Operator's Manual

*Monogram Series
LTR® Compatible
Trunking Portable*

ERICSSON ⪕

NOTICE!

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

LTR is a registered tradename of E. F. Johnson.

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SAFETY INFORMATION

The Federal Communications Commission (FCC), with its action in General Docket 79-144, March 13, 1985, has adopted a safety standard for the human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act and Federal Communication Commission limits.

DO NOT *hold the radio in such a manner that the antenna is close to, or touching, exposed parts of the body -- especially the eyes or face --while the radio is transmitting.*

DO NOT *operate the radio near unshielded electrical blasting caps or in an explosive atmosphere, unless it is a type specifically designed and qualified for such use.*

DO NOT *operate the radio unless the antenna connector is secure and any open connectors are properly terminated.*

DO NOT *allow children to operate transmitter-equipped radio equipment.*

This device complies with Part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

FEATURES

- *Up to 10 Systems selectable*
- *Up to 10 Groups selectable per System*
- *System scan*
- *System lockout when scanning*
- *Group Scan automatically or manually*
- *First Available System Scan when out of range of Systems*
- *7-character alpha-numeric LCD display with back-light for System and Group identification and other status information*
- *Operation in both Trunked and Conventional (non-Trunked) modes*
- *Repeater talkaround in Conventional and Trunked modes*
- *Standard telephone keypad for placing telephone interconnect calls*
- *Call indicator*
- *User-programmable storage of up to 8 telephone numbers of up to 14 digit in length*
- *Automatic System ringback if System is busy*
- *Transmit inhibit with busy tone*
- *Clear-to-Talk beep tone signal indicates when speaking can begin*

--- **NOTE** ---

System setup determines the specific operation of some of the above features. Refer to the descriptions in this manual for more information.

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QUICK REFERENCE GUIDE

Controls and Buttons

*Turns transceiver on and adjusts audio
listening level*
***L**ights up LCD display*
***M**onitors channel activity (Conventional
Mode only)*
***P**ress-**T**o-**T**alk places transceiver in
transmit mode*

Keypad

(SYS)	*Change **SYS**tem number*
(GRP)	*Change **GR**ou**P** number*
(T/A)	***T**alk **A**round bypasses System when out of range of System*
(MUTE)	*Enable or disable "key press" tone*

(SCN) ⟶ (SYS) *Turn SYStem **SC**a**N**ning On/Off*

(SCN) ⟶ (GRP) *Turn **GR**ou**P** **SC**a**N**ning On/Off*

(SCN) + *Enters First Available System Scan
(FASS) mode*

LCK	**LoCK** Keypad or displayed System out of scan sequence
PHONE	Enable or disable "**Phone**" mode

--- **NOTE** ---

In "**Phone**" mode, the **T/A, MUTE, SCN** and **LCK** keys have the following functions; (**SND**) **S**e**ND**, (**STR**) **ST**o**R**e, (**REC**) **REC**all and (**CLR**) **CL**ea**R** respectively. The functions are indicated in the orange letters next to the primary function indicated on the keypad.

DTMF Keypad	Enter telephone number to be called
SND	**S**e**ND** key automatically interconnects with System and transmits displayed telephone number
STR → 1 ... 8	**ST**o**R**es displayed telephone number in memory location **1** through **8**
REC → 1 ... 8	**REC**alls stored telephone number from memory location **1** through **8**
CLR → **CLR** → **CLR**	**CL**ea**R**s one digit at a time from display

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DESCRIPTION OF RADIO COMPONENTS

CONTROLS AND CONNECTORS

Antenna Connector - SMA type connector.

TX/CALL Indicator - Two color LED glows red when transmitting (TX) and green when receiving a call (CALL).

Accessory Connector - Interface for Speaker/microphone and programming cable.

On-Off/Volume Control - Turning this knob clockwise supplies power and increases volume level. A counter-clockwise rotation decreases volume level. To turn transceiver power off, rotate knob counter-clockwise to detent.
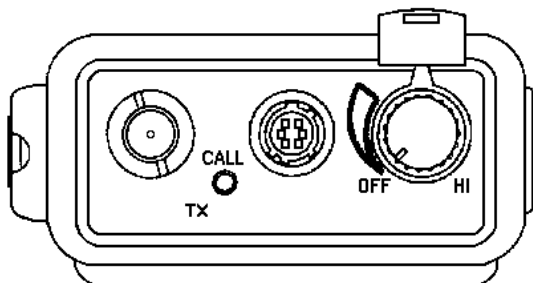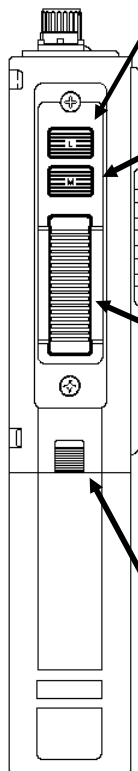
L-Backlight Button - Press the L button once to illuminate the display for low light conditions. After pressing the L button, the light will stay on for approximately 10 seconds.

M-Monitor Button - Press and hold the **M** button to monitor channel activity. This disables any squelch system so that all traffic is heard. The monitor function is available only when Conventional Systems are programmed.

Push-To-Talk Button - Press and hold the Push-To-Talk (**P-T-T**) Button to place in transmit mode. When transmitting, the TX indicator located near the antenna will glow red. In Trunked Systems, the radio must first "handshake" with the System to access an available channel. This initial access may cause the TX indicator to flash momentarily.

Battery Latch - Lifting this latch allows battery to be removed. Place thumb under latch and lift upward while sliding battery away from thumb. To reinstall battery, slide toward latch until securely locked.

KEYPAD

SYS "System" - Pressing this key selects the next programmed System. Only those Systems programmed will be displayed. System number selected is located in upper left comer of display.

GRP "Group" - Pressing this key changes the selected group. Only those groups programmed will be displayed. Group number selected is located in lower left corner of display. Group name or identifier is shown in main body of display.

T/A "Talk Around" - Places the radio into the Talk Around mode on Trunked and Conventional Systems (Dealer programmable option). Allows direct radio-to-radio communication when out of range of System.

MUTE "Silent" - Pressing this key places the radio into the "Silent" mode (none of the "key press" tones will be heard through the speaker.) To enable "key press" tone mode, press (MUTE) again.
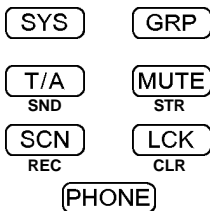
```
  (SYS)      (GRP)

  (T/A)     (MUTE)
   SND        STR
  (SCN)      (LCK)
   REC        CLR
       (PHONE)
```

SCN "Scan" - *Pressing this key initiates the scan
feature. When the* SCN *key is pressed followed by
pressing either the* SYS *(System) or* GRP *(Group) key,
System scan or Group scan is enabled. (See "Scan
Modes").*

LCK "Lock" *- Disables keypad or used to lock System or Systems out of the scan sequence so that they
are not scanned. This function is retained in memory and
does not need to be re-entered each time the radio is
turned on. (Refer to "Keypad Lock" or "System Lockout"
for more information).*

PHONE "Phone" *Mode - Places radio in or out of
"Phone" mode. In "Phone" mode, activates second function of dual function keys indicated by orange lettering
on the radio and in parenthesis ()starting on next page.*

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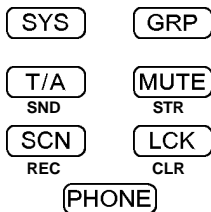
The following Keys are activated in "Phone" mode:

DTMF Keypad Keys 0-9, and symbol keys "*" and "#" for entering telephone numbers to send or store in memory.

NOTE

*If more than 7 digits are entered or stored in a memory location, a left facing arrow ◄ will appear at the bottom of the LCD display. This represents there are more digits entered than can be displayed. Only the last seven digits entered are displayed. To display any digits not shown, first (**STR**) "Store" the entire number into a memory location and then use (**REC**) "Recall" to bring back the number. The first digits will be displayed for 1 second and the remaining 7 digits will be displayed and remain shown until the function is changed or the (**REC**) "Recall" key is again pressed.*

1	2	3		SYS	GRP
4	5	6		T/A **SND**	MUTE **STR**
7	8	9		SCN **REC**	LCK **CLR**
✱	0	✱			PHONE
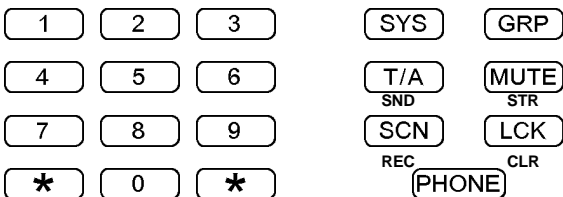
*T/A (**SND)** "**Send**" - Transmits the telephone number entered or recalled from memory on the LCD display.*

*MUTE (**STR)** "**Store**" - Stores a telephone number into memory. To store a number shown in the LCD display, press STR (Store) and a memory location number **1** through **8**.*

NOTE

Storing a displayed number will overwrite any previously stored phone number!

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*SCN (**REC)** "**Recall**" - Used to recall a telephone number from memory locations **1** through **8**.*

*LCK (**CLR)** "**Clear**" - Deletes the last digit shown in the display. To erase the displayed number entirely, depress the (**CLR**) button repeatedly until the LCD display clears.*

NOTE

The telephone number entered in the display will be erased when the power is turned off.

```
 ┌─────┐    ┌─────┐
 │ SYS │    │ GRP │
 └─────┘    └─────┘

 ┌─────┐    ┌─────┐
 │ T/A │    │MUTE │
 │ SND │    │ STR │
 └─────┘    └─────┘

 ┌─────┐    ┌─────┐
 │ SCN │    │ LCK │
 │ REC │    │ CLR │
 └─────┘    └─────┘
    ┌───────┐
    │ PHONE │
    └───────┘
```
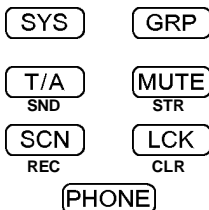
DISPLAY INFORMATION

Alpha-numeric Display - *In the* **standard** *mode, this 7-character display identifies the selected System/Group and those operating modes or error conditions as described in "Display Messages". In the "Phone" mode, it indicates the telephone number as well as the functions activated in "Phone" mode.*

SYS (System) - *Displays above the System number*

GRP(Group) - *Displays above the Group number*

LOCK - *Indicates that the Keypad is disabled or that System (or Systems) are locked out of the scan sequence*

MONITOR - *Indicates that the "Monitor" mode has been enabled by pressing the* **M** *Monitor button in a Conventional System*

PHONE	-	Indicates that the "Phone" mode has been selected
FASS	-	Indicates First Available System Scan has been enabled
SCAN	-	Indicates that the "Scan" mode has been selected by the SCN key
BUSY	-	Indicates that the channel (Conventional) or the System/Group (Trunked) you have selected is busy
CALL	-	Indicates that a call has been received
)	-	Indicates that the displayed group is programmed for telephone interconnect
♪	-	Indicates that the "key press" tones are heard
▬+▬	-	Indicates that the battery is weak and needs recharging
◀	-	Indicates that there are overflow digits (the telephone number is longer than 7 digits)

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NOTE

Fully charge your radio battery prior to operation. Batteries are not fully charged when shipped. They must be charged before use.

TRUNKED AND CONVENTIONAL MODE

Your radio may be programmed to operate with both Trunked and Conventional modes. Each System can be individually programmed to operate in either the Trunked or Conventional Systems. There are only a few differences in their operation and these are detailed as follows.

CHANNEL MONITORING

While on a Trunked System, channel monitoring is performed automatically by the transceiver. In accordance with the FCC Rules, while operating on a Conventional System the channel must be monitored prior to transmitting. In both Trunked and Conventional Systems, operation may vary from System to System. Your dealer will be able to assist with particular operational parameters and procedures for the various Systems and functions.

SYSTEM "HANDSHAKING"

In a Trunked System, when the P-T-T button is pressed, the red TX indicator flashes momentarily to allow the transceiver and System to connect properly. When the red TX indicator glows steadily, voice transmission may begin. If your Dealer has enabled the "Clear to Talk" tone option, the radio will emit a short tone signalling voice transmission may occur. In Conventional Systems, there is no System "handshaking" and voice transmission may start immediately.

TRANSMITTING

A. Rotate the On-Off/Volume control clockwise to turn the power on.

B. Adjust On-Off/Volume control further clockwise to desired volume level. (Pressing any of the function keys will provide a "key press" tone. Use this tone to set desired audio level).

C. Press the ⌈SYS⌋ and ⌈GRP⌋ keys until the desired System and Group are displayed.

D. If a Conventional System is selected, the channel must be monitored before transmitting. Press and hold the **M** Monitor button. This disables all squelch systems and allows you to hear any transmissions on this channel.

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E. Press and hold the **P-T-T** button on the side of the transceiver. (If a "Busy", "Intercept" or "Ringback" tone is heard, refer to "Supervisory Tones" descriptions for more information).

F. Listen for the "Clear to Talk" tone (or wait for the TX indicator to glow steady) and begin talking. Hold the transceiver 1 or 2 inches from your mouth, speak clearly and distinctly into the microphone area of the front grille.

G. Release the **P-T-T** button as soon as the message is complete and listen for a response. The **P-T-T** button must be pressed continuously while talking and released to listen.

RECEIVING

A. Turn power on and set the volume level as previously described.

B. Select the desired System and Group.

C. When a message is received, the TX/Call indicator will glow green.

D. Respond to message by pressing the **P-T-T** button on the side of the transceiver. This switch must be pressed continuously while talking and released to listen.

If scanning, be sure to respond before scanning resumes, if you do not, another call may be received and the selected System and Group may have to be changed. Refer to "System Scan" description for more information.

T/A - TALK AROUND

Talk Around mode, if enabled by your dealer, allows you to talk directly from radio to radio. This is useful when your radios are out of range of any System. If the radio can receive the System transmissions, then Talk Around may be disabled.

A. *Press the ⬚T/A⬚ key. The LCD display will indicate the word "**SIMPLEX**" in place of the unique System / Group identifier.*

B. *Transmit and receive as described in "Transmitting".*

TRANSPOND MODE

If Transpond has been enabled by your dealer, your radio will automatically send (transpond) an acknowledgment to the System indicating that your radio has received a transmission. Transpond is a dealer programmable option.

KEYPAD LOCK

LCK "Keypad Lock" - While your radio is on, this function prevents inadvertent setting changes due to accidental key presses.

A. *To "Lock" Keypad - Press and hold the* **LCK** *key for 3 seconds and wait for 2 long beeps. The word "* **LOCK** *" will blink in the upper left hand corner of the LCD display to verify activation of the keypad lock.*

B. *To "Unlock" Keypad - Hold the* **LCK** *key down for 3 seconds and wait for 3 short beeps. The word "* **LOCK** *" will then disappear from the LCD display.*

NOTE

The " **LCK"** *key will not work under tow conditions:*

1) Editing phone numnbers (while in the "Phone" mode).

2) While in Manual System or Group Scan mode.

TELEPHONE CALLS

Telephone calls may be placed and received, provided that your dealer has programmed this feature into your transceiver. The following instructions pertain to placing telephone calls which are made in the Trunked mode only. Calls made in Conventional modes may vary depending on the System setup. Consult your for specific information.

PLACING A TELEPHONE CALL

Auto Interconnect Operation

A. *Turn power on and set the volume as desired.*

B. *Select a System that contains an interconnect group. You may enter the phone mode from a noninterconnected group but the System selected must have at least one telephone interconnect Group. (When the SND key is pressed the unit will automatically select the first available interconnect Group and transmit the displayed telephone number.)*

C. *Select the "Phone" mode by pressing the* PHONE *key. The word "**PHONE**" will appear in the upper right portion of the display.*

D. *Enter the number to be dialed, or recall a number from memory locations 1-8, by pressing **REC 1-8.** (Information on storing and recalling a num-*

*ber from memory is detailed in the following sections.)*

E. *Press the **SND** key. The radio will access the Trunked Group, send the phone number and return to the receive mode.*

NOTE

*In some Systems or with a very weak signal, it may be necessary to press the **P-T-T** button to access the dial tone and then press the **SND** key.*

F. *When the called party answers, press the **P-T-T** button to talk and release to listen.*

G. *To release the call (to hang up), press the **P-T-T** button and press the pound sign (#) key for 1 to 2 seconds. Release the **P-T-T** button.*

NOTE

This step is important as well as good operating practice. Pressing the ⬚ # ⬚ key instructs the System that your call is completed. Additional interconnected billing time may be incurred before the System automatically terminates the call. In most Systems this is 30 seconds, however it may vary. Consult your dealer for specific details.


Manual or Direct Dialing

A. Turn power on and set the volume as desired.

B. Select the System and Group that has been programmed for telephone calls. The "telephone" icon will appear in the LCD display.

C. Press and hold the **P-T-T** button to obtain the System "Handshake". The red "TX" LED will glow continuously and the Clear-To-Talk tone will sound (if programmed).

D. Momentarily release the **P-T-T** button and listen for the dial tone.

E. Press and hold the **P-T-T** button while "keying" the telephone number using the DTMF keypad.

F. Release the **P-T-T** button.

G. When the party you are calling answers, press and hold the **P-T-T** button while talking.

H. Release the **P-T-T** button after speaking.

I. To release the call (to hang up), press the **P-T-T** button and press the pound sign (#) key for l to 2 seconds. Release the **P-T-T** button.

RECEIVING A TELEPHONE CALL

A. *Turn power on and set the volume as desired.*

B. *Select or scan the System and Group programmed for telephone calls. (When a Group programmed for telephone calls is selected, the "telephone" icon appears in the display.)*

C. *When a telephone ringing sound is heard from the speaker, answer the call in the normal manner (press the **P-T-T** button to talk and release it to listen). It is not necessary to select the "Phone" mode to receive a call.*

D. *When the call is finished, release the System by pressing the **P-T-T** button and the pound sign (#) key for l to 2 seconds.*

NOTE

This step is important as well as good operating practice. Pressing the ⌐#⌐ key instructs the System that your call is completed. Additional interconnected billing time may be incurred before the System automatically terminates the call. In most Systems this is 30 seconds, however it may vary. Consult your dealer for specific details.

ADDITIONAL TELEPHONE CALLING
INFORMATION

ENTERING TELEPHONE NUMBERS

   A.   Press the PHONE key to enter the "Phone" mode.
        The word "**PHONE**" will appear in the upper right
        portion of the display. The numeric DTMF tele-
        phone keypad is now enabled.

   B.   Enter the desired telephone number by pressing
        the corresponding number keys.

   The radio allows you to enter the telephone number
at any desired rate. Errors can be corrected before
sending the telephone number to be dialed. Numbers up
to 14 digits in length can be entered. When there are
more than 7 digits entered, the overflow icon ◀ will
appear in the lower left portion of the LCD display, next
to the Group number. Numbers which have been stored
into memory locations 1 through 8 and recalled will
momentarily display the first overflow digits, and then the
last 7 digits entered.

CLEARING TELEPHONE NUMBERS

   When a phone number has been entered, it will
remain in the display whenever you enter "Phone" mode.
To erase the last digit entered depress the **CLR** key. To
erase the entire number, press **CLR** until no information
is displayed (**CLR, CLR, CLR,** etc.).

Tip: To quickly erase an entire number from the display, press "RECall" and the "0" (zero) memory location. It is a dedicated "blank" display.

TO STORE A NUMBER IN MEMORY:

A. Press $\boxed{\text{PHONE}}$ key to place the unit into the "Phone" mode.

B. Enter the desired number. Example:

   1 816 891 6320

C. Press **STR**.

D. Press memory location **1** through **8** (for example, "2"). The number 1 816 891 6320 is now stored in memory location 2.

E. Clear the existing digits by pressing **CLR** until no information remains in the display.

F. Repeat above steps for other desired memory locations.

TO RECALL A NUMBER STORED IN MEMORY

The stored numbers can now be recalled and sent by selecting the **PHONE** mode, pressing **REC**, the desired memory number **1** through **8**, and then **SND**.

SCAN MODES

GENERAL

Both System Scan and Group Scan are available. Although your dealer will explain which option(s) he has programmed for you, following is a description of each.

SYSTEM SCAN

System Scan is initiated by pressing `SCN` `SYS`. To exit Scan mode, press `SCN` and hold for 2 seconds. Scan mode is indicated by the word "**SCAN**" displayed in the lower left portion of the display. When scanning is actually occurring, the words "**IN SCAN**" appear in the display in place of the unique group identifier. In addition, the System numbers are incremented. Scanning is sequential through all Systems, Trunked and Conventional, unless they are locked out of scan as described under "System Lockout". When an incoming call is detected, scanning stops and the call is received. The display will indicate the System and Group identifier from which the call was received and the word "**SCAN**" in the lower left portion of the display. When the incoming call is complete, scanning resumes after a predetermined pause. (See "Scan Resume Delay" for additional information regarding the pause).

SYSTEM LOCKOUT

All Systems, Trunked and Conventional, are scanned in System Scan Mode. If you desire not to scan a particular System, select that System with the `SYS` key

*and press the **LCK** key. The word "**LOCK**" appears in the upper left portion of the display and that System will be deleted from the scan list. When System Scan is initiated, the word "**LOCK**" will be shown in the upper left portion of the display along with the words "**IN SCAN**" denoting a System or Systems have been locked out of scan. To restore a System to the scan list manually select the "LOCKed" System and press the **LCK** key. The word "**LOCK**" will disappear and the System will now be scanned while in the System Scan Mode. The "LOCK" information is stored in memory and will not be affected by turning the power switch off.*

GROUP SCAN

There are two different ways the radio does Group Scanning. Your dealer programs these functions into the radio during initial setup. Only those Groups your Dealer has "enabled" for Group Scan can be scanned. Group scan is not available in Conventional Systems.

AUTO GROUP SCAN

There is no action required to initiate Auto Group Scan. Whenever a System is selected that is programmed for Auto Group Scan, those Groups "enabled" will automatically be scanned. When an incoming call on any "enabled" Group is detected, the radio will switch to this Group, display the Group number, and unique identifier. The radio will remain on this Group until a message comes from another "enabled" group, the ⌈SYS⌋ key, and/or the ⌈GRP⌋ key is pressed.

MANUAL GROUP SCAN

To initiate Manual Group Scan press SCN GRP . To exit Group Scan mode, press SCN . Scan mode is indicated by the word "**SCAN**" displayed in the lower left portion of the display. When Group Scan is actually occurring, the words "**IN SCAN**" appear in the display in place of the unique group identifier. Group Scan occurs only on those Groups "enabled" by your dealer for the selected System. When an incoming call is detected, scanning stops and the incoming call is received. The display changes to indicate the Group identifier on which the call was received and the word "**SCAN**" in the lower left portion of the display remains. When the incoming call is complete, after a brief pause, scanning resumes. (See "Scan Resume Delay" for additional information regarding the pause).

TRANSMITTING WHILE SCANNING

When a message is transmitted while scanning (i.e. the words "**IN SCAN**" show in display), Dealer programming determines if it is transmitted on the "Last Active (floating)" or on a pre-set "Home" System and Group. The following describes operation for each configuration.

LAST ACTIVE (FLOATING) SYSTEM AND GROUP

During Scan (i.e. the words "**IN SCAN**" show in the display) when you press the **P-T-T** button, you will transmit on the System and Group that were selected prior to entering Scan mode. If scanning stops for an incoming call, and you press the **P-T-T** button during the pause

prior to scanning resuming, you will transmit on the System and Group displayed.

Last active (floating) programming allows you to respond (transmit) to an incoming call during Scan mode without having to press the $\boxed{\text{SYS}}$ *or* $\boxed{\text{GRP}}$ *keys.*

"HOME" SYSTEM AND GROUP

The "Home" System and Group are the System and Group in which you require priority to transmit on. This is usually the System and Group on which you will receive and transmit most of your calls.

*When you press the **P-T-T** button during scanning (i.e. "**IN SCAN**" appears in the display) your radio will always transmit on the "Home" System and Group. This applies whether scanning has stopped for an incoming call or not.*

SCAN RESUME DELAY

*After a message is received or transmitted in the "Scan" mode, there is a delay period of 1-7 seconds before scanning resumes. The exact length of this delay is programmed by your dealer. When a message is received, this delay allows you to respond without having to change the selected System and Group. If you do not respond until after scanning resumes (the words "**IN SCAN**" reappear in display), another call may be received and the response may not occur on the desired System or Group.*

RX PRIORITY

Your dealer may have programmed a Group ID as an
RX PRIORITY *(Receive Priority) ID. Whenever your
radio receives this ID, the LCD display will show the
words "***RX PRI" i***n place of the normal alphanumeric
System / Group identifier. "***RX PRI"*** will remain in the
display until you press any button or key on the radio. An
RX priority message takes priority over any other mes-
sage, other than a telephone interconnect message.*

FIRST AVAILABLE SYSTEM SCAN

*When you are Out of Range of any System when
trying to transmit, First Available System Scan (FASS)
will scan all Systems programmed and look for the first
System that is in range of the radio.*

*To enter First Available System Scan (FASS), rotate
the On-Off/Volume control counter clockwise to detent,
shutting off power to radio. Press and hold the* SCN *key
while turning the radio power back on. The word "***FASS"***
will show in the upper right portion of the display. When*

you attempt to transmit and the selected System is out of range, the radio will emit a short tone indicating the System is out of range and "FASS" mode has started. When the radio detects a System in range, scanning will stop and the radio will emit a short series of tones (auto ring back tone) to indicate a System is in range. Normal operation may resume. To exit "FASS" mode press $\boxed{\text{SCN}}$*.*

TRUNKED SUPERVISORY TONES

BUSY TONE

*This tone is similar to the standard telephone busy tone and it indicates that the radio System is currently "busy". It sounds for as long as the **P-T-T** button is pressed. The word "**BUSY**" also appears in the upper left portion of the display while this tone is sounding. If the Clear-to-Talk tone is programmed, the "Busy" tone does not sound except when making a telephone call. If "**TX INHIB**" is displayed while this tone is sounding, the selected group is temporarily busy.*

INTERCEPT TONE

This is a siren-like tone (alternating high and low tones) which indicates the following error conditions:

1) *If this tone sounds after the transmit indicator flashes several times and* **"RANGE"** *appears in the display, an out-of-range condition is indicated. To complete a call, you may need to get closer to your radio System. Once this tone sounds, no more access attempts are made until the* **P-T-T** *button is released and then pressed again.*

2) *If this tone sounds after the transmitter has been on for an extended period and* **"TX TIME"** *also appears in the display, the transmitter has been disabled by the Time-Out-Timer feature.*

CLEAR-TO-TALK

When the Clear-To-Talk feature is programmed, it emits a short tone which indicates when speaking can begin. (Refer to "Clear-To-Talk" description for more information).

KEY PRESS TONE

This is a short tone that sounds to indicate when a key is pressed. This tone can be enabled and disabled by pressing the MUTE *key.*

REORDER TONE

Three beeps which indicate that the call has been terminated by the System.

RETURN TIME WARNING TONE

Two beeps which indicate that you have not transmitted recently. If you do not transmit within 5 seconds, the call will be terminated. The time between transmissions is one of the parameters used by the System to determine when a call is finished (if the ⬚ # ⬚ key has not been detected).

CONVERSATION TIME-OUT TONE

Calls are limited to a certain length by the System. Thirty seconds before this time is reached, a "tick" begins sounding each second. When the thirty-second period expires, the call is automatically terminated.

TURN-AROUND TONE

*This is a single beep which may be used to indicate to the landside party when to respond to your transmission. It sounds when you release the **P-T-T** button, and you may partially hear this tone.*

SYSTEM RINGBACK TONE

If the First Available System Scan mode or after receiving a "Busy" indication when attempting to access a System (Trunked or Conventional), the radio will emit a one second "ring" to indicate a System is now available.

DISPLAY MESSAGES

RANGE: *This message accompanied by an intercept tone (a "warbling" siren-type tone) indicates that the radio is Out Of Range, or too far from System site to provide communications.*

BUSY: *Indicates that the channel is busy. This message is accompanied by the intercept tone.*

TX Time: *This message indicates that the transmit TimeOut-Time has been exceeded. This message is accompanied by the intercept tone.*

TX DSBL: *Transmit is disabled, allowing only reception of signals. This message will be displayed and the warbling intercept tone will sound (dealer programmed).*

TX INHIB: Indicates that the frequency or Group selected is temporarily busy. The intercept tone will accompany this message. Try your transmission again in 15 to 30 seconds.

UNLOCK: This message indicates that the synthesizer has become "unlocked". If this message should be displayed, take the radio to your dealer for service.

RX PRI: Indicates that a call has been received on a programmed priority channel (dealer programmed).

IN SCAN: Indicates that the Scan function has been enabled.

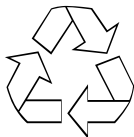### BATTERY CHARGING AND CARE

⚠ **WARNING** ⚠

Do not dispose of the battery pack in fire - it may explode, causing injury or death.

Do not replace the battery in hazardous atmosphere locations.

Do not carry battery loose in your pocket or purse.

Do not attempt to repair battery.

Ni-Cd

The product you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life under various state and local calls it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details concerning recycling options or proper disposal in your area. Call Toll Free 1-800-822-9362 for information and/or procedures for returning rechargeable batteries in your state.

Your radio comes supplied with one 7.2 volt 1100 mAh Ni-Cd battery pack, which can be recharged from 500 to 1000 times before requiring replacement. The actual number of charge / recharge cycles vary depending upon usage. We recommend that the battery be charged 14 to 16 hours on the first charge cycle and then in accordance with the charger model instructions thereafter.

To remove the battery pack, push up on the battery latch and slide the battery pack to the right. To replace the battery, align the battery on the track and slide to the left until a click is heard, indicating the battery is correctly installed.

If the battery is to be charged on the radio, ensure that the power switch on the radio is in the off position before charging. Failing to turn the power switch to off during the charge cycle will result in a less than full charge condition, which will noticeably reduce the operating time between charges!

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Normal battery operation time is 8 hours. This may vary depending upon how much the receiver audio is present and how much you transmit. The actual time may vary from day to day depending upon operational requirements.

FOR BEST PERFORMANCE

1. *Charge battery to full capacity, 14 hours at the standard C/10 rate (capacity X .10). For "rapid" chargers, allow additional time (2-3 hours) for "topping off" the charge after it switches from "charging" to "compete".*

2. *Use the battery soon and use as much of the battery capacity as possible or practical. A battery that is charged and discharged completely will maintain the longest running time capacity. Also, several charge/discharge cycles are recommended to bring a new battery up to its rated capacity.*

3. *Store and charge the batteries at room temperature 65°F to 75°F. Batteries that have been stored for over a month should be recharged before putting into service due to chemical self-discharge which occurs at a rate of approximately 1% per day. Do not charge cold batteries (40°F or below).*

4. *Reduced capacity or "memory effect" may result from repeated identical shallow discharge/full recharge cycles. If such a condition is suspected, run the battery until the instrumentation loses all power, then fully recharge and discharge again. Repeat this cycle 3-4 times.*

EXTENDED OPERATIONS

When operating in "Fringe Areas" at some distance from the System, the other party may not receive your transmission clearly. Also you may notice that the background noise will increase on received signals. Moving to higher ground or moving closer to the System will help alleviate these problems. If moving closer to the System is not practical, communication may be improved by moving away from shielding structures. If you are in a building interior, move closer to a window (preferably one generally in the direction of the System). At 800 MHz the wave length is very short, sometimes moving a few inches to a few feet can make significant signal strength changes. Finding the best location can also be done while listening to the background noise while moving about; attempt to find a spot where the background noise is reduced to a minimum or eliminated entirely. This may make the difference from not being heard, to being heard loud and clear when operating in the fringe areas of your System coverage.

The fringe distance will vary greatly from plains areas, hilly terrain and mountain top sites.

FCC LICENSING

This unit may or may not require a specific FCC license to operate. The FCC requires all transmitters in the conventional and some Trunked Systems to be licensed by the Federal Communications Commission. Some Trunked operations now are exempt from individ-

ual licensing requirements but must be operated in a licensed System.

Consult your dealer regarding specific licensing information, or contact the Federal Communications Commission.

For more information regarding the FCC license application (Form 571), call 717-337-1212 for additional information or contact the FCC District Office nearest your location.

TRANSCEIVER SERVICE

There are no user serviceable components inside the radio. Altering the internal components or adjustments may result in illegal emissions, including off-frequency operation, or damage to the radio.

*Should an "**UNLOCK**" condition be shown in the LCD display, or the LCD fail to display information, or all icons and display segments are shown, turn the power switch off then on to reset the microprocessor. Ensure that the battery is fully charged and check that the antenna is securely tightened.*

If the unit still fails to operate properly, refer to an Authorized Service Center for servicing.

NICKEL CADMIUM BATTERY WARRANTY

A.   Ericsson Inc. (hereinafter "Seller") warrants to the original purchaser for use (hereinafter "Buyer") that nickel-cadmium batteries supplied by Seller shall be free from defects in material and workmanship, and shall conform to its published specifications for a period of twelve (12) months from the date of purchase.

B.   For purposes of this warranty, batteries shall be deemed defective if (1) the battery capacity is less than 80% of rated capacity, or (2) the battery develops leakage.

C.   If any battery fails to meet the foregoing warranty, Seller shall correct the failure by issuing a replacement battery upon receipt of the defective battery at an Authorized Service Center (ASC). To obtain the name and address of an ASC, ask your salesperson, consult the Yellow Pages, or call the number printed at the bottom of this page.

D.   Replacement batteries shall be warranted only for the remaining unexpired warranty period of the original battery. This warranty becomes void if:

   (1)   The battery has been subjected to any kind of misuse, detrimental exposure, or has been involved in an accident.

   (2)   The battery is used in equipment or service other than the radio equipment for which it is specified.

E.   The preceding paragraphs set forth the exclusive remedies for claims (except as to title) based upon defects in or non-conformity of any battery, 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 COMPANY 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)

ECX-841C

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 charge 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.

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)

ECX-362S

EMERGENCY NUMBERS

Police

State Police

Fire

Poison Control

Ambulance

*Life Saving and
Rescue Squad*