LBI-38862A

Operator's Manual

MONOGRAM SERIES MOBILE RADIO

ERICSSON

TABLE OF CONTENTS

SAFETY INFORMATION 3
SAFE DRIVING RECOMMENDATIONS FOR USERS OF MOBILE RADIOS* 4
OPERATING PROCEDURES 4
INTRODUCTION 6
OPTIONS AND ACCESSORIES 6
CONTROLS AND INDICATORS 7
CONTROLS 7
INDICATORS 8
ALERT TONES 9
OPERATION 10
POWER UP/DOWN 10
RECEIVING A CALL 10
TO TRANSMIT A MESSAGE 11
CHANNEL SCAN OPERATION 12
NON PRIORITY SCAN 12
PRIORITY SCAN 13
LIMITED PRIORITY SCAN 14
VACANT CHANNEL SCAN 14
TRANSMIT TIME OUT TIMER 15
BUSY CHANNEL LOCKOUT 15
FRONT PANEL PROGRAMMING 15
PRIORITY CHANNEL PROGRAMMING 16
ERROR MESSAGES 18

NOTICE

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

NOTICE

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution 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 manufacturer's warranty.

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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 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 vehicles. Do not carry containers of fuel in the trunk of the vehicle.

2. Interference To Vehicular Electronics Systems

   Electronic fuel injection systems, electronic antiskid braking systems, etc., are typical of the type 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.

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 Radios" 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.

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 National Fire Protection Association standard (NFPA) 58 which requires that:

   a. 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 your unit.

Keep both hands on the steering wheel and the microphone on the hookswitch.

Place calls only when the vehicle is stopped.

When talking from a moving vehicle is unavoidable, drive in the slower lane. Keep conversation brief.

If conversation requires taking notes or complex thought, stop the vehicle in a safe place and continue your call.

Whenever you use a mobile radio you should 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). 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 is 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 and 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 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 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 the FCC rules. You may send only those messages that are essential to 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 times by means of your call letters. Refer to the rules that apply to your particular type of operation for the proper procedure.

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

INTRODUCTION

The Monogram Series Mobile Radio utilizes advanced design techniques using state-of-the-art technology. Microcomputer technology and a Phase Locked-Loop (PLL) synthesizer provide the added flexibility and capability inherent in quality radios.

16 channel capability, CTCSS (Channel Guard) and DCS signaling systems compatibility, as well as a quick scan function, (including dual-level priority scan) are all controlled by the microprocessor.

Priority channels on both levels are front panel programmable - and you the operator are in control. You can program your own list of priority channels.

An automatic self-check feature is built into the radio. Each time the radio is turned on, the microprocessor executes a self-check of the microprocessor and indicates proper operation by displaying 4000 in the display window and sounding an alert tone.

For programming, service and repair needs, see your local Service Representative. He will be happy to service your radio for you.

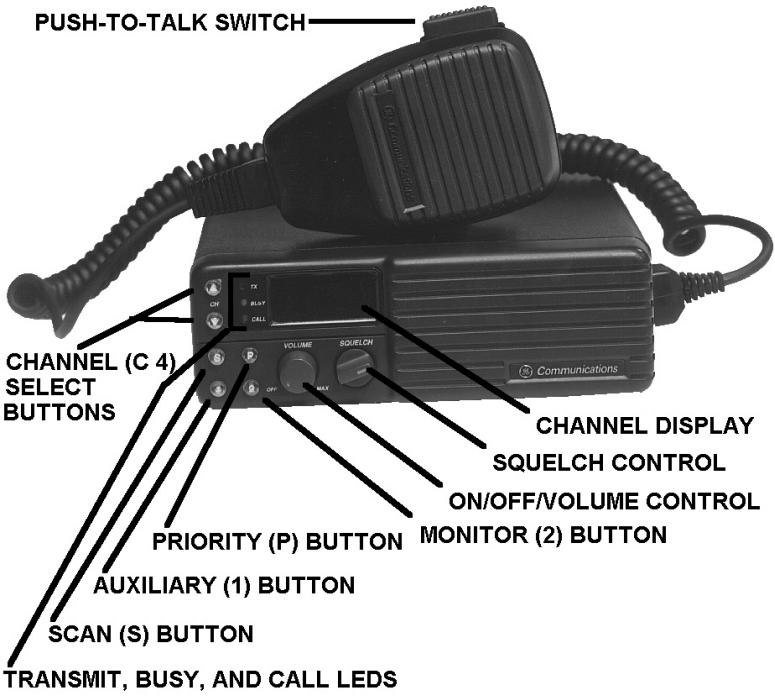
IMPORTANT

Under U.S. Law, operation of an unlicensed radio transmitter within the jurisdiction of the United States may be punishable by a fine up to $10,000, imprisonment up to two years, or both!

OPTIONS AND ACCESSORIES

MGAN1A	Antenna, 148-470 MHz
MGMC5J	Mobile Microphone
MGMC5H	Desk Microphone
MGLS1F	External Speaker
MGCE3F	Speaker Adapter Cable
MGZM7C	External Speaker with Adapter Cable (includes MGLS1F & MGCE3F)
MGPD1A	Noise Filter
MGSU1C	Relay Kit
MGPS5V	Station Power supply, 120 Vac With Adapter Cable

CONTROLS AND INDICATORS



CONTROLS

ON/OFF/VOLUME CONTROL	Turns the radio ON or OFF and allows the user to adjust the volume to the desired listening level.
SQUELCH CONTROL	Quiets the radio receiver when there are no incoming calls. Maximum squelch is obtained at full clockwise rotation.
CHANNEL SELECT (CH)	Enables you to select any of the preprogram- med channels by pressing either of the channel selector push-buttons (up or down). These push-buttons allow you to scroll through the preprogrammed channels.

SCAN PUSH-BUTTON	Turns the SCAN function ON or OFF (ON indicated by a RED backlit display).
	Provides the "ENTER" function during scan programming.
PRIORITY SCAN PUSH-BUTTON	Turns priority scan on/off (ON indicated by a green backlit display).
	Provides access to programming mode at radio turn-on.
AUXILIARY SPEAKER PUSH-BUTTON (Optional)	Functionally, it replaces the internal speaker with the auxiliary speaker. This function must be re-initialized after power is cycled (OFF/ON).
	In the programming mode, it deletes channels from the scan list.
MONITOR PUSH-BUTTON	Disables tone or digital Channel Guard in the receive mode.
	Returns operation to the normal mode from the programming sequence.
	Controls display intensity.

INDICATORS

TRANSMIT LED (TX)	Indicates the microphone Push-To-Talk (PTT) switch is pushed.
FLASHING	Indicates the frequency synthesizer is malfunctioning. Contact your local service center.
BUSY LED	Indicates activity on the receive channel (indicated by a YELLOW backlit display).
CALL LED	Indicates activity on a channel programmed for Channel Guard (indicated by a GREEN backlit display).

ALERT TONES

Self Check

ALERT TONE - Sounded for one second each time the radio is turned on and the microprocessor completes its self-check. It also indicates proper operation by momentarily displaying 4000 in the display window.

POWER UP - A power up alert tone is sounded to indicate proper operation of the microprocessor.

SCAN LIST EMPTY - If your scan list is empty, the "S" button will not light, an alert tone will sound, and scanning will not start.

TIME OUT TIMER - If the transmitter has been keyed (PTT bar pressed continuously) for a period of time exceeding the preprogrammed time, an alert tone is sounded until the PTT bar is released and the TX LED goes out.

CHANNEL BUSY LOCKOUT - If a transmission is attempted on a channel that is being used, a **WARNING** tone sounded and all transmit functions will be disabled. Transmissions are allowed only on channels that are idle (BUSY LED off).

PROGRAMMING PROMPT - A tone is sounded to indicate access to the programming mode.

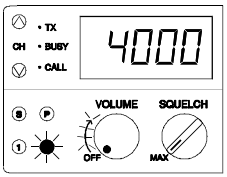
ANTENNA IMPROPERLY CONNECTED - a 3 beep alert tone is sounded, the TX LED blinks, and the transmitter is disabled.

CHANNEL DISPLAY

BLUE-GREEN - Indicates channel number, priority scan channels, programming mode, and error messages.

OPERATION

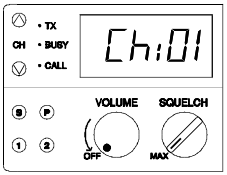
POWER UP/DOWN



1. Turn the radio on by rotating the volume control 1/2 turn clockwise. "4000" appears in the display window for approximately 1 second. A power up alert tone is then sounded for approximately 1 second to indicate proper operation of the microprocessor. The MONITOR push-button will light to indicate operation in the receive mode.

NOTE

All receiver tone options are off (disabled) until you press the MONITOR button and the GREEN backlight goes out.



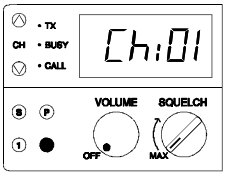
The display changes to indicate the priority 1 channel (if programmed) or channel No. 1 (Ch:01).

2. Turn the radio off by turning the VOLUME control full counterclockwise.

RECEIVING A CALL

1. Turn the radio on and select the desire frequency by pressing the appropriate channel select push-button until the desired channel is displayed.

2. With the Monitor button lit, adjust the volume control to a comfortable listening level.



3. Rotate the SQUELCH control clockwise until the squelch noise (rushing sound) is no longer heard from the speaker and the BUSY LED goes out.

4. Push the Monitor button. The green blacklight will go out to indicate normal operation.

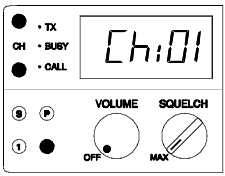
NOTES

DO NOT adjust the SQUELCH control while other parties are using the channel.

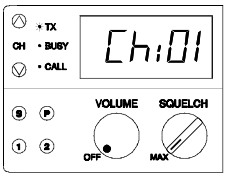
If your radio is equipped with Channel Guard, tone or digital, push the Monitor button (if lit) to enable the option. The CALL LED will now be off.

TO TRANSMIT A MESSAGE

1. Turn the radio on and select the desired channel by pushing the appropriate **CH**annel up ▲ or **CH**annel down ▼ selector button to display the desired channel.



2. Pick up the microphone (or Push the Monitor button while the mic is on-hook) and listen to be sure no one else is using the channel. The Monitor button should be lit and the BUSY LED should be out.



3. Remove the microphone from the hook-switch and push the PTT bar on the side of the microphone. Speak into the microphone in a normal tone of voice. The TX LED will light while the PTT bar is pressed (NOTE: PTT will not operate while the microphone is "on-hook").

4. Terminate the call as soon as you are through by releasing the PTT bar.

CHANNEL SCAN OPERATION

Scan permits you to monitor any or all programmed channels; the receiver continuously scrolls through each channel selected from the scan list. The channels to be scanned are user programmable and may or may not be assigned a priority level, its up to you the user to make this determination.

NOTE

If the power is cycled or the channel selector is changed during scan operation, scan must be re-initiated.

NON PRIORITY SCAN

Non-priority operation is initiated by pressing the "S" button. If the "2" button (Monitor) is lit, scan will be faster because the transceiver is looking only for carrier activity not channels programmed for Channel Guard. When not in the Monitor mode (i.e., "2" button not lit), scanning speed will be slower due to combined search of carrier and channels programmed for Channel Guard.

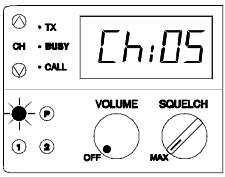
If your scan list is empty, the "S" button will not light, an alert tone will sound, and scanning will not start.

The scanner will stop on the first channel with activity, and when that activity ceases, the dealer programmed SCAN WAIT TIME will go into effect (for reception of any additional transmissions on that channel). At the end of the scan wait time, the transceiver will resume scanning, starting with the next channel on the list.

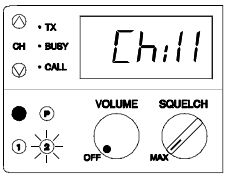
Picking up the microphone (going off-hook) while locked onto an active channel will stop scan and cause the radio to remain locked on that channel for the duration of transmission plus the scan wait time.

Picking up the microphone while not locked onto a channel, will stop scan as above, however, the transceiver will stop on the channel being scanned at the time the microphone was taken off-hook, if no priority channel had been programmed. If a priority channel is programmed, the transceiver will revert to Priority Channel #1, even in the Non-Priority scan mode.

Returning the microphone to the holder (going on-hook) will cause the scan sequence to resume the pre-programmed scan wait time.



1. To enter the non-priority scan mode, press the "S" button; it will light and the radio will start scanning all valid channels on the scan list.



2. To exit the non-priority scan mode, press the "S" button, the radio will return to normal operation.

PRIORITY SCAN

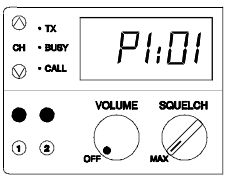
Any of the radio's programmed channels may be assigned a priority level. Two levels of priority our available - priority level #1 and priority level #2.

When operating in the scan mode, the scanner will stop on the first scan channel with activity. If that channel is not a priority channel, the scanner will continue to monitor both priority channels at each pre-programmed time interval. When the radio detects activity on Priority Channel #2, it selects that channel while continuing to monitor Priority Channel #1. When activity occurs on Priority Channel #1, the scanner will immediately select that channel and remain there until the transmission is completed and the scan wait time has expired.

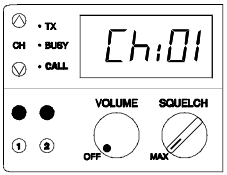
Picking up the microphone (taking it off-hook) will cause the radio to immediately select Priority Channel #1 for operation. Unless a different operating channel is selected, all transmissions will occur on Priority Channel #1.

Returning the microphone to its holder (on-hook) will return the radio to the scan mode of operation.

Refer to Priority Channel Programming for details.



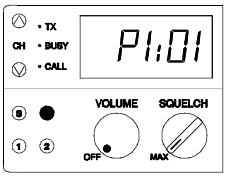
1. To enter the priority mode, press the "S" and "P" buttons while the microphone is on-hook. Each will light to indicate operation in the priority mode. The radio will now monitor the priority channels at time intervals pre-programmed by your dealer.



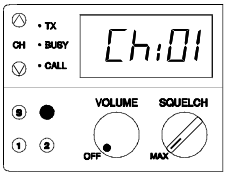
2. To exit the priority scan mode, press the "S" and "P" buttons. The radio will return to Priority Channel #1 for normal operation.

LIMITED PRIORITY SCAN

In Limited Priority Scan, the radio operates in the same manner as in Priority Scan, the radio will monitor Priority Channels 1 and 2 (at the intervals programmed by your dealer) as well as the non-priority channel to which you assigned limited priority scan.



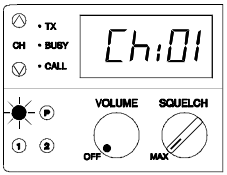
1. To enter the Limited Priority Scan mode, press the "P" button while the microphone is on-hook. The "P" button will light and the radio will begin scanning Priority Channels 1 and 2 and the channel you assigned limited priority scan.



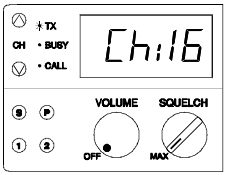
2. To exit the limited priority scan mode, press the "P" button. The light will go out and the radio will resume non-priority channel operation.

VACANT CHANNEL SCAN

Operation in the Vacant Channel Scan mode allows you to search for an idle channel. When this mode is selected, the radio will lock onto the first valid channel with no activity. If that channel goes active during the scan wait time, the radio will resume the search for another inactive channel. The SCAN WAIT TIME (time radio remains on the channel after carrier drops) will remain in effect, however the SCAN DELAY TIME (time required for radio to detect proper frequency and Channel Guard tone) is turned off.



1. To enter the Vacant Channel Scan Mode, press the "S" button. The "S" light will blink, indicating vacant channel scan is in progress. When a channel is identified, the "S" light will go out and the idle channel number displayed.



2. To exit the Vacant Channel Scan Mode, press the PTT bar. The TX LED will light.

TRANSMIT TIME OUT TIMER

The Transmit Time Out Timer is a dealer programmable option that disables the radio transmitter if a single transmission (PTT pressed continuously) exceeds a preprogrammed time. When this occurs, the radio reverts to the receive mode, even if the PTT bar is still pressed. Following the time out period, an alert tone is sounded until the PTT bar is released and the TX LED goes out. In this way, the Transmit Time Out Timer minimizes channel abuse.

A transmission can be initiated immediately after releasing the PTT bar by simply pressing the PTT bar again. If the PTT bar is released prior to exceeding the time out period, the radio operates normally (reverts to the receive mode with no alert tone.

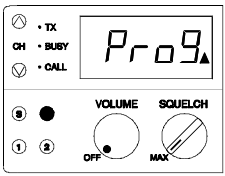
The time out period can be set for any period from 10 seconds to 16.5 minutes in 10 second increments.

BUSY CHANNEL LOCKOUT

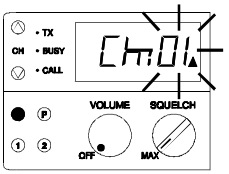
The Busy Channel Lockout option prevents inadvertent transmissions on a channel that is already being used. If this option is enabled, pressing the PTT bar while the selected channel is in use will cause all transmit functions, including the TX LED, to be disabled and a **WARNING** tone sounded. Transmissions will be allowed only on channels that are idle (BUSY LED off).

FRONT PANEL PROGRAMMING

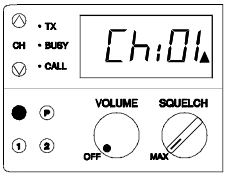
In the Programming Mode, the user can program the scan list and two Priority Channels, if desired. Entry into the Programming Mode is allowed only during the first four seconds when the radio is turned on.



1. **To enter the Programming Mode**, turn the radio on and press and hold the "P" Priority button for up to 4 seconds. The radio will sound the prompt tone and display "Prog". The radio can now be programmed with your scan list, with or without priorities.



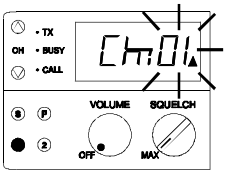
2. **To add a channel** to the scan list, select the channel and press the "S" button while the channel is flashing in the display. The number will be displayed continuously to indicate that it is stored on the scan list.



3. **To select the next channel** to be programmed and repeat the procedure above.

NOTE

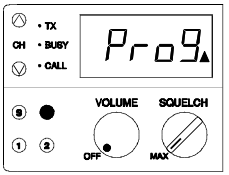
When stopped on a channel in the Programming Mode, the display will blink if the channel is not in the scan list, and be on continuous if already included.



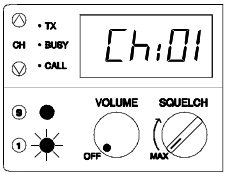
4. **To delete a channel** from the scan list, press the "1" auxiliary button LED. The display will change from continuous to flashing, indicating the deletion was successful.

NOTE

After selecting a channel to be deleted, use the "1" button to delete it from the scan list.



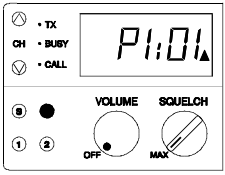
5. After you have completed programming your scan list, press the "P" button again, the radio will sound the prompt tone and display "Prog".



6. **To save the scan list**, press the "P" button again to enter the scan list into the micro-processor memory.

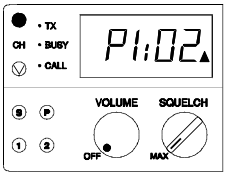
7. **To exit the programming mode**, press the "2" button.

PRIORITY CHANNEL PROGRAMMING



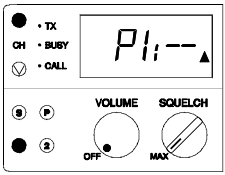
1. To display the current priority channel, press the "P" button. Note: you must be in the user programming mode. Refer to Front Panel Pro-gramming.

   If Channel 1 is Priority 1, "P1:01"is displayed; if no channel has been assigned priority, then "P1:--" is displayed.



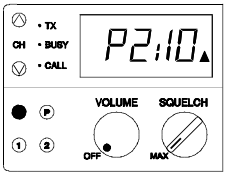
2. Use the CHannel up ▲ or the CHannel down ▼ to ramp to the desired channel.

3. **To delete a priority channel**, press the "1" auxiliary button.



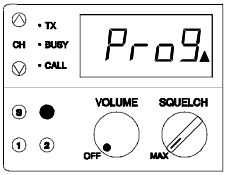
4. **To save Priority Channel 1** after selecting it, press the "S" button to save it and bring up Priority Channel 2 in the display.

5. If channel 2 is assigned Priority 2, then P2:02" is displayed. If no channel has been assigned priority, then "P2:--" is displayed.

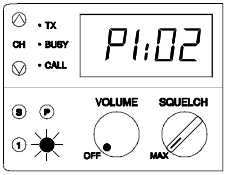


6. Use the CHannel up ▲ or the CHannel down ▼ to ramp to the desired channel.

7. **To delete priority channel 2**, press the "1" auxiliary button.



8. After you have completed programming your priority channels, press the "P" button, the radio will sound the prompt tone and display "Prog".



9. **To exit the programming mode**, press the "2" button. The radio will return to the normal operating state on Priority Channel 1, if assigned, or to Ch:01 if no priority channels were programmed into the radio.

ERROR MESSAGES

During normal operation, from turn-on to turn-off, the microprocessor is working. From initial self-check to channel scan operation it is designed to keep you informed of its operating status.

If your radio displays:

ER:01 - there is a problem with the EEPROM (For example, EEPROM not installed or installed incorrectly).

ER:02 - there is a programming problem with channel data. The radio will work, but only on correctly programmed channels.

ER:03 - indicates the synthesizer is out of lock or a channel is out of acceptable band; it is necessary to re-program or re-align the radio.

ER:04 - indicates improper antenna connection; the microprocessor will disable the transmitter, sound a 3 beep alert tone and blink the TX LED as warnings.

MONOGRAM SERIES 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, two (2) years.

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 only for the Equipment covered under Paragraph B.3, and only during the first twenty-four (24) 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.

1-800-528-7711 (Outside USA, 804-528-7711)

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Private Radio Systems
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Printed in U.S.A.

QUICK REFERENCE CARD

FRONT PANEL CONTROLS, SWITCHES AND INDICATORS

- **On/Off/Volume Control**: turns radio on/off and adjusts audio output level
- **Squelch Control**: silences the radio's receiver when no signal is being received
- **Channel Change Buttons**: scroll you through the programmed channels in your radio, allow you to select the one you want
- **Scan Push Button**: turns Priority Scan on/off (ON with GREEN backlight)
- **Auxiliary speaker Button**: silences internal speaker and connects the auxiliary speaker
- **Monitor Button**: disables tone or digital coded squelch options in receive mode; controls display intensity
- **Transmit LED**: indicates transmission when illuminated
- **Busy LED**: indicates activity on receive channel when illuminated
- **Call LED**: indicates activity with the correct tone or code when illuminated

RADIO ON/OFF, POWER UP

1. Turn the radio on by rotating the on/off control 1/2 turn clockwise after "4000" appears in the display and the power up alert tone is generated, the display will change to indicate the #1 priority channel. If no priority channel is programmed, the display will change to channel 1.
2. Turn the radio off by rotating the on/off control fully counterclockwise.

RECEIVING A CALL

1. Turn the radio on and select the desired channel. With the Monitor Button/LED 2 ("2") lit, adjust the volume control to a comfortable listening level.
2. Rotate the squelch control clockwise (to the right) until the squelch noise (the rushing sound) is no longer heard.
3. Depress the "2" to extinguish the GREEN backlight.
NOTE: If your radio is equipped with coded squelch options, depress the "2" to enable the option, the CALL LED will no longer be illuminated.

TRANSMITTING

1. Turn the radio on and select the desired channel.
2. Pick up the microphone and listen briefly to make sure that no one else is using the channel. Or, with the microphone on-hook, depress the "2" to monitor the channel for activity; the "2" light should be illuminated and the BUSY LED should be off.
3. Press the PTT on the microphone and from a distance of 1/2 to 2 inches speak directly into the microphone in a normal tone of voice.
4. The TX LED will light RED while pressing the PTT.
5. Release the PTT as soon as you have completed the transmission.
NOTE: FCC Rules and Regulations require that you monitor a frequency for activity before transmitting.

CHANNEL SCAN OPERATION
Non-Priority Scan

1. With microphone on-hook, press the S button ("S"), it will light and your radio will start to scan the valid channels in the scan list.
2. If the "2" is illuminated, scan will be faster because the transceiver is only looking for carrier, no coded squelch, activity.
3. The scanner will stop on the first scan channel with activity. When that activity falls off, the dealer programmed scan wait time will go into effect. At the end of the scan wait time, scan resumes, beginning with the next channel in the list.
4. Going off-hook (picking up the microphone) while locked onto an active channel will stop scan, and cause the radio to remain locked on that channel for duration of activity plus the scan wait time.
5. Going off-hook, while not locked onto any particular channel, scan will stop as above; however, the transceiver will revert to the #1 Priority channel, even in non-priority scan.
6. Going back on-hook (returning the microphone to holder) will cause the scan sequence to resume after the preprogrammed scan wait time.

7. Exit the scan mode by pressing "S". Your radio will return to normal operation.
NOTE: If your scan list is empty/unprogrammed, the "S" will not illuminate, scan will not start and an alert tone will sound.

Priority Scan

1. With microphone on-hook, press the "S" and "P". Each will illuminate and the radio will be in the priority scan mode.
2. The scanner stops on the first scan channel with activity. If that channel is not a priority channel, the scanner will continue to monitor both priority channels every Look Back Time.
3. When the transceiver finds the #2 Priority Channel with activity, it decodes that channel activity while continuing to monitor Priority Channel #1. However, if activity is found on Priority Channel 1, the scanner will remain there until carrier drops and the Scan Wait Time is over.
4. Going off-hook at any time during Priority Scan will result in the radio and the display reverting to the #1 priority Channel. Transmitting will then occur on Priority #1.
5. Returning microphone to its holder will cause the Priority Scan sequence to restart.
6. Exit the Priority Scan mode by pressing both the "S" and "P" (to extinguish). Radio and display will return to priority #1 channel for normal operation.

Limited Priority Scan

1. With microphone on-hook, press the "P". It will light and your transceiver will start to scan for activity on the #1 and #2 Priority Channels as will as the channel you assigned Limited Priority Scan.
2. As in priority Scan, the transceiver will monitor the priority channels every Look Back Time as programmed by the dealer.
3. Operating remains the same as in Priority Scan
4. Exit the Limited Priority Scan by pressing the "P". Radio and display will remain on the non-priority channel for normal operation.

Vacant Channel Scan

1. With the microphone off-hook, press the "S" and the radio will start scanning for a vacant channel on which to transmit.
2. The "S" will blink to indicate that vacant channel scan is in process.
3. The radio will lock onto the first channel with no activity. If that channel becomes active during the scan wait time, the vacant channel scan will then resume.
4. If you press the PTT to transmit, the "S" will go out, the TX LED will go on, and you will have exited the vacant channel scan mode. Otherwise, simply return the microphone to its holder.

FRONT PANEL PROGRAMMING

To enter the user programming mode, press and hold the "P" during the initial 4 seconds at radio turn-on. The radio will sound the prompt tone and display the message "Prog".

Scan List Programming

1. After entering the programming mode, press the "S", the radio will display channel "01". The number will blink if channel one is not in the list.
2. Then insert this or any channel onto the scan list, press the "S" while the channel number is flashing in the display. The channel number will be displayed continuously to indicate that it is stored in the scan list.
3. You can now use the channel up and down buttons to change the displayed channel number accordingly.
4. To delete a channel from the scan list, press the 1 button/LED. The display will change from continuous to flashing, indicating that the deletion was successful.
5. After you have completed programming your scan list, press the "P". The radio will sound the prompt tone and display the message "Prog".
6. Press the "P" again to save the scan list in the microprocessor's memory.
7. Press the "2" to exit the user programming mode.
NOTE: Use the "1" to delete displayed channel from the scan list; use the "S" to store displayed channel in the scan list.

Priority Channel Programming

1. After you have entered the user programming mode, press the "P" to change the display to indicate the current #1 priority channel.
2. Use the Channel up and down buttons to change it.
3. After you have selected the First Priority Channel, press the "S" to save it and to bring up Priority Channel 2 in the display.
4. Use the Channel up and down buttons to get to the desired priority #2 channel.
5. After you have selected Second Priority Channel, press the "P" to save the priority channel programmed, to sound the prompt tone and to display the message "Prog".
6. To exit from priority channel programming mode, press the "2".