Groups that are part of the radio's scan list may be scanned. Groups are added to the scan list on a per system basis through PC programming. Each system's group scan list is retained in memory when the radio is turned off. The radio may also be programmed to provide Priority Group Scan capability which operates similar to priority scan in conventional systems.

The following is a description of PC programmable scan features that should be helpful in understanding Group Scan Operation.

Scan Hang Time - the delay time the radio waits before resuming scan after PTT is released or after the carrier has dropped a channel.

TX Select - the group the radio will transmit on while scanning. The radio will be programmed to transmit on either the scanned group or the selected group.

Scan List (privileges) - pre-programmed list of groups that may be scanned.

P1 Programming - priority group programming is accomplished by one (and only one) of two methods:

1. Priority 1 Group programming follows the selected channel.

2. Priority Group programming is fixed during PC programming and cannot be changed by the user.

P1 Always Scan - determines if the Priority Group will always be scanned, regardless of the scan state set by the user.

Enable/Disable Scan

To enable Group scan, press the SCN button. The **SCAN** status flag will be displayed. To disable Group scan, press and release the SCN button so that the **SCAN** status flag is not showing in the display.

Nuisance Delete

A Group can be deleted from the scan list, if it is not the currently selected group, by pressing both the SCN and CLR buttons during scan operation while the radio is displaying the unwanted Group. The Group will be deleted from the system's group scan list (the ◀ status flag will not be displayed). Pressing the SCN and CLR buttons again will add the selected Group back to the scan list (the ◀ status flag will be displayed). Turning the radio off and then back on will also restore the Group to the scan list.

Add/Delete Groups

Groups can be added or deleted from the scan list as necessary. To add Groups to the scan list:

NOTE

Scan must be disabled to add/delete a Group on the scan list.

1. Select the desired Group to be added. If the current group is already included in the scan list, the ◀ status flag will be illuminated.
2. To add the Group to the scan list, press the SYS button and then press the SCN button. The ◀ flag will turn on and the Group will be included on the scan list.

To delete Groups on the scan list:

1. Select the desired Group to be deleted. If the current Group is already included on the scan list, the ◀ status flag will be illuminated.

2. To delete the Group from the scan list, press the SYS button and then press the SCN button. The ◀ flag will turn off and the Group will be removed from the scan list.

Priority Group Scan

When scan is enabled, the radio will listen for calls on the Groups in the scan list. While receiving a scanned group call, the radio will continue to monitor the Priority Group. If a call is received on a Priority Group while the radio is already connected to a scanned Group, that call will be dropped and the radio will accept the call on the Priority Group.

DYNAMIC REGROUPING (OPTIONAL)

Dynamic Regrouping is a feature which permits the System Manager to dynamically program new groups into selected radios. Upon development of the regrouping plan, the site controller sends each radio the regroup plan number, "group position" and activate/deactivate commands. Each radio that receives and acknowledges a regrouping instruction is successfully regrouped. When the radio is regrouped, it will alert the user and displays the regroup number (01-08) in the display.

Emergency Operation (Optional)

If the pre-programmed Group on the currently selected system contains a Home/Emergency group and the radio is in dynamic regroup, the radio will exit dynamic regroup and declare the emergency on the HOME Group. If no Home/Emergency group is present, the radio will declare the emergency on the currently selected dynamic regroup Group.

DTMF MICROPHONE OPERATION (OPTIONAL)

When a DTMF microphone (optional) is used with the mobile radio, several features are available. These include manual individual and interconnect calls, storage of individual and interconnect numbers by the user, recall of user stored individual and interconnect numbers and enable/disable of keypress alert tone. The following paragraphs describe the various operational features when using the optional DTMF microphone.

Sending A Manually Entered Individual Call

SPC, 0 - 9 RCL, **PTT**

1. Press the SPC key to put the radio into the Special Call mode. The display will show the last accessed Special Call name/number from the pre-programmed Special Call selection. **PHONE** and will be displayed while in the Special Call mode.

2. Enter the ID number of the radio to be called. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

> **NOTE**
>
> To recall the last individual number entered manually from the keypad, press the 9 RCL key.

3. Press and hold the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.

4. When the signalling is successfully completed, the **BUSY** status flag is displayed and the Clear To Talk tone sounds. Speak directly into the microphone. Release the **PTT** to listen for a reply. If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).

5. When the call is completed, press CLR MON key once to return to normal operation. **PHONE** and will not be displayed.

Sending A Manually Entered Interconnect Call

SPC, 0 - 9 RCL, * PHN, **PTT**

1. Press the SPC key to put the radio into the Special Call mode. The display will show the last accessed Special Call name/number from the pre-programmed Special Call selection. **PHONE** and will be displayed while in the Special Call mode.

2. Enter the telephone number to be called. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

NOTE

To recall the last individual number entered manually from the keypad, press the (9 RCL) key.

3. Complete the telephone entry by pressing the (* PHN) key. The (* PHN) key indicates the digits are for an Interconnect Call. This will not be displayed but a tone will sound.
4. Press and release the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.
5. When the signalling is successfully completed, the **BUSY** status flag is displayed and the proper DTMF tones will be sent and heard at the speaker. If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).
6. When someone answers, press the **PTT** and speak directly into the microphone. Release the **PTT** to listen to a reply.
7. When the call is completed, press the (CLR MON) key once to return to normal operation. **PHONE** and ☎ will not be displayed.

Storing Individual And Interconnect Numbers

(SPC), (0), -, (9 RCL), (# IND), (0), -, (9 RCL), (8 STR), (CLR MON) TO STORE AN INDIVIDUAL CALL NUMBER

(SPC), (0), -, (9 RCL), (# IND), (0), -, (9 RCL), (8 STR), (CLR MON) TO STORE AN INTERCONNECT NUMBER

1. Press the (SPC) button to put the radio into the Special Call mode. The display will show the last accessed Special Call name/number from the pre-programmed Special Call selection. **PHONE** and will be displayed while in the Special Call mode.
2. Enter the ID or telephone number to be stored. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

3. Complete the entry by pressing the (#IND) key for individual numbers and the (*PHN) key for telephone interconnect numbers. These digits will not be displayed but a tone will sound.
4. Enter a digit between 0 and 9 to select a storage location. The storage location will not be displayed but a tone will sound. There are 10 storage locations for individual numbers and 10 storage locations for interconnect numbers.
5. Press the (8 STR) key to complete the storage procedure.
6. Press the (CLR MON) key once to return to normal operation. **PHONE** and) will not be displayed.

Recalling Manually Stored Individual And Interconnect Numbers

(#IND), (0) - (9 RCL), (9 RCL), **PTT** — TO RECALL AND PLACE AN INDIVIDUAL CALL

(#IND), (0) - (9 RCL), (9 RCL), **PTT** — TO RECALL AND PLACE AN INTERCONNECT CALL

1. Press the) key to place the radio into the Special Call mode.
2. Press the (#IND) key to recall the individual call list or the (*PHN) key to recall the interconnect call list. The display will blank and a tone will sound.
3. Enter the desired storage location number (0-9).
4. Press the (9 RCL) key. If the number is from the individual call list, the ID number will be displayed. If the number is from the interconnect call list, the last seven digits of the telephone will be displayed.

   If the memory location is blank, the radio will sound a low pitch tone after the (9 RCL) key is pressed.
5. Once the desired number is displayed, press and release the **PTT** to initiate the call. The radio performs the necessary signalling required to obtain a working channel.
6. **INDIVIDUAL** - When the signalling is successfully completed, **BUSY** is displayed, the red TX indicator lights and the Clear To Talk tone sounds. Press the **PTT** and speak directly into the microphone. Release **PTT** to listen for a reply.

INTERCONNECT - When the signalling is successfully completed, **BUSY** is displayed and the proper DTMF tone will be sent and heard in the speaker. When someone answers, press the **PTT** and speak directly into the microphone. Release **PTT** to listen for a reply.

7. When the call is completed, press the CLR MON button once to exit the Special Call mode and return to normal operation.

Keypad Lock

The keypad can be locked on the DTMF microphone at any time to prevent undesired key presses. To lock the keypad when it is in the unlocked state, press 5 LCK key. All buttons and keys on the microphone except **PTT**, and 5 LCK will be inhibited. To unlock the keypad when it is in the locked state, press 5 LCK key.

Keypad Mute

The keypad can be muted at anytime. To mute the keypad when it is in the unmute state, press and release the 6 MUT key. All keys will be muted. To unmute the keypad, press and release the 6 MUT key; the keypad is now unmuted.

GE-MARC OPERATION

TURNING ON THE RADIO

Rotate the **POWER ON-OFF/VOLUME** control clockwise, out of detent, to turn on the radio. A short beep (if enabled through programming) indicates the radio is ready for operation. The display indicates the last selected System/Area and Group.

RECEIVING A CALL

1. Turn on the radio as indicated in paragraph ***TURNING ON THE RADIO***.
2. Adjust the **POWER ON-OFF/VOLUME** control clockwise to the desired audio level.
3. Select the desired Area (System) by pressing the SYS button and then using the ▲ or ▼ ramp button to scroll to the desired Area. Only Areas programmed can be selected.
4. Select the desired Group by pressing the ▲ or ▼ ramp button to scroll to the desired Group. Only Groups programmed can be selected.
5. The radio is now ready to receive calls.

Individual Call

1. If an Individual Call (call directed only to your radio) is received, the radio unsquelches on the assigned Group. The **BUSY** status flag will light.
2. If programmed ON, the individual call received tones (one high followed by one low pitched tone) will sound and the originator's ID or just "ID" (dependent upon programming) is displayed for a short time.
3. To answer the call, press the **PTT** button and begin talking if caller's ID is still in display. If caller's ID is no longer in display, press the SPC button to display caller's ID, then press **PTT** and begin talking.

Group Call

1. When the radio receives a Group Call, it unsquelches on the assigned channel and the **BUSY** status flag lights.
2. If programmed ON, the Group Call receive tone (single tone) will sound. The Group name originator's ID (if programmed) will be shown in the display.

Interconnect Call

1. When the radio receives an Interconnect Call (telephone call directed to your radio), the radio unsquelches on the assigned channel and the **BUSY** status flag turns on.
2. If programmed ON, the Interconnect Call received tones (one high followed by one low pitched tone) will sound. The **PHONE** and status flags will be displayed.
3. Press the **PTT** button and begin talking.

SENDING A CALL

1. Turn the radio on and select the desired Area (System) and Group as indicated in paragraph ***TURNING ON RADIO***.
2. Observe the display for the absence of the **BUSY** status flag to ensure that no one is transmitting on the selected Area and Group and ensuring radio is in service area.
3. Press and release the **PTT** button. The radio will perform the necessary signalling required to obtain a communications channel. If the signalling is unsuccessful, the radio will sound the appropriate alert tone(s).

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

   A sequency 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.

NOTE

If the "Call Retry" option has been programmed and active, the radio will automatically try to acquire a channel at 20 second intervals for five minutes before returning to the normal Area and Group display.

4. When the channel has been acquired, the red **TX** indicator lights and the **BUSY** status flag is displayed. If programmed, the clear to talk tone will sound.
5. Hold the microphone about 3 inches from your mouth and speak normally into the microphone.
6. Release the **PTT** button to listen for a reply.

Sending A Special Call

1. Press the SPC button to place the radio into the Special Call mode and provide access to a pre-programmed special call alphanumeric list. Each selection from the list is pre-programmed with either an Individual Call or an Interconnect number. If programmed, the special call alphanumeric will be displayed. The **PHONE** and status flags will be displayed while in the Special Call mode.
2. Use the ▲ or ▼ button to scroll through the Special Call list.
3. Once the desired Individual/Interconnect Call number is displayed, press and hold the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.
4. **INDIVIDUAL** - When the signalling is successfully completed, the **BUSY** status flag is displayed and the clear to talk tone sounds. Speak directly into the microphone. Release the **PTT** button to listen to a reply.

   INTERCONNECT - When the signalling is successfully completed, the **BUSY** status flag is displayed and the proper DTMF tones will be sent and heard at the speaker. When someone answers, press the **PTT** button and speak directly into the microphone. Release the **PTT** button to listen to a reply. Messages cannot be received when the **PTT** button is pressed.

   If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).

5. To return to the normal Area/Group, press the CLR button to exit the Special Call mode.

DTMF MICROPHONE OPERATION (OPTIONAL)

When a DTMF microphone (optional) is used with the mobile radio, several features are available. These include manual individual and interconnect calls, storage of individual and interconnect numbers by the user, recall of user stored individual and interconnect numbers and enable/disable of keypress alert tone. The following paragraphs describe the various operational features when using the optional DTMF microphone.

Sending A Manually Entered Individual Call

SPC, 0 - 9RCL, #IND, **PTT**

7, 0 - 9RCL, #IND, **PTT**

1. Press the SPC key to put the radio into the Special Call mode or 7 to put the radio into Conference Call mode. The SYS displays SP and GRP displays last accessed call number from the pre-programmed Special Call selection or it will be blank if no Special Calls are programmed for this Area. **PHONE** and ☎ will be displayed while in the Special Call mode.
2. Enter the ID number of the radio to be called. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

> **NOTE**
>
> To recall the last individual number entered manually from the keypad, press the 9RCL key.

3. Complete the tone set entry by press the #IND key. This indicates the digits are for an individual call. This will not be displayed but a tone will sound.
4. Press and release the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.

5. When the signalling is successfully completed, the **BUSY** status flag is displayed and the Clear To Talk tone sounds. Speak directly into the microphone. Release the **PTT** to listen for a reply. If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).

6. When the call is completed, press CLR MON key once to return to normal operation. **PHONE** and) will not be displayed.

Sending A Manually Entered Interconnect Call

SPC, 0 - 9 RCL, * PHN, **PTT**
7, 0 - 9 RCL, * PHN, **PTT**

1. Press the SPC key to put the radio into the Special Call mode or 7 to put the radio into Conference Call mode. The SYS displays SP and GRP displays last accessed call number from the pre-programmed Special Call selection or it will be blank if no Special Calls are programmed for this Area. **PHONE** and) will be displayed while in the Special Call mode.

2. Enter the telephone number to be called. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

> **NOTE**
>
> To recall the last individual number entered manually from the keypad, press 9 RCL key.

3. Complete the telephone entry by pressing the * PHN key. The * PHN key indicates the digits are for an Interconnect Call. This will not be displayed but a tone will sound.

4. Press and release the **PTT** button to initiate the call. The radio performs the necessary signalling required to obtain a working channel.

5. When the signalling is successfully completed, the **BUSY** status flag is displayed and the proper DTMF tones will be sent and heard at the speaker. If the signalling is unsuccessful, the radio will remain in the Special Call mode and sound the appropriate alert tone(s).

6. When someone answers, press the **PTT** and speak directly into the microphone. Release the **PTT** to listen to a reply.

7. When the call is completed, press the CLR MON key to return to normal operation. **PHONE** and ☎ will not be displayed.

Storing Individual And Interconnect Numbers

SPC, 0 - 9RCL, #IND, 0 - 9RCL, 8STR	TO STORE AN INDIVIDUAL CALL NUMBER
7, 0 - 9RCL, #IND, 0 - 9RCL, 8STR	TO STORE AN INDIVIDUAL CONFERENCE NUMBER
SPC, 0 - 9RCL, *PHN, 0 - 9RCL, 8STR	TO STORE AN INTERCONNECT NUMBER
7, 0 - 9RCL, *PHN, 0 - 9RCL, 8STR	TO STORE AN INTERCONNECT CONFERENCE NUMBER

1. Press the SPC key to put the radio into the Special Call mode or 7 to put the radio into Conference Call mode. The SYS displays SP and GRP displays last accessed call number from the pre-programmed Special Call selection or it will be blank if no Special Calls are programmed for this Area. **PHONE** and ☎ will be displayed while in the Special Call mode.

2. Enter the ID or telephone number to be stored. The last digit entered will always be displayed in the far right side of the display. Any previously entered digits will scroll left. Only the last seven characters will be visible at a time with the leading character scrolling off the display upon each new key entry.

3. Complete the entry by pressing the #IND key for individual numbers and the *PHN key for telephone interconnect numbers. These digits will not be displayed but a tone will sound.

4. Enter a digit between 0 and 9 to select a storage location. The storage location will not be displayed but a tone will sound. There

are 10 storage locations for individual numbers and 10 storage locations for interconnect numbers.

5. Press the 8 STR key to complete the storage procedure.

6. Press the CLR MON key once to return to normal operation. **PHONE** and) will not be displayed.

Recalling Manually Stored Individual And Interconnect Numbers

SPC, #IND, 0 - 9 RCL, 9 RCL, **PTT**	TO RECALL AND PLACE AN INDIVIDUAL CALL
7, #IND, 0 - 9 RCL, 9 RCL, **PTT**	TO RECALL AND PLACE AN INDIVIDUAL CALL IN CONFERENCE CALL MODE
SPC, *PHN, 0 - 9 RCL, 9 RCL, **PTT**	TO RECALL AND PLACE AN INTERCONNECT CALL
7, *PHN, 0 - 9 RCL, 9 RCL, **PTT**	TO RECALL AND PLACE AN INTERCONNECT CALL IN CONFERENCE CALL MODE

1. Press the SPC key to place the radio into the Special Call mode.

2. Press the #IND key to recall the individual call list or the *PHN key to recall the interconnect call list. The display will blank and a tone will sound.

3. Enter the desired storage location number (0-9).

4. Press the 9 RCL key. If the number is from the individual call list, the ID number will be displayed. If the number is from the interconnect call list, the last seven digits of the telephone will be displayed.

   If the memory location is blank, the radio will sound a low pitch tone after the 9 RCL key is pressed.

5. Once the desired number is displayed, press and release the **PTT** to initiate the call. The radio performs the necessary signalling required to obtain a working channel.

6. **INDIVIDUAL** - When the signalling is successfully completed, **BUSY** is displayed, the red TX indicator lights and the Clear To Talk tone sounds. Press the **PTT** and speak directly into the microphone. Release **PTT** to listen for a reply.

INTERCONNECT - When the signalling is successfully completed, **BUSY** is displayed and the proper DTMF tone will be sent and heard in the speaker. When someone answers, press the **PTT** and speak directly into the microphone. Release **PTT** to listen for a reply.

7. When the call is completed, press the SPC button twice (double click) to exit the Special Call mode and return to normal operation.

SCAN OPERATION

Wide Area System Scan

When operating within a GE-MARC system the radio may be programmed to scan up to 20 Groups from other GE-MARC systems. The radio will scan the groups in the selected systems and if its programmed collect tone is not seen, then it will proceed to scan the groups of the systems in its wide area scan list. The group selection may change upon switching to the new system.

Group Scan

Only Groups that are part of the radio's scan list may be scanned. Groups are added to the scan list on a per system basis through PC programming. Each system's group scan list is retained in memory when the radio is turned off. The radio may also be programmed to provide Priority Group Scan capability which operates similar to priority scan in conventional systems.

The following is a description of PC programmable scan features that should be helpful in understanding Group Scan Operation.

Scan Hang Time - the delay time the radio waits before resuming scan after PTT is released or after the carrier has dropped a channel.

TX Select - the group the radio will transmit on while scanning. The radio will be programmed to transmit on either the scanned group or the selected group.

Scan List (privileges) - pre-programmed list of groups that may be scanned.

P1 Programming - priority group programming is accomplished by one (and only one) of two methods:

1. Priority 1 Group programming follows the selected channel.

2. Priority Group programming is fixed during PC programming and cannot be changed by the user.

P1 Always Scan - determines if the Priority Group will always be scanned, regardless of the scan state set by the user.

Enable/Disable Scan

To enable Group scan, press the SCN button. The **SCAN** status flag will be displayed. To disable Group scan, press and release the SCN button so that the **SCAN** status flag is not showing in the display.

Add/Delete Groups

Groups can be added or deleted from the scan list as necessary. To add Groups to the scan list:

NOTE

Scan must be disabled to add/delete a Group on the scan list.

1. Select the desired Group to be added. If the current group is already included in the scan list, the ◀ status flag will be illuminated.
2. To add the Group to the scan list, press the SYS button and then press the SCN button. The ◀ flag will turn on and the Group will be included on the scan list.

To delete Groups on the scan list:

1. Select the desired Group to be deleted. If the current Group is already included on the scan list, the ◀ status flag will be illuminated.
2. To delete the Group from the scan list, press the SYS button and then press the SCN button. The ◀ flag will turn off and the Group will be removed from the scan list.

DIRECT MODE

The direct mode provides short range, line of sight communications. In the direct (or talk-around) mode, the direct mode is not functional in a trunked system.

Receiving And Sending A Message

1. Press the SYS button and then use the ▲ or ▼ ramp button to select the Direct Mode System. The **SYS**tem display will indicate the current system selected.
2. Press the CLR button to disable squelch and monitor the channel. Adjust the VOLUME control to the desired audio level.
3. Press the **PTT** and send the message. The red TX indicator will light and the **BUSY** status flag will be shown. Release the **PTT** to listen for a reply.

CONVENTIONAL MODE OPERATION

The procedures in the following section describes Conventional Mode Operation. Each conventional channel may be programmed with one or more features such as Channel Guard or telephone interconnect capability (using optional DTMF microphone).

TURNING ON THE RADIO

Rotate the **POWER ON-OFF/VOLUME** control clockwise, out of detent, to turn on the radio. A short beep (if enabled through programming) indicates the radio is ready for operation. The display indicates the last selected System and Channel.

RECEIVING A MESSAGE

1. Turn on the radio as indicated in paragraph ***TURNING ON THE RADIO***.
2. Adjust the **POWER ON-OFF/VOLUME** control clockwise to the desired audio level.
3. Select the desired System by pressing the SYS button and then using the ▲ or ▼ ramp button to scroll to the desired System. Only Systems programmed can be selected.
4. Select the desired Channel by pressing the ▲ or ▼ ramp button to scroll to the desired Channel. Only Channels programmed can be selected.
5. Press the CLR button to disable squelch and monitor the channel. Adjust the **VOLUME** control to the desired audio level.
6. The radio is now ready to receive calls.

SENDING A MESSAGE

1. Turn on the radio as indicated in paragraph ***TURNING ON THE RADIO***.
2. Adjust the **POWER ON-OFF/VOLUME** control clockwise to the desired audio level.

3. Select the desired System by pressing the SYS button and then using the ▲ or ▼ ramp button to scroll to the desired System. Only Systems programmed can be selected.
4. Select the desired Channel by pressing the ▲ or ▼ ramp button to scroll to the desired Channel. Only Channels programmed can be selected.
5. Press the CLR button to disable squelch and monitor the channel. Adjust the **VOLUME** control to the desired audio level.
6. Hold the microphone about 3 inches from your mouth, press the **PTT** and speak normally into the microphone.
7. Release the **PTT** when transmission is complete to listen for a reply.

SQUELCH ADJUSTMENT

In normal operation the squelch is automatically set by the radio and does not require adjusting. If it becomes necessary to adjust the squelch, use the following procedure.

NOTE

The radio must be on a Conventional System or an EDACS working channel (i.e., receiving a voice call) to adjust the squelch. It is recommended to adjust squelch from a Conventional System.

1. Press and hold the SYS button.
2. Use the ▲ or ▼ buttons to adjust the squelch . Pressing the ▲ button will open the squelch and pressing the ▼ button will close the squelch.

SENDING A MANUALLY ENTERED INTERCONNECT CALL (OPTIONAL DTMF MICROPHONE)

1. Select a channel in the Conventional System that has telephone interconnect capability. The radio should be programmed for DTMF operation on this channel.
2. Press and hold the **PTT** to key the transmitter.

3. While holding the **PTT**, press either the (*PHN) or (#IND) key (as required by the radio system) to obtain a telephone line. The radio will transmit the selected tone.

4. Release the **PTT** and listen for a dial tone. When the dial tone is heard, press and hold the **PTT** while you enter the desired telephone number through the keypad. As you enter each digit, the DTMF sidetone (if programmed) will be heard in the speaker as the radio transmits the DTMF tone.

5. After all the digits have been keyed in, release the **PTT**.

6. When someone answers, press the **PTT** and speak directly into the microphone. Release the **PTT** when you stop talking to listen to a reply.

7. At the completion of the call, press and hold the **PTT** and then press the (*PHN) or (#IND) key (as required by the radio system) to disconnect from the interconnect facility.

SCAN OPERATION

Only Channels that are part of the radio's scan list may be scanned. Channels are added to the scan list on a per system basis through PC programming. The scan list is retained in memory when the radio is turned off. The radio may also be programmed to provide Priority Scan.

The following is a description of PC programmable scan features that should be helpful in understanding Scan Operation.

Scan Hang Time - the delay time the radio waits before resuming scan after PTT is released or after the carrier has dropped a channel.

TX Select - the channel the radio will transmit on while scanning. The radio will be programmed to transmit on either the scanned channel or the selected channel.

Scan List (privileges) - pre-programmed list of channels that may be scanned.

P1 Programming - priority programming is accomplished by one (and only one) of two methods:

1. Priority 1 Channel programming follows the selected channel.

2. Priority Channel programming is fixed during PC programming and cannot be changed by the user.

P1 Always Scan - determines if the Priority Channel will always be scanned, regardless of the scan state set by the user.

Enable/Disable Scan

To enable scan, press the SCN button. The **SCAN** status flag will be displayed. To disable scan, press and release the SCN button so that the **SCAN** status flag is not showing in the display.

Add/Delete Channels

Channels can be added or deleted from the scan list as necessary. To add Channels to the scan list:

NOTE

Scan must be disabled to add/delete a channel on the scan list.

1. Select the desired Channel to be added. If the current channel is already included in the scan list, the ◀ status flag will be illuminated.
2. To add the Channel to the scan list, press the SYS button and then press the SCN button. The ◀ flag will turn on and the Channel will be included on the scan list.

To delete Channels on the scan list:

1. Select the desired Channel to be deleted. If the current channel is already included on the scan list, the ◀ status flag will be illuminated.
2. To delete the Channel from the scan list, press the S button and then press the SCN button. The ◀ flag will turn off and the Channel will be removed from the scan list.

Priority Channel Scan

When scan is enabled, the radio will listen for calls on the channels in the scan list. While receiving a scanned channel, the radio will continue to monitor the Priority Channel. If a call is received on a Priority Channel while the radio is already connected to a scanned channel, that call will be dropped and the radio will accept the call on the Priority Channel.

USING THE RADIO WITH SCAN

The Selected Channel

The SELECTED channel is the channel in the display when scan is turned on by pushing the SCN switch. When a signal is not being received, the radio reverts to this channel for transmitting. When a signal is being received, the radio can be PC programmed to either revert to the SELECTED channel or remain on the received channel for transmission.

The SELECTED channel does not necessarily have to be a channel in the scan list. The SELECTED channel will be temporarily entered into the scan list and scanned until the SELECTED channel is changed.

When scan is turned off by pushing the SCN switch, the radio will return to the SELECTED channel.

Display

Channel indicator

While no signal is being received, the channel indicator will always show the SELECTED channel. When an active channel is received, the channel indicator will show the received channel.

SCN indicator

When the SCN button is pushed, the radio will light the **SCAN** indicator and begin scanning. The **SCAN** indicator will flash when the microphone is placed off-hook to show the radio is no longer scanning (only if the radio is PC programmed not to scan off-hook).

Transmitting While In Scan:

Transmitter operation in scan is determined by the PC programming of the radio's personality.

- Off-hook scan not enabled (default):

  With off-hook scan not enabled (normal default condition), all scanning will stop when the microphone is placed off-hook. The **SCAN** indicator will flash to show all scanning has stopped. If a signal is not being received when the microphone is placed off-hook, the radio will transmit on the SELECTED channel. If a signal is being received when the microphone is placed off-hook, the radio can be PC programmed (using the "scan transmit option")

to either stay on the receive channel or revert to the SELECTED channel. When the microphone is placed back on-hook, the radio will immediately start scanning, even if the received channel was still active.

- Off-hook scan enabled:

  With off-hook scan enabled, moving the microphone off-hook will not affect scan operation. The radio will continue scanning. If a signal is not being received, the radio will transmit on the SELECTED channel. If a signal is being received, the radio can be PC programmed (using the "scan transmit channel" option) to either stay on the receive channel or revert to the SELECTED channel when the mic PTT is keyed.

- On-hook

  When the microphone is on-hook (in the microphone hanger) and the radio is not receiving a channel, the radio always transmits on the SELECTED channel.

  When the radio is receiving a channel the radio's personality can be programmed to transmit either on the received channel or the SELECTED channel. If the radio was programmed for the SELECTED channel, the display changes to the SELECTED channel when the transmitter is keyed.

MAINTENANCE AND BASIC CARE

ANTENNA REMOVAL

It is strongly recommended that your antenna be removed from its mounting prior to passing through an automatic car wash in order to prevent antenna and/or vehicle damage. See your antenna instruction guide for instructions on how to safely remove the antenna from its mounting.

FUSE REPLACEMENT

The radio is protected by one or more fuses located in the cables connected to the vehicle power source(s). If the radio fails to operate, the problem may be a defective fuse. Replace the fuse(s) with a similar type and size. The fuse may be obtained from the radio supplier or most electrical supply stores. If, however, the trouble persists (continues to blow fuse or inoperative radio), check with the radio supplier.

Radio Power (Orange lead) 10 amp Fast Blow Type AGC15

JUMP STARTING THE VEHICLE

Before jump starting or charging the vehicle battery, it is strongly suggested that the main power fuse, located in the orange lead, be removed. This insures that the radio is protected from damage in the battery charging process. Replace the fuse when charging is completed.

OPERATOR'S RADIO SETUP

RADIO TYPE:

FREQUENCY BAND:

OPERATOR'S NAME:

EMERGENCY GROUP:

SYSTEM NUMBER	SYSTEM NAME	TRK/CNV	GRP/CHN NUMBER	GRP/CHN NAME	USE

PERSONAL MEMORY DIRECTORY

Mem. Loc.	Name	Tel. No.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

PERSONAL MEMORY DIRECTORY

Mem. Loc.	Name	Tel. No.
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

FREQUENTLY CALLED NUMBERS

MEMORY LOCATION	NAME	TELEPHONE NUMBER
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
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WARRANTY

A. Ericsson 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 change only for the Equipment covered under Paragraph B.3, and only during the first three (3) months following the date of sale to the Buyer. Thereafter, labor will be charged at prevailing rates. To be eligible for no-charge labor, service must be performed by an Authorized Service Center 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 Center or other approved Servicer's place of business will include a charge for transportation. Equipment located off-shore 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 all 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.
1-800-592-7711 (Outside USA, 804-592-7711)

ECX-362S

NOTES

EMERGENCY NUMBERS

Police _____

State Police _____

Fire _____

Poison Control _____

Ambulance
Life Saving and Rescue Squad _____

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.

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.

Ericsson Inc.
Private Radio Systems
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