

Operator's Manual

KME-200 EDACS Mobile Radio



PRELIMINARY

ERICSSON 

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SAFETY INFORMATION

The operator of any mobile radio should be aware of certain hazards comEMER to the operation of vehicular radio transmissions. **A list of several possible hazards is given:**

1. **Explosive Atmospheres** - Just as it is dangerous to fuel a vehicle with the motor running, similar hazards exist when operating a mobile radio. Be sure to turn the radio off while fueling a vehicle. Do not carry containers of fuel in the trunk of a vehicle if the radio is mounted in the trunk
2. **Interference to Vehicular Electronics Systems** - Electronic fuel injection systems, electronic anti-skid braking systems, electronic cruise control systems, etc., are typical electronic systems 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 and enlist their aid in determining the expected performance of electronic circuits 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 Petroleum (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 requiring:

- The space containing the radio equipment shall be isolated by a seal from the space containing the LP gas container and its fittings.
- Outside filling connections shall be used for the LP gas container.
- The LP gas container shall be vented to the outside of the vehicle.

SAFE DRIVING RECOMMENDATIONS FOR USERS OF MOBILE RADIOS RECOMMENDED BY AAA

- Read the literature on the safe operation of the radio.
- Keep both hands on the steering wheel and the microphone in its hanger whenever the vehicle is in motion.
- Place calls only when vehicle is stopped.
- When talking from a moving vehicle is unavoidable, drive in the slower lane. Keep conversations brief.
- If a 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.

OPERATING RULES AND REGULATIONS

Two-way FM radio systems must be operated in accordance with the rules and regulations of the local, regional or national government

In the United States, the KME radio 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 helps eliminate confusion, assures the most efficient use of the existing radio channels, and results 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. As your radio operates in much the same way as a telephone "**party line**", always listen to make sure that the channel

is clear before transmitting. Emergency calls have priority over all other messages. If someone is sending an emergency message - such as reporting a fire or asking for help in an accident - **KEEP OFF THE AIR!**

2. The use of profane or obscene language is prohibited by Federal law.
3. It is against the law to send false call letters or false distress or emergency messages. The FCC requires that you keep conversations brief and confine them to business. To save time, use coded messages whenever possible.
4. Using your radio to send personal messages (except in an emergency) is a violation of FCC rules. You may send only those messages that are essential for the operation of your business.
5. It is against 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.
6. The FCC requires that you identify yourself at certain specific times by means of your call letters. Refer to the rules that apply to your particular type of operation for the proper procedure.
7. No changes or adjustments shall be made to the equipment except by an authorized or certified electronic technician.

IMPORTANT

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

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 areas of low terrain, or while under power lines or bridges.
- Obstructions such as mountains and buildings.

In areas where transmission or reception is poor, some improvement may be obtained by insuring that the antenna is vertical. Moving a few yards in another direction or moving to a higher elevation may also improve communication.

INTRODUCTION

This manual describes the operation for the Ericsson KME- Mobile radio. The KME radio is a high performance FM mobile radio providing reliable two-way communication in a Trunked radio system

The KME- radio can be programmed with multiple systems or a single system and up to 128 channels. The KME- radio includes a 14-segment, eight character, alphanumeric display.

The KME- can be programmed with a single system and up to 16 channels. The KME- radio includes a 7-segment, five character numeric display.

The KME- radio can be programmed to operate with any of the following Trunked radio system platforms:

- ❑ DTMF
- ❑ Channel Guard
- ❑ Type 99

The KME- is a versatile radio designed to meet almost all Conventional applications. The KME radio is available in numerous splits in the VHF and UHF bands. Both the 20 watt and the 40 watt units, can be programmed for low or high power on a per channel basis. The following table provides a complete list of the KME- radios model numbers.

Table 1 – KME- Radio Model Numbers

KME- Radio Model #	Description
KRD 103 143/1	136-156 MHz, 20 W
KRD 103 143/2	150.8-174 MHz, 20 W
KRD 103 143/3	403-440 MHz, 20 W
KRD 103 143/4	440-470 MHz, 20 W
KRD 103 143/5	470-512 MHz, 20 W
KRD 103 143/6	136-156 MHz, 40 W
KRD 103 143/7	150.8-174 MHz, 40 W
KRD 103 143/8	403-440 MHz, 40 W
KRD 103 143/9	440-470 MHz, 40 W
KRD 103 143/10	470-512 MHz, 40 W
KRD 103 143/21	806-825, 851-869 MHz, 25 W
KRD 103 143/31	896-902, 935-941 MHz, 25 W

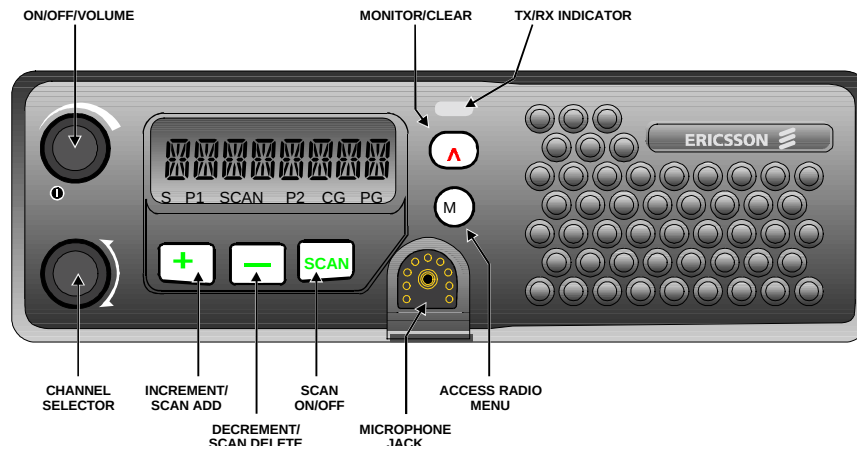
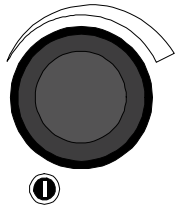


Figure 1 – KME- Radio Front View

CONTROLS

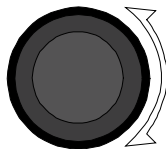
All the controls for the KME- mobile radio are located on the front of the control unit and described below:

ON/OFF Volume Knob



This knob powers the radio ON/OFF and controls the volume level of the received audio at the speaker. Rotate the knob counterclockwise to turn the volume down. Rotate the knob clockwise to turn the volume up. Rotate the knob counterclockwise until it clicks and then stops, to turn the radio OFF. When the knob is in the OFF position, rotate the knob clockwise until the knob clicks to turn the radio ON.

System/Group Channel Knob



This rotary knob is used to select the systems or groups/channels, depending upon programming. This 16 position knob has no stop. See **System/Group Channel Selection** for more details.



Increment/Scan Add Button

This button used in conjunction with the SCAN button to add channels to the scan list. This button is also used to increment to the next item in the menu.



Decrement/Scan Delete Button

This button is used in conjunction with the SCAN button to remove channels from the scan list. This button is also used to decrement to the previous item in the radio menu.



Scan On/Off Button

This button is used toggle the scan operation on and off. In conjunction with the + and – buttons, this button is also used to add the selected channel to the scan list and remove the selected channel from the scan list.



EMER Button

This button has two functions:

1. Press and hold the button for at least 1 second to unsquelch the receiver and allow the user to hear all transmissions on the channel. All decoders are defeated when the button is pressed. This allows the user to check the setting of the volume control and to Monitor the channel before transmitting.
2. Press and release the button (less than 1 second), to enable and disable decode Channel Guard. At the same time, the selective signaling state (Type 99, Enhanced and Multi-tone) toggles between Monitor mode and selective mode.



M Button

This button provides access to the KME- menu. The KME- menu allows the user to change radio operating parameters, select preprogrammed calls from a list, etc.

DISPLAY

KME- Display

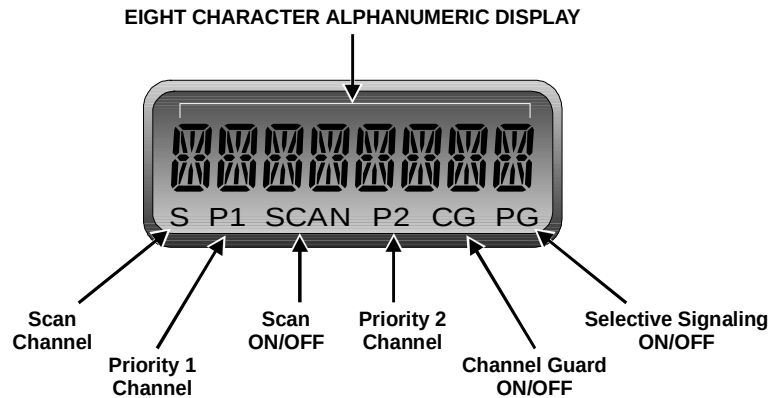


Figure 2 - KME- Display

The KME- includes an eight character 14-segment display and six status icons. The eight character first line is used to display the selected channel, menu items and miscellaneous operating conditions. When the radio is programmed a personality or computer file is downloaded into the radio. The personality defines how the radio will operate and is used to tailor the operation of the radio for each application. Since the KME radio clearly displays alphanumeric characters, an eight character name can be created for each of the following items:

- ☐ Systems
- ☐ Individual Calls
- ☐ Channels
- ☐ Group Calls

POLICE 1

The KME- radio displays the selected channel by displaying the selected channel name as defined in the personality. For example, this is what will appear in the display if the name for channel 4 is defined in the personality as "Police 1".

STATUS INDICATORS

The status indicators or icons are located at the bottom of the display and provide an indication of various radio operating characteristics.

S

The **S** icon is used for channels in the scan list. The **S** icon turns on if the selected channel is part of the scan list. The scan list is a group of channels the radio continuously Monitors for activity. **This list can be modified by the radio programmer or by the radio user.**

P1

The **P1** icon is used for priority 1 channels. The **P1** icon turns on when the selected channel is defined as the priority 1 channel or when the radio receives a call on the priority 1 channel. In scan mode, channels defined as priority channels have precedence over non-priority channels. If a priority 1 channel is decoded, the radio will drop a call while on a non-priority channel or a priority 2 channel and then switch to the priority 1 channel to receive the call. This channel will also be scanned more often than non-priority channels and the priority 2 channel.

SCAN

The **SCAN** icon indicates the condition of the SCAN mode. The **SCAN** button is used to toggle scan ON and OFF. When scan is ON, the radio Monitors all the channels in the scan list for any activity. The **SCAN** icon turns on when the scan mode is enabled.

P2

The **P2** icon represents priority 2 channels. The **P2** icon turns on when the selected channel is defined as the priority 2 channel or when the radio receives a call on the priority 2 channel. In scan mode, channels defined as priority channels have precedence over non-priority channels. If a priority 2 channel is decoded, the radio will drop a call while on a non-priority channel and then switch to the priority 2 channel to receive the call. This channel will also be scanned more often than other non-priority channels, but less than the priority 1 channel.

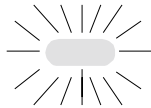
CG

The **CG** icon represents decode Channel Guard. When the user selects a channel preprogrammed with decode Channel Guard, the **CG** icon turns on. Channels programmed with Channel Guard only allow the user to hear calls carrying the equivalent Channel Guard tones or digital codes. This reduces the amount of "channel chatter" the user hears.

PG

The **PG** icon represents selective signaling. When the user selects a channel preprogrammed with Multi-tone or Type 99 tone signaling, the **PG** icon turns on. Selective signaling is used to initiate individual calls, group calls, all calls, etc. When the radio is in the Monitor mode the **PG** icon flashes.

TX/RX INDICATOR



This indicator is located above the EMER button. This indicator contains a red LED and green LED. When the radio is transmitting the red LED turns on. When the radio is receiving a call, the green LED turns on.

ALERT TONES

The KME radio generates a number of unique audible alert tones or “beeps” to indicate various operating conditions. The alert tone feature can be enabled or disabled through PC Programming. All of the KME alert tones are described in the following sections:

BASIC OPERATION

TURNING THE RADIO ON

Typically, mobile radio installations require the vehicle ignition switch to be in the Accessory or Run position before the radio will power ON. In some applications, the radio is wired directly to the battery and the radio will power ON regardless of the setting of the vehicle ignition. Verify with the installer, how the radio has been connected.



CH-01

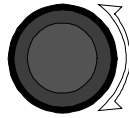
From the OFF position, rotate the ON/OFF Volume knob clockwise until the knob clicks. The radio performs a diagnostic test and then sounds three short tones to indicate the radio has passed the diagnostic test and is ready for operation. The display comes ON and indicates the currently selected channel.



The KME mobile preserves the following data from the previous operating state:

- *Channel Number (unless preprogrammed with a power-up channel)*
- *Scan ON/OFF State*
- *Scan List*
- *Radio Enable/Disable*

SELECTING OR CHANGING CHANNELS



Rotate the Channel Selector Knob clockwise or counterclockwise until the desired channel appears in the display.

The Channel Knob is a continuous rotary knob that is used to select the desired channel from a preprogrammed list of channels. Rotate the knob clockwise to increment to the next channel in the list. When the end of the list is reached the radio will wrap to beginning of the list. Rotate the knob counterclockwise to decrement to the previous channel in the list.

CHANGING SYSTEMS



1. Press the **M** button. This will bring up the KME radio main menu.



2. Press the **+** or **-** buttons to scroll through the list of preprogrammed systems.



3. Once the desired system appears in the display, press the **M** button to accept the change, exit the radio menu and return to the normal display.

RECEIVING A CALL



1. Make sure the radio is ON. Select the proper system and channel as described in the previous sections.

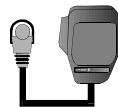


2. Adjust the volume to the desired level by pressing and holding the **EMER** button for at least 1 second. Noise will be heard if there is no activity on the channel.



3. When the radio receives a call, the green receive indicator will light and audio will be present at the speaker.

TRANSMITTING A BASIC CALL



1. Make sure the radio is ON. Select the desired system and channel as described in the previous sections.
2. Observe the TX/RX indicator for any activity on the channel. Never transmit with the green RX indicator ON.
3. Press and hold the **EMER** button for at least 1 second to Monitor the channel for activity. Noise will be heard if there is no activity on the channel. This will also help in setting the volume level to the desired level.
4. Remove the microphone from the hookswitch. Holding the microphone approximately 2 inches from your mouth, press the PTT button on the side of the microphone and speak in the microphone.



Always speak in a normal tone of voice. Hold the microphone cupped in your hand and approximately three (3) inches from your mouth. Shouting will degrade your transmission, so do not speak any louder than normal.

5. When you have finished speaking, release the PTT button and wait for a reply.

CHANNEL GUARD

Channel Guard is a method of reducing "channel chatter" by equipping receivers with a device that only allows calls with the correct signaling to be heard by the user. Channel Guard is defined in the radio personality.

To Disable Channel Guard (Decode):

CG

If Channel Guard is ON, the **CG** status indicator will be ON.



Press and release the **EMER** button (less than 1 second) to turn decode Channel Guard OFF. The **CG** status indicator will turn OFF. The radio will always transmit with Channel Guard unless the channel is programmed without Channel Guard.



The radio can be programmed to disable Channel Guard by removing the hookswitch .

To Enable Channel Guard:

If Channel Guard is OFF, the **CG** status indicator will be OFF.



CG

Press and release the **EMER** button (less than 1 second) to turn decode Channel Guard ON. The **CG** status indicator will turn ON. The radio will always transmit with Channel Guard unless the channel is programmed without Channel Guard.

RADIO MENU OPERATION

There are up to 12 main menu items available. For each main menu item there are multiple submenu items to select from. The features enabled in the radio personality define which main menu items are available and will appear when the radio user accesses the radio menu. The following procedure describes how to access and use the radio menu:



1. Press the **M** button to access the KME Radio Main Menu.



2. Press the **+** button to move to the next item in the main menu. Press the **-** button to move to the previous item in the main menu.



3. Press the **M** button again to select any item from the menu.

The radio will enter the main menu at the last changed item in the menu. If the menu has not been accessed since the last power cycle, the radio will bring up the first item in the menu list. Table 2 shows how the main menu items will appear in the KME- radio and the KME- radio. The flowchart in Figure 3 shows movement through the entire menu including all submenu items. **Error!**

Reference source not found. provides a complete description of all radio menu items.

Table 2 – KME Radio Main Menu Display

KME Main Menu	Description
REVISION	Software Version
KEYLOCK	
BACK LGHT	Backlight Adjust
CONTRAST	Display Contrast
SQUELCH	Squelch Adjust
TX POWER	
DISP KEY	
PHN CALL	Phone Calls
EXTALARM	Car Horn Alert
EXT SPKR	Internal/External Speaker
PUB ADDR	Public Address Speaker
KEY LOCK	System Change
PROFILE	

Figure 3 - Radio Menu Flowchart

SCAN OPERATION

The KME- mobile radio can be set up to scan (Monitor) up to 16 channels on the selected system. The scanned channels may be any frequency within the frequency band limits of the radio. If the radio picks up activity on one of the scanned channels, the radio will switch to the channel and allow the user to receive the call. When the call is done, the radio automatically switches back to the knob-selected channel.

When scan is turned ON, the radio scans all the channels in the scan list. Initially, the scan list is created when the radio is PC Programmed, but the KME radio allows the user to modify the scan list.

The scan list can also include a priority 1 channel and a priority 2 channel. In scan mode, channels defined as priority channels have precedence over non-priority channels. If a call on a priority 2 channel is received, the radio will drop a call while on a non-priority channel and switch to the priority channel to receive the call. If a call on a priority 1 channel is received, the radio will drop a call while on a non-priority channel or a priority 2 channel and then switch to the priority 1 channel to receive the call. Priority channels are also scanned more often than non-priority channels.

The following sections describe how to use the scan feature on the KME- mobile radio.

SCAN ON/OFF

- | | |
|---|--|
|  | 1. To turn the scan feature ON, press the SCAN button. |
| SCAN | 2. The SCAN icon should appear in the radio display. |
|  | 3. To turn the scan feature OFF, press the SCAN button again. |
| | 4. The SCAN icon should disappear from the radio display. |
-

To Add Channels To The Scan List



1. Press the **SCAN** button if necessary to turn scan OFF. The **SCAN** icon should not be visible in the display. The scan list cannot be modified while the radio is scanning.

2. The **SCAN** button is used in conjunction with the **+** button to add channels to the scan list as non-priority, priority 2 or priority 1.



3. Press and hold the **SCAN** button.



S

4. Press the **+** button once, the **S** icon appears and the channel is added to the scan list as a non-priority channel.



P2

5. Press the **+** button again (twice), the **P2** icon appears and the channel is added to the scan list as the priority 2 channel.



P1

6. Press the **+** button again (three times), the **P1** icon appears and the channel is added to the scan list as the priority 1 channel.

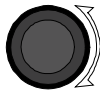


If you define a channel as priority 1 or priority 2, the radio will automatically switch the previously defined priority 1 or priority 2 channel to non-priority. The channel is not removed from the scan list.

To Remove Channels From The Scan List



1. Press the **SCAN** button if necessary to turn scan OFF. The **SCAN** icon should not be visible in the display. The scan list cannot be modified while the radio is scanning.



2. Using the channel knob, select the desired channel to remove from the scan list. If the channel is part of the scan list, the **S**, **P1** or **P2** icon will appear in the display when the channel is selected.



3. Press and hold the **SCAN** button.



4. Press and release the - button. The **S**, **P1** or **P2** icon will disappear from the display and the channel is removed from the scan list.

PHONE CALLS (DTMF)

DTMF operation is enabled on a per channel basis in the radio personality. Up to X phone numbers can be pre-programmed into the radio and recalled by the user. Radio operators equipped with a DTMF microphone can initiate a phone call to any number with the keypad on the microphone.

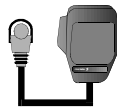
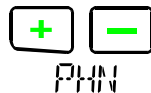
Initiating A Phone Call From Memory

1. Select the desired system and channel as described in the Basic Operation section on page 14. DTMF must be enabled on the channel.
-  2. Observe the TX/RX indicator for any activity on the channel. Never transmit when the green RX indicator is ON.
-  3. Press the **EMER** button to be sure there is no activity on the channel. Typically, if there is noise, there is no channel activity.
4. Remove the microphone from the hookswitch.
-  5. Press the **M** button. This will bring up the KME radio main menu.
-  6. Press the **+** or **-** buttons until the **PHN** menu item appears.
-  7. Press the **M** button to view the list of pre-programmed phone numbers (1-3).
-  8. Press the **+** or **-** buttons to scroll through the pre-programmed phone numbers (PHN 1 thru PHN 3).
-  9. When the desired phone call entry appears in the display, press and release the PTT button on the side of the microphone. The red TX indicator should light and the radio will initiate the phone call.

10. When the person answers, press PTT button to talk and release the PTT button to listen.

Initiating A Phone Call From The DTMF Microphone

By entering a new number from the DTMF microphone any of the 3 stored phone numbers can be temporarily changed. The new number does not change the pre-programmed number. The following procedure describes how to enter a phone number and initiate a phone call from the DTMF microphone:



1. Select the desired system and channel as described in the Basic Operation section on page 14. DTMF must be enabled on the channel.
2. Observe the TX/RX indicator for any activity on the channel.
3. Press the **EMER** button to be sure there is no activity on the channel. Typically, if there is noise, there is no channel activity.
4. Remove the microphone from the hookswitch.
5. Press the **M** button. This will bring up the KME radio main menu.
6. Press the **+** or **-** buttons until the **PHN** menu item appears.
7. Press the **M** button to view the list of pre-programmed phone entries (PHN 1 - PHN 3).
8. With any of the pre-programmed phone entries displayed, enter the new phone number from the DTMF mic. The digits will appear on the right and rotate left as new digits are entered. The maximum is 13 characters.
9. When you have finished entering the phone number, press and release the PTT button on the side of the microphone. The red TX indicator should light and the radio will initiate the phone call.
10. When the person answers, press PTT button to talk and release the PTT button to listen.

EMERGENCY OPERATION

Emergency signaling can be transmitted when operating in the conventional mode. Emergency signaling will transmit 5 times with a delay between each transmission. To send an emergency call on the selected conventional system and channel (or on an optionally pre-programmed conventional emergency system and channel), proceed as follows:

Press and hold the red  button for approximately one second (this time is programmable and, therefore, could be longer or shorter; check with the system administrator). The radio turns on the **TX** indicator and proceeds to transmit the pre-programmed emergency signaling sequence.

Emergency signaling is programmed to transmit in one of the following methods:

METHOD 1: Signaling is transmitted on the selected channel. If the channel is changed the emergency signaling will continue to be transmitted on the newly selected channel.

METHOD 2: Same as METHOD 1 but the radio will lock on to the currently selected channel. Any attempts to change the system or channel will be disabled.

METHOD 3: Signaling is transmitted on a pre-programmed conventional emergency system and channel regardless of the selected channel. In this case the selected channel is available for voice transmission and the radio will periodically change to the pre-programmed emergency system and channel to send the emergency signaling and then change back to the selected channel.

METHOD 4: Same as METHOD 3 but the radio will lock on to the pre-programmed emergency system and channel. Any attempts to change the system or channel will be disabled.

The emergency state can be cleared by turning the radio OFF and then back ON.

Receiving A Call



12345

ID 12345

1. When the radio receives an Emergency call:

- The green TX/RX indicator will turn ON to indicate the radio is receiving a carrier.
- The radio display will change. The radio will alternate between displaying the selected channel and the ID of the calling radio. The radio will display “**ID 12345**”, where “12345” is the radio ID.
- The radio displays the ID of all Emergency calls decoded. When Channel Guard is enabled on the channel, the user will only hear calls intended for the user. When Channel Guard is disabled, the user will hear all calls.



2. To respond to the call, remove the microphone from the hookswitch. Hold the microphone approximately 2 inches from your mouth, press the PTT button on the side of the microphone and speak in the microphone.
3. There are three ways to clear the call from the display:
 - Wait, the display will timeout and return to the normal channel display.
 - Select another channel.
 - Press the **Push-To-Talk, EMER, M** or **SCAN** button.

Transmitting A Call



1. Select the proper system and channel as described in the Basic Operation on page 14.



2. Observe the TX/RX indicator for any activity on the channel. Never transmit with the green RX indicator ON.



3. Press and hold the **EMER** button for at least 1 second to Monitor the channel for activity. Noise will be heard if there is no activity on the channel. This will also help in setting the volume level to the desired level.



4. Remove the microphone from the hookswitch. Holding the microphone approximately 2 inches from your mouth, press the PTT button on the side of the microphone and speak in the microphone.
5. When you have finished speaking, release the PTT button and wait for a reply.

Receiving An Emergency Call

1. When the radio receives an emergency call:



12345

EM 12345

- The green TX/RX indicator will turn ON to indicate the radio is receiving a carrier.
- A single tone will sound to indicate the radio has received an emergency call.
- The radio display “EM xxxxx,” where xxxxx is the calling radio ID. The display will alternate between the selected channel and the ID of the calling radio,.
- The user will hear the receive audio in the radio speaker. Emergency transmissions are always sent with Channel Guard.



2. To respond to the call, remove the microphone from the hookswitch. Hold the microphone approximately 2 inches from your mouth, press the PTT button on the side of the microphone and speak in the microphone.
3. There are three ways to clear an emergency call from the display:
 - Wait, the display will timeout and return to the normal channel display.
 - Select another channel.
 - Press the **Push-To-Talk, EMER, M** or **SCAN** button.

Transmitting An Emergency Call

Emergency transmission can be programmed to go out on the selected channel or a pre-programmed emergency channel. To send an emergency, simply press the emergency button for approximately 1 second. The radio will send out the radio ID and the emergency message.

TYPE 99 OPERATION

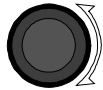
Type 99 is Ericsson's proprietary method for in-band, two-tone sequential signaling. It is a conventional signaling protocol used to control the muting and unmuting of a radio. This signaling is commonly used for selective calling of individual units or groups of units in a conventional system. Type 99 is typically used in paging operations, where a dispatcher is able to select which radio or radios are to be selectively called.

If Type 99 has been setup, the radio can decode individual, group and supergroup paging calls. When the radio decodes an appropriate Type 99 decode sequence, an alert sounds, the PG icon flashes and the radio enters the Monitor mode.

Receiving An Individual, Group or Supergroup Call

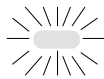


1. Turn scan OFF. The radio cannot receive selective calls with scan ON. When scan is enabled, the radio automatically switches to the Monitor Mode and Type 99 decode is disabled.



2. Select the proper system and channel as described in the Basic Operation on page 14.

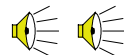
3. When the radio receives a selective call:



- The green TX/RX indicator will turn ON to indicate the radio is receiving a carrier.



- For an individual call, a single ½ second tone will sound to indicate the call is an individual call.



For a group call, two short tones will sound to indicate the call is a group call.



For a supergroup call, three short tones will sound to indicate the call is a supergroup call.

PG



- The radio switches to the Monitor mode and the PG icon flashes.



4. To respond to the call, remove the microphone from the hookswitch. Hold the microphone approximately 2 inches from your mouth, press the PTT button on the side of the microphone and speak in the microphone.
5. To end the call and return to the Selective Mode, press the EMER button. The radio will remain in the Monitor Mode and the PG icon will continue to flash until the user presses the EMER button.



At this point in the menu, radios equipped with a DTMF microphone may enter any radio ID from the DTMF keypad.



1. When the desired individual ID or name appears in the display, press the PTT button on the side of the microphone and speak in the microphone. The red TX indicator should light.
2. When you have finished speaking, release the PTT and wait for a response (if expected). If your radio is programmed to receive an individual acknowledgement and does not receive an acknowledgement, the radio will display **FAIL**.
3. When the call is complete, press the **EMER** button and the radio will return to the Selective Mode.

Transmitting A Status Message



1. Turn scan OFF. The radio cannot transmit a status message call with scan ON. When scan is turned ON, the encoder is disabled and the radio is in the Monitor mode.



2. Select the desired system and channel as described in the Basic Operation section on page 14.



3. Observe the TX/RX indicator for any activity on the channel. Never transmit with the green RX indicator light ON.

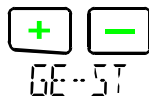


4. Press and hold the **EMER** button for at least 1 second to Monitor the channel for activity. Noise will be heard if there is no activity on the channel. This will also help in setting the volume level to the desired level.

5. Remove the microphone from the hookswitch.



6. Press the **M** button. This will bring up the KME radio main menu.



7. Press the **+** or **-** buttons until the **XXXX** menu item appears.



8. Press the **M** button to view the submenu items.



9. Press the **+** or **-** buttons to scroll through the submenu items.



10. When **STAT** appears in the display, press the **M** button to view list of preprogrammed individual calls.

11. Press the **+** or **-** buttons to scroll through the list of preprogrammed individual calls. For KME- radios, this list will consist of the radio ID for each individual call as defined in the radio personality. For KME- radios, this list will consist of the individual name for each individual call as defined in the radio personality.



At this point in the menu, radios equipped with a DTMF microphone may enter any radio ID from the DTMF keypad.



12. When the desired individual ID or name appears in the display, press the PTT button on the side of the microphone and speak in the microphone. The red TX indicator should light.
13. When you have finished speaking, release the PTT and wait for a response (if expected).



14. When the call is complete, press the **EMER** button and the radio will return to the Selective Mode.

Emergency Transmissions

The KME radio can be programmed and installed to send emergency signals. To initiate an emergency call, the Option Cable (KRD 103 133/45) must be installed with a customer supplied emergency button or switch. See the Installation Manual LZT 123 4452 for more information.

Emergency signaling is defined in the personality. The programmable features related to emergency signaling are described below:

- ❖ The emergency can be programmed to transmit on the selected channel, or on a pre-programmed Home/Emergency Channel.
- ❖ The emergency can be programmed with or without an acknowledgement from the base station. If an acknowledgement is required, the radio will display **FAIL** if the acknowledgement is not received.
- ❖ The KME radio can also be programmed to send a silent emergency. In a silent emergency, the radio transmits the emergency without any indication of a transmission. The TX indicator does not light and all received calls are muted until the user presses the PTT button. The received calls are muted to keep from endangering the user that declared the silent emergency.

To Send An Emergency

Press and hold the emergency button for at least 1 second.

Base Station Calls

In an Enhanced environment, the radio is capable of receiving several unique calls from the base station dispatcher. These calls do not require a response from the user. The following sections describe each type of call.

Interrogate Radio

The interrogate feature allows the dispatch base station to validate the participation of a radio Monitoring the system. The base station sends out a message to a particular radio that includes the radio ID and the interrogate message. If the radio receives a call that includes its own ID and the interrogate message, the radio responds by transmitting its own radio ID back to the base station. The radio receives the call and

responds (transmits) back to the base station without providing any indication to the radio user.

Disable Radio

The radio disable feature allows the dispatch base station to disable any radio Monitoring the system. The base station sends out a message to a particular radio that includes the radio ID and disable message. If the radio receives a call that includes its own ID and the disable message, the radio responds by transmitting its own radio ID back to the base station. After responding to the base station, the radio enters a disabled or kill mode. In the disable mode, the radio will receive calls, but no audio is heard at the speaker. The Push-To-Talk button is also disabled. The radio is disabled for all channels in the system. The radio will only respond to an interrogate call or radio enable call.

Enable Radio

The radio enable feature allows the dispatch base station to reactivate or enable any radio Monitoring the system that had previously been disabled. The base station transmits a call to a particular radio that includes the radio ID and the enable message. If the radio receives a call that includes the its own radio ID and the enable message, the radio responds by transmitting its own radio ID back to the base station. After responding to the base station, the radio exits the disabled or kill mode.

Reset Radios

The reset radio feature allows the base station to reset a particular radio on the system to the selective state. The base station sends out a message to a particular radio that includes the radio ID and the reset message. If the radio receives a call that includes its own ID and the radio reset message, the radio responds by resetting the decoder back to the selective state. The mobile radio does not send an acknowledgement back to the base station.