SABER SI™
Portable Radios

FLASHport.

6881074C10

68P81074C10-0

MOTOROLA

operating instructions

MOTOROLA

1 | SABER SI™ Portable Radios

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3 | Introduction

Welcome to the Motorola SABER SI Portable Radio. SABER SI Radios are sophisticated, state-of-the-art communication units. Pioneering the latest technology in radio electronics, Motorola SABER SI radios provide features that were once only available in more expensive radios. Intelligent and flexible software increases the radio's capability, and permits many of the radio's features to be customized just for you.

Inspect the shipping carton for any signs of damage. Remove and check the contents to be sure that all ordered items have been shipped. Inspect all items thoroughly. If any items have been damaged during transit, report the damage to the shipping company immediately.

Radio Packing Box Contents

    Radio
    Antenna
    Nickel-Cadmium Battery
    Belt Clip
    Help Card
    Radio Information Sheet
    Operating Instructions Manual
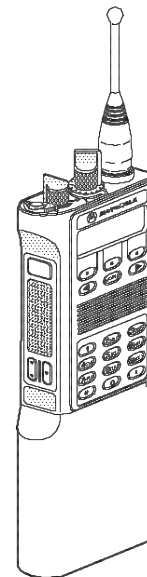
Throughout the text in this publication, you will notice the use of **WARNINGS**, **CAUTIONS**, and **Notes**. These notations are used to emphasize that safety hazards exist, and care must be taken or observed.

Basic Radio Features

Inspection and Unpacking

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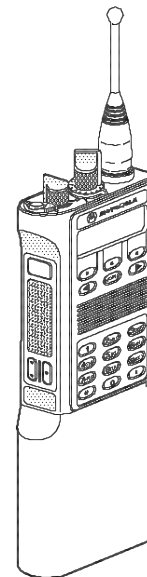
Warnings, Cautions, and Notes

WARNING: An operational procedure, practice, or condition, etc., which may result in injury or death if not carefully observed.

CAUTION: An operational procedure, practice, or condition, etc., which may result in damage to the equipment if not carefully observed.

4 | Getting Started

Radio/Antenna Identification

An information label is attached to the back of your radio (chassis), just under the battery contacts. A radio model number is identified on this label. A typical model number might be HO3HEH7PW9AN. The fourth position of the model number (in this case "H") identifies the operating frequency band of the radio. The Radio Operating-Frequency Chart lists all fourth-position alpha characters and corresponding frequency band.

Radio Operating-Frequency Chart

Fourth-position Character	Frequency Band
U	806-870 MHz

Antennas are frequency sensitive and are color coded according to the frequency range of the antenna. The color code indicator is the insulator in the center of the base of the antenna. The following illustrations and chart will help identify the antenna, antenna frequency range, and corresponding color code.

Refer to the **Radio Operating-Frequency Chart** and the **Antenna Identification Chart** to ensure that the match between your radio and antenna is correct.
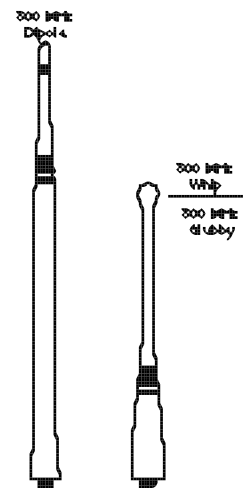
Antenna Identification Chart

Antenna	Approx. Length		Insulator Color Code	Frequency Range
	In.	MM		
800 MHz Stubby Quarterwave	3.3	83	WHITE	806-941 MHz
800 MHz Dipole	8	200	RED	806-870 MHz
800 MHz Whip	7	175	RED	806-870 MHz

Antenna Installation

Screw the threaded end of the antenna into the antenna receptacle located on

Antennas

800 MHz
Dipole

800 MHz
Whip

800 MHz
Stubby
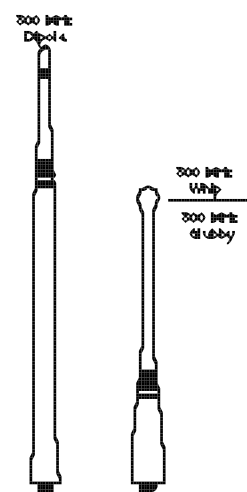
5 | Getting Started (cont.)

Note: Installation and removal of the belt clip assembly should be done with the battery removed from the radio.

Installing the Belt Clip

1. Looking at the back of the radio, insert the top (hooked) end of the belt clip assembly into the slot at the top of the radio. Make sure that the clip's hook is centered and seated in the slot.

2. Align and center the bottom end of the belt clip in the slot between the radio housing and the baseplate.

3. Press the bottom of the belt clip into the slot until it "clicks" into place. Pull outward on the bottom of the clip to ensure that it is secured to the radio.

Removing the Belt Clip

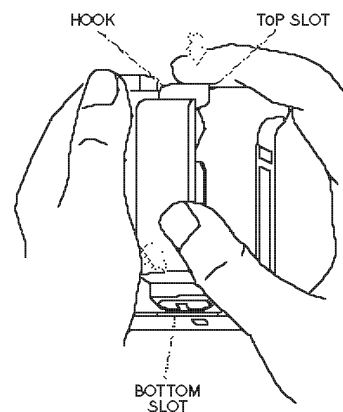1. Looking at the back of the radio, insert a thin, flat-bladed screwdriver into the belt clip access hole in the baseplate at an angle of about 30°, and engage the locking tab on the belt clip.

2. Push firmly inward and upward on the locking tab until it is disengaged from the access hole.

3. Continue pushing on the tab until it can be seen between the radio housing and the baseplate. If necessary, reposition the screwdriver and push on the tab again to free it from the hole.

4. Lift the belt clip up and away from the radio.

HOOK   TOP SLOT

BOTTOM SLOT

Insert
MAEPF-20183-0

Belt Clip Installation and Removal

HOOK   TOP SLOT

BOTTOM
SLOT
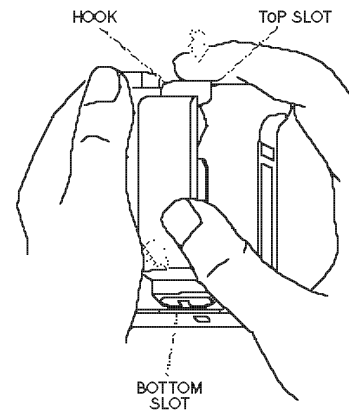
6 | **Getting Started (cont.)**

1. Make sure your radio is turned off.

2. Hold the radio in your hand and slide the battery latch toward the top of the radio with your thumb.

3. While holding the battery latch, slide the battery pack away from you until it clears the radio.

4. To replace the battery, hold the radio in one hand. With the other hand, slide the battery onto the radio's baseplate and toward the latch until it "clicks" into place.

BATTERY

REMOVAL
DIRECTION

INSERTION
DIRECTION

BASEPLATE
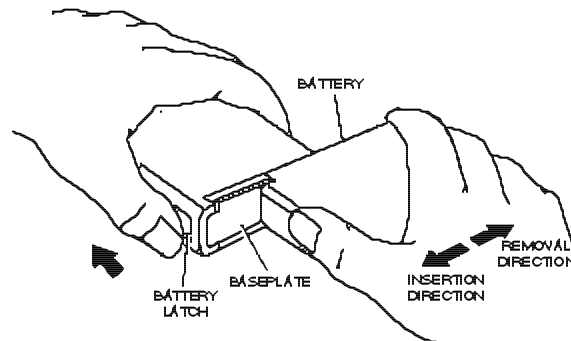
BATTERY
LATCH

Note: Batteries are shipped uncharged; they must be charged before use.
(See "Batteries and Accessories" section.)

Battery Installation or Replacement

WARNING: *To avoid a possible explosion:*

Do Not replace the battery in a hazardous atmosphere.

Do Not discard batteries in a fire.

BATTERY

REMOVAL
DIRECTION

INSERTION
DIRECTION

BASEPLATE

BATTERY
LATCH

7 | Getting Started (cont.)

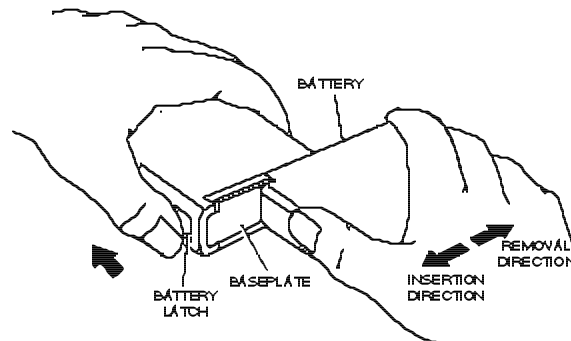The accessory connector cover protects the accessory connector. The cover should be installed whenever the radio is not being used with an accessory.

Note: The radio must be turned off when connecting an accessory to the accessory connector. Failure to do so may cause the radio to detect the wrong option. This condition can be corrected by turning the radio off, then on again.

Removing the Cover

1. Loosen the cover's Phillips-head screw.

2. Lift the cover up and away from the radio and store it in a convenient place.
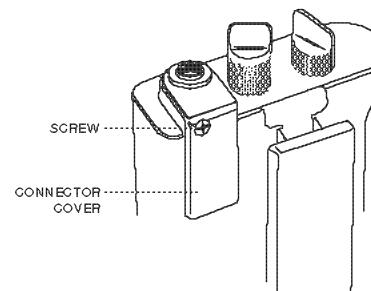
Installing the Cover

1. Looking at the back of the radio, insert the tab on the cover into the slot just below the accessory connector.

2. Pivot the cover toward the radio until the connector is completely covered and the cover's Phillip's-head screw mates with the threaded hole on the connector.

3. Snugly tighten the screw (0.3 in. lb.) to hold the cover in place.
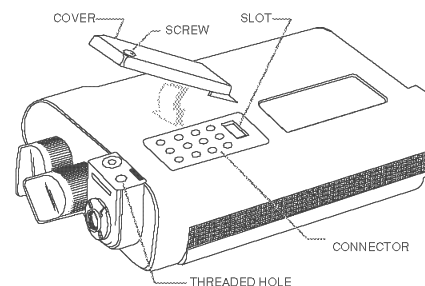
   DO NOT OVERTIGHTEN THE SCREW!

Accessory Connector Cover

SCREW

CONNECTOR
COVER

COVER   SCREW   SLOT

CONNECTOR

THREADED HOLE
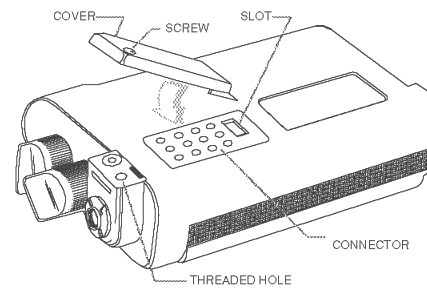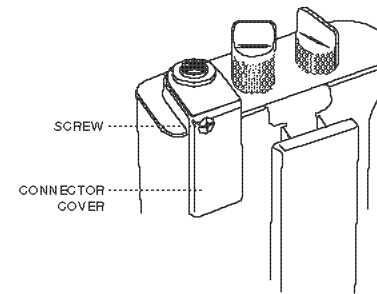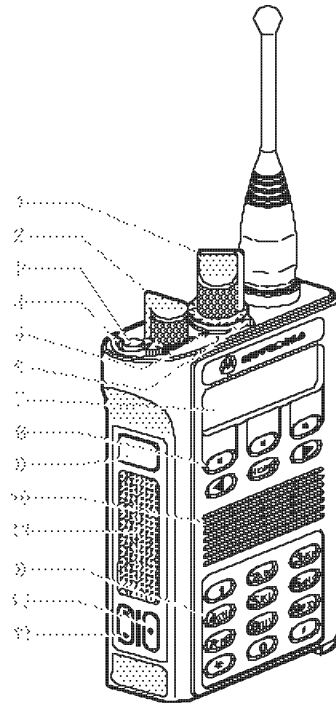
Selects the operating system/mode (all radios) or the dynamic regrouping position (trunked radios with dynamic regrouping only).

Turns the radio on and off and adjusts the volume level.

Programmable. Programmed at shipment for emergency.

Programmable.

Indicates the radio operating status; green/red light-emitting diode (LED).

Programmable. Programmed at shipment for scan on/off.

Provides visual information about many of the radio's features.

Provides control and data interface for many of the radio's features.

Programmable. Programmed at shipment for monitor.
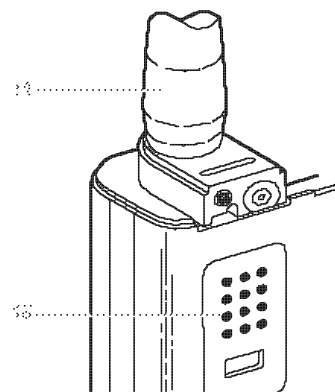
Engages the transmitter and puts the radio in the transmit mode.

Programmable. Programmed at shipment for display light.

Programmable.

Whip, dipole, or stubby (quarter-wave); with threaded base.
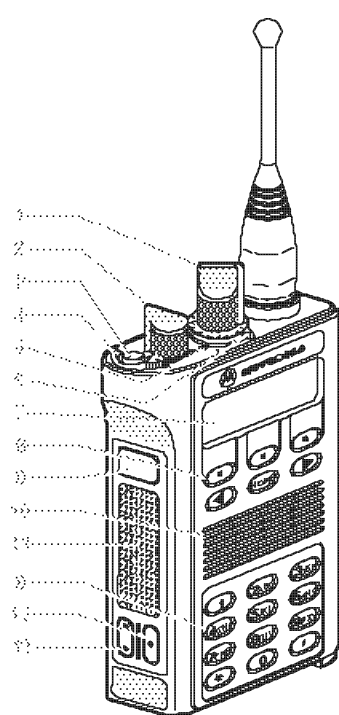
Controls, Switches,
Indicators, and Connectors

1   16-Position Mode Selector Switch

2   On/Off/Volume Switch

3   Top Programmable Button

4   Two-Position Programmable Switch

5   Bicolor Indicator LED

6   Two-Position (A/B) Switch

7   Two-Line x 14-Character Display

8   Keypad

9   Programmable Side Button 1

10   Speaker/Microphone
11   Push-To-Talk (PTT) Switch

12   Programmable Side Button 2

13   Programmable Side Button 3

14   Antenna

15   Weather-Sealed Accessory Connector

The SABER SI radio has a 28-character, two-line liquid-crystal display (LCD), which displays either alphanumeric messages or feature information. Above the character displays are eight status annunciators that indicate some of the radio's operating conditions

Display Light

If poor light conditions make the display difficult to read, turn on the radio's display backlight by pressing the light button (normally side button 2). This light will remain on for a preprogrammed time period before it turns off automatically, or you can turn it off immediately by pressing the light button again. If, while the light is on, any key or button is pressed (except for the monitor button and the PTT switch), any knob is turned, or any toggle switch is moved, the light will remain on for an additional time period.
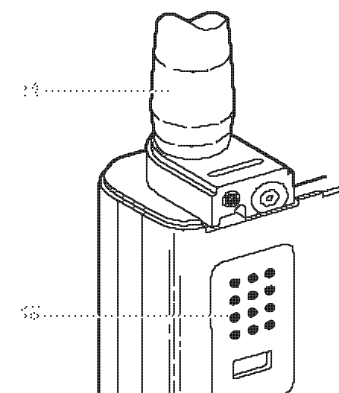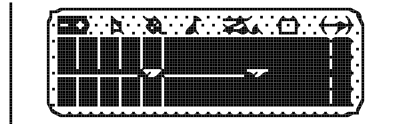
Status Annunciators

The status annunciators indicate the status of certain radio functions:

▣   Flashes when the battery is low.

▷   Indicates when the active conventional mode is being monitored in the carrier squelch mode; ON = BEING MONITORED; OFF = NOT BEING MONITORED.

♪   Flashes when a call, page, or phone call is received.

≥   Indicates when the radio is scanning; ON = SCANNING; OFF = NOT SCANNING.

≥.   The presence of a dot along with the scan annunciator indicates the scanning of a priority mode; FLASHING DOT = PRIORITY 1; SOLID DOT = PRIORITY 2.

□   Indicates when the radio is in the programming or view mode; ON SOLID = IN VIEW MODE; FLASHING = IN PROGRAMMING MODE; OFF = NOT IN PROGRAMMING OR VIEW MODE.

↦   Indicates whether you are talking directly to another radio (talkaround), or through a repeater; ON = DIRECT; OFF = REPEATER.

Display
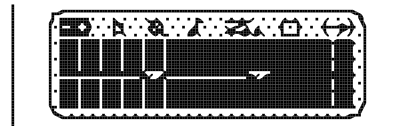
- **Battery Status (▱) –**
- **Carrier Squelch (▷) –**

- **Call Received (♪) –**
- **Scan (⇄) –**

- **Priority Scan (⇄·) –**

- **Programming/View Mode (▭) –**

- **Direct (⊢) –**
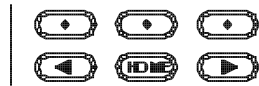
The SABER SI radio's 18-key keypad controls or inputs data to many of the radio's features. The keypad's top three (•) keys access many of these features. The second row of three keys includes the left arrow key, the **HOME** key, and the right arrow key. In addition, the keypad's lower 12 keys are arranged, and function, like a standard telephone keypad.
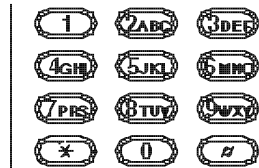
Selecting a Feature

A unique feature of the SABER SI radio is its use of the display to give you quick access to many of the radio's features without having to have a dedicated mechanical key for each feature.

The names of the features (**CALL**, **MUTE**, etc.) are shown on the display, three at a time, with key-like outlines to make them look like keys.

Selection of features is controlled by the three (•) keys directly below the feature names: the left key controls the left feature, the middle key controls the middle feature, and the right key controls the right feature.

Left and Right Arrow Keys

The left (◀) and right (▶) arrow keys are used to scroll the display forward or backward through the radio's features and lists. There is no end point to the list, so if you continue to scroll in one direction, the display will "wrap around" back to the beginning of the list. If you hold either key down, the display will scroll at a faster rate until the key is released.

The left arrow key is also used for editing when you are entering information manually from the keypad. Pressing the left arrow key will backspace, and erase the display, one character at a time. If you have erased all the digits, an additional press of the left arrow key will return the display to the preprogrammed list.

HOME Key

The **HOME** key will always return you to the home (default) display. In most cases, this is the current mode. If you are using a feature that requires it, pressing the **HOME** key will also cause information to be saved in memory before going to the home display. Some radio features wi_ automatica_y go to the home display when

Keypad
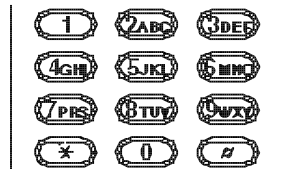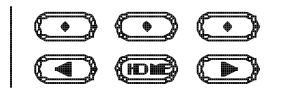
The SABER SI radio generates a number of audible tones to indicate radio operating conditions:

A low-battery condition is indicated by a high-pitched, cricket-like "chirp-chirp" when the PTT switch is released following a transmission.

A short, high-pitched tone when the radio is first turned on indicates that the radio has passed its power-up self test and is ready for use.

A short, low-pitched tone when the radio is first turned on indicates that the radio has failed its power-up self test and is not ready for use. Contact your service representative for service.

If you press the PTT switch while tuned to a "receive-only" mode, you will hear a continuous, low-pitched alert tone, indicating that no transmission is possible on this mode. This tone will continue until the PTT switch is released.

If you press the PTT switch while the mode is busy, you will hear a continuous, low-pitched alert tone, indicating that no transmission is possible on this mode. This tone will continue until the PTT switch is released.

A continuous, low-pitched tone is heard when an invalid or unprogrammed operation is attempted on the radio.

A short, medium-pitched tone when a keypad key is pressed indicates that the key press was accepted.

A short, low-pitched tone when a keypad key is pressed indicates that the key press was rejected.

A short, medium-pitched tone when the emergency button is pressed indicates that the radio has entered emergency operation.

A continuous, medium-pitched tone when the radio is in emergency operation indicates that the radio is exiting emergency operation.
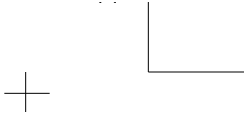
A faint "beeping" tone every ten seconds indicates that the radio is in failsoft operation.

Your radio's time-out timer limits the length of your transmission time. When you are pressing the PTT switch (transmitting), a short, low-pitched warning tone will sound four seconds before the allotted time will expire.

If you hold down the PTT switch longer than the time-out timer's allotted time, a continuous, low-pitched tone will sound, indicating that your transmission has been cut off. This tone will continue until the PTT switch is released.

A "bah-bah-bah-bah" tone when telephone interconnect is accessed indicates that all available modes are busy and the radio is in queue for the next available phone line.

A group of four medium-pitched tones every five seconds indicates that your radio has received a Call Alert page.

Alert Tone Indications

- Low Battery –

- Successful Power-Up –

- Unsuccessful Power-Up –

- Transmit on Receive-Only Mode –

- Transmit Inhibit on Busy Mode –

- Invalid Mode –

- Valid (Good) Key Press –

- Invalid (Bad) Key Press –

- Emergency Alarm Entry –

- Emergency Alarm/Call Exit –

- Failsoft (Trunked Systems Only) –

- Time-Out Timer Warning –

- Time-Out Timer Timed-Out –

- Phone Busy –

- Call Alert™ (Page) Received –

A group of two medium-pitched tones indicates that your radio has received a Private Conversation call.

A "bah-bah-bah-bah" tone when a trunked system is accessed indicates that all available modes are busy and the radio is in queue for the next available mode.

A group of three medium-pitched tones (di-di-dit) indicates that a talkgroup is now available for your previously requested transmission.

The indicator LED on top of the radio indicates radio operating conditions:

A.   With PTT switch pressed (radio transmitting)

Continuous red LED—Normal transmission

LED unlit—Radio is not transmitting

Blinking red light—Low battery

B.   With PTT switch released (radio receiving)

Blinking red light—Mode busy (conventional modes only)

Blinking green light—Receipt of a telephone call, Private Conversation call, or Call Alert page

The time-out timer feature limits the amount of time that you can continuously transmit on a mode. If you hold down the PTT switch longer than the allotted time:

A pre-alert warning tone sounds four seconds before the termination of your transmission to warn you that your conversation is about to be cut off.

Four seconds later, your transmission is terminated, and an alert tone sounds until the PTT is released.

Your SABER SI radio is capable of both conventional and trunked operation:

During conventional operation, your SABER SI radio performs like a conventional two-way radio. That is, you must monitor the selected mode before transmitting (by checking the LED for mode busy [blinks red when busy] and listening for the "mode busy" tone, or by pressing the monitor button) to ensure that you are observing standard two-way radio transmission protocol by not "talking over" someone who is transmitting.

During trunked operation, your SABER SI radio offers a number of advantages, including fast system access, enhanced privacy, and ease of operation. In a trunked system, there is no need for you to monitor a mode before transmitting.

Alert Tone Indications (cont.)

- **Private Conversation™ Call Received –**

- **Trunked System Busy (Trunked Systems Only) –**

- **Call Back (Trunked Systems Only) –**

LED Indications

-
-
-

-
-

Time-Out Timer

-

-

Conventional or Trunked Radio Operation

- **Conventional Operation –**

- **Trunked Operation –**

13 | Basic Radio Operation

1. Turn the radio on by rotating the volume control clockwise. The radio goes through a power-up self check and, if it passes the check, the display momentarily shows "**Self Test**." A good-power-up, high-pitched tone sounds to indicate that the radio has passed the self check.

   If the radio fails the self check, the display shows "**ERROR XX/XX**" (where XX/XX is alphanumeric), accompanied by a bad-power-up, low-pitched tone. Turn the radio off, check the battery, and turn the radio back on. If the radio still does not pass the self check, a problem exists in the radio. Contact your nearest Motorola Service Shop.

   Note: The power-up self check verifies that the radio's microprocessor-based systems are working, but it does not check all of the rf components, nor does it check the operation of all customer-specific features. Motorola recommends that the functionality of the radio be periodically checked by an authorized Motorola service shop.

2. Turn the radio off by rotating the volume control fully counterclockwise until you hear a click.

Turn the radio on, momentarily press the monitor button (typically side button 1) and listen for activity. To put the radio in permanent monitor operation (Private-Line® [PL] defeat), press and hold the monitor button for five seconds (programmable time). The radio sounds a short, high-pitched tone as it enters the permanent-monitor mode. To return the radio to its original squelch state, tap the monitor button again or press the PTT switch.
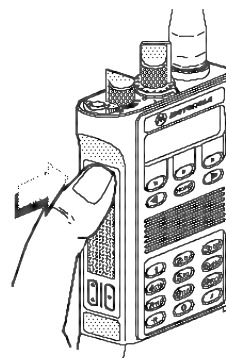
Radio On/Off; Power-Up

```
┌─────────────────┐
│                 │
│    S e l f      │
│    T e s t      │
│                 │
└─────────────────┘
```

```
┌─────────────────┐
│                 │
│  ERROR XX/XX    │
│                 │
└─────────────────┘
```

Monitoring (Conventional Modes Only)
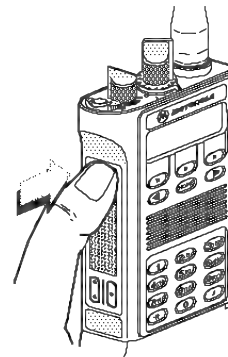
14 | Basic Radio Operation (cont.)
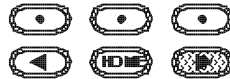
A *mode* is a channel or talkgroup. A *zone* is a grouping of modes that can be selected via the keypad. Before you send or receive, set the radio to the desired zone and mode. To do this:

1. Turn the radio on and press the right arrow key (▶) until "**ZONE**" appears on the display.

2. Press the key below "**ZONE**." The current zone name will flash on the display; the mode name will stay on solid.
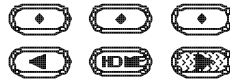
3a. Press the right arrow key (▶) until the desired zone name appears on the display.

or

3b. Enter the number (1 through 16) of the desired zone. The new zone name appears, flashing.

Selecting a Zone and Mode

PLANT POLICE
ZONE MUTE CALL

▶

POLICE

POLICE

▶
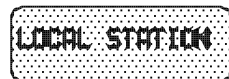
POLICE
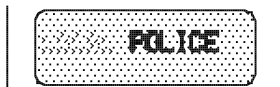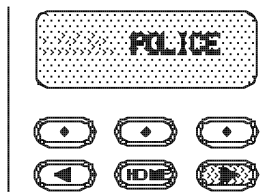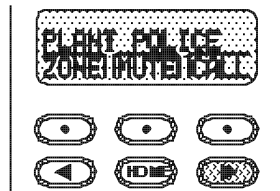
15 | Basic Radio Operation (cont.)

4. Press the **HOME** key or the PTT switch, or turn the mode selector switch, to store the displayed zone. This will be the new "home" (default) zone. If you pressed the PTT switch, you will also transmit on the displayed mode (see "Transmitting").

5. Turn the mode selector switch to the desired mode. The display shows the selected mode's name.
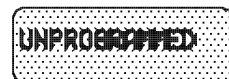
Notes:

If the selected mode is unprogrammed, the display will show "**UNPROGRAMMED**," and you will hear an invalid-mode tone until a valid programmed mode is selected.

You can use the mode selector switch at any time to select the mode.

LOCAL STATION

UNPROGRAMMED
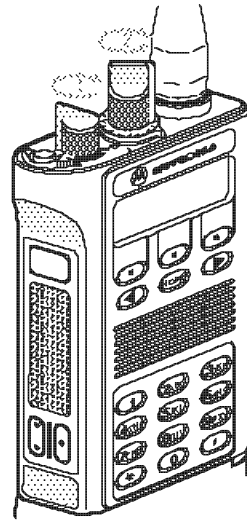
Conventional Modes

1. Turn the radio on and select the desired zone and mode (see "Selecting a Zone and Mode").

2. Listen until you hear a transmission, then adjust the volume control for a comfortable listening level.

    Or, if a button is programmed for "volume set," press this button and adjust the volume to a comfortable listening level.

    Note: The squelch opening level setting may be reprogrammed at an authorized service facility.

3. Your radio is now set to receive on the selected mode.

4. Refer to the Coded Squelch paragraph of the "General Radio Features Operation" section for Tone Private-Line® (PL), Digital Private-Line™ (DPL) operation.

    Note: A mode-busy feature is available; the red LED will blink when your radio is receiving to indicate that the mode is busy.

Trunked Systems

1. Turn the radio on and select the desired zone and mode (see "Selecting a Zone and Mode").

2. Listen until you hear a transmission, then adjust the volume control for a comfortable listening level.

    Or, if a button is programmed for "volume set," press this button and adjust the volume to a comfortable listening level.

3. Your radio is now set to receive on the selected zone and mode.

Receiving
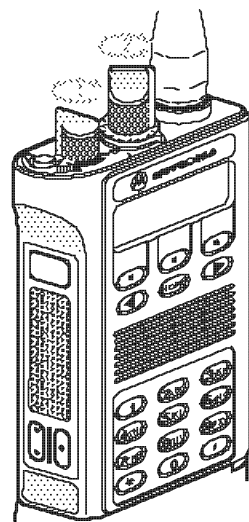
17 | Basic Radio Operation (cont.)

Conventional Modes

1. Turn the radio on and select the desired zone and mode (see "Selecting a Zone and Mode").

2. Listen for a transmission and adjust the volume control for a comfortable listening level.

    Or, if a button is programmed for "volume set," press this button and adjust the volume to a comfortable listening level.

3. Do not interrupt another user. If the mode on which you are transmitting is programmed to receive PL, ensure that the mode is not in use by momentarily pressing the monitor button to listen for activity. If the "mode busy" feature is enabled, a blinking red LED on receive (PTT released) will indicate that the mode is currently busy and you should not transmit.
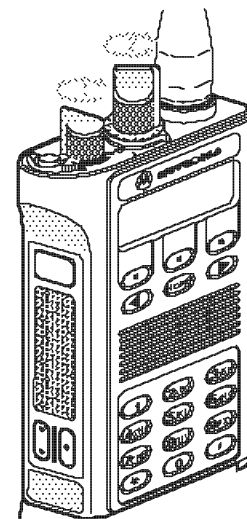
4. Press and hold the PTT switch on the side of the radio and speak slowly and clearly into the microphone area. The red LED will light continuously while the radio is transmitting. When you have finished talking (transmitting), release the PTT to listen (receive).

    Notes:

    If you try to transmit on a mode that is programmed for receive only, an invalid-mode tone will sound until you release the PTT switch.
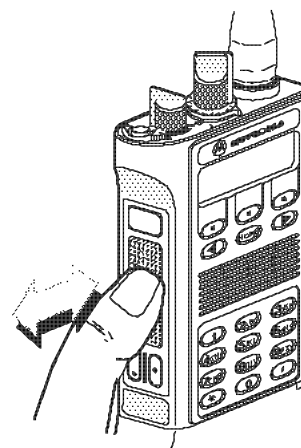
Transmitting
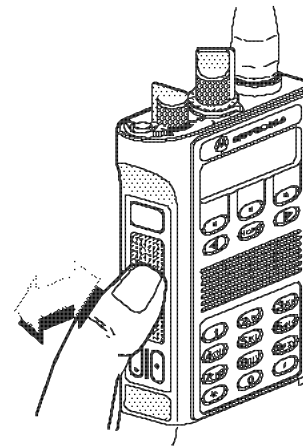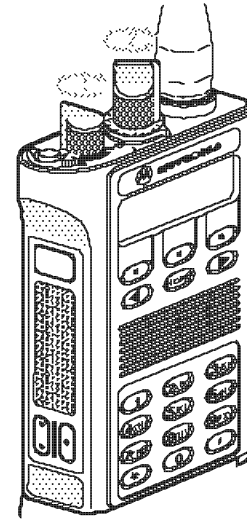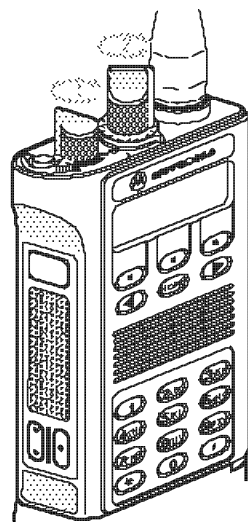
Trunked Systems

1. Turn the radio on and select the desired trunked zone and mode (see "Selecting a Zone and Mode").
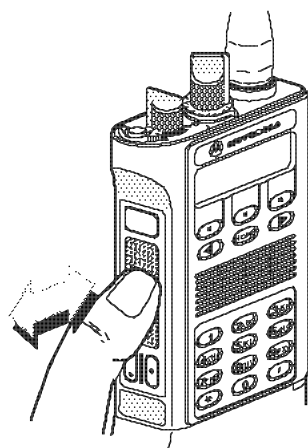
2. Press and hold the PTT switch on the side of the radio and speak slowly and clearly into the microphone area. The red LED will be lit while the radio is transmitting. When your transmission is completed, release the PTT to listen.

Notes:

If you hear a busy signal (a low-frequency "bah-bah-bah-bah"), release the PTT switch and wait for a call-back tone (sounds like "di-di-dit"). When you hear the call-back tone you will have three seconds to press the PTT switch, allowing you to make your call without getting another busy signal.

If you hear a continuous low-pitched talk-prohibit tone when the you press the PTT switch, transmission is not possible. The radio may be out of range.

If the battery voltage falls below the low-voltage level, the radio will sound an alert tone to indicate a ow-battery condition. This tone wi be emitted when
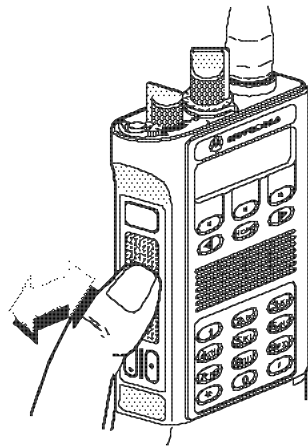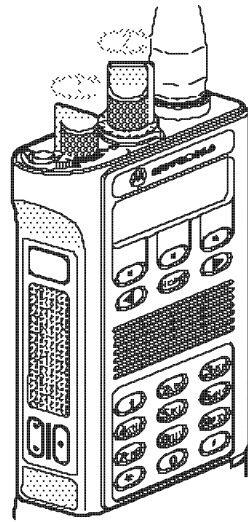
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Low-Battery Alert

Tone Private-Line® (PL), Digital Private-Line™ (DPL), and carrier squelch operations are all available in the same radio on a per-mode basis. When in carrier squelch operation, all traffic on the mode is heard. When in PL or DPL operation, your radio responds to only those messages intended for you. When this feature is mode-slaved, PL, DPL, or carrier squelch is programmed to each mode, and you need not move any switches for activation. Alternatively, this feature can be programmed to the A/B switch: carrier squelch operation in one switch position, and PL or DPL operation in another switch position.

Whenever the radio is operating in carrier squelch, the display will show the carrier-squelch annunciator.

Pressing the top emergency button (for radios with emergency operation) will send out an emergency signal that takes precedence over any other signalling activity in progress. This emergency signal can take two forms: emergency alarm and emergency call. The SABER SI radio can have either or both signal types enabled.

The *emergency alarm* feature sends a data transmission on the trunked control mode to alert the dispatcher to an emergency condition and identify the unit sending the emergency signal.

Emergency call (radios with trunked emergency operation only) is a type of dispatch operation which gives your radio priority access to modes.

"Emergency" signals a critical situation. It should never be used for any other reason.

Coded Squelch Operation

Emergency Operation

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Sending an Emergency Alarm

1. Press and hold the emergency button (the length of button press is RSS programmable) until the LED lights solid red and the display alternates between showing "**EMERGENCY**" and the current zone and mode. A short, medium-pitched emergency tone sounds.

2. When the trunked emergency alarm is acknowledged by the central controller, the radio sounds four beeps and the alarm ends. The radio returns to normal operation or, if enabled in your radio (trunked emergency call systems only), enters at step 3 of "Sending an Emergency Call." While in emergency call operation, subsequent presses of the emergency button will reinitiate the emergency alarm sequence.

Sending a Silent Emergency Alarm

In radios with the silent emergency alarm option enabled, pressing the emergency button sends an emergency signal to the dispatcher. During the emergency alarm procedure: the LED will not light, tones will not be heard, and the display will not change.

The audio will be muted (turned off), and will remain so until you exit the emergency state.

Cancelling an Emergency Alarm

Press the emergency button for more than 1 1/2 seconds (programmable); a medium-pitched emergency-exit tone sounds until the button is released and the radio returns to normal operation.

The alarm will also be cancelled (without emergency-exit tone) by:

pressing the PTT switch (see the note below),

turning the radio off, or

receiving an acknowledge from the dispatcher.

Note: Pressing the PTT switch while the radio is in *emergency alarm* operation will place the radio in *emergency call* operation (see step 3 of "Sending an Emergency Ca...")

EMERGENCY
ZONE1 MUTE] CALL

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21 | General Radio Features Operation (cont.)

Sending an Emergency Call (Radios With Trunked Emergency Call Operation Only)

1. Press the emergency button. The LED lights solid red, the top line of the display alternates between showing "**EMERGENCY**" and the current trunked zone and mode, and a short, medium-pitched emergency tone sounds.

2. Press the PTT switch to request a priority mode assignment in the trunked system.

3. While the radio is in emergency call operation it operates in the usual dispatch manner.

    Note:

    The trunked mode you will talk to in an emergency is controlled by whether your radio is programmed for tactical or non-tactical operation. If tactical, you will be talking to the mode you selected before entering emergency call; if non-tactical, you will talk to a preprogrammed emergency mode.

    If you change trunked modes while in emergency call operation, the emergency call will be moved to, and continued on, the new mode.

4. It is important that you exit the emergency call mode when you have finished your emergency call. To do this, press the emergency button for more than 1 1/2 seconds (programmable). You will hear a medium-pitched emergency-exit tone until the emergency button is released, and the radio will return to normal operation.

Emergency Operation (cont.)

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EMERGENCY
ZONE1 MUTE1 CALL
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PLANT POLICE
ZONE1 MUTE1 CALL
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22 | General Radio Features Operation (cont.)

The "failsoft" system ensures that you will continue to have radio communications capability in the event of trunked system failure. During trunked operation, the radio will automatically go into failsoft operation if the central trunking controller fails for any reason. While in failsoft, your radio will transmit and receive on a predetermined frequency on a conventional, as opposed to trunked, mode. When the trunked system returns to normal operation, the radio will automatically leave failsoft operation and return to trunked operation.

When the radio is in failsoft operation, you will hear a faint "beeping" sound every ten seconds, and the radio will become unsquelched. At the same time, the display will alternate between showing "**FAILSOFT**" and the current active trunked zone.

Failsoft Operation (Trunked Systems Only)

23 | General Radio Features Operation (cont.)

The transmitter disable feature, when enabled in your radio (via radio service software [RSS] programming), lets you put the radio in a condition in which it will not transmit. This will prevent the radio from accidentally transmitting in a hazardous environment. All transmissions, including automatic data transmissions, will be inhibited.

Disabling the Transmitter Using the Transmitter Disable Switch

To disable the radio transmitter, put the transmitter disable switch (programmed via the RSS) in the "disable" position. When your radio's transmitter has been disabled, pressing the PTT switch will cause a low-pitched, continuous alert tone to sound, indicating that the radio is not transmitting.

Note: If you attempt to transmit while the transmitter is disabled, the display will react as in normal operation. However, the red LED transmit indicator will not turn on.

To enable the transmitter for normal operation, put the transmitter disable switch in the "enable" position.

Disabling the Transmitter Using the Keypad

1. Press the right arrow key (▶) until "**TXIN**" appears on the display.
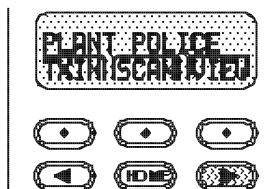
2. Press the key below "**TXIN**." The upper line of the display shows the current transmit state ("**TX INHIBIT ON**" = transmitter disabled; "**TX INHIBIT OFF**" = transmitter enabled). The lower line of the display shows the selections, "**ON**" and "**OFF**."

3. Press the key below the desired transmit state (on or off). The radio automatically returns to the home display.

Transmitter Disable Operation

▶
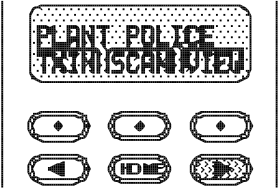
24 | General Radio Features Operation (cont.)

The radio's keypad tones, normally heard each time a keypad key is pressed, can be turned off (muted) or on (unmuted) at your discretion.

Muting Keypad Tones Using the Keypad-Mute Switch

To turn the keypad tones off, put the keypad-mute switch (programmed via the RSS) in the "tones off" position.

To turn the keypad tones on for normal operation, put the keypad-mute switch in the "tones on" position.
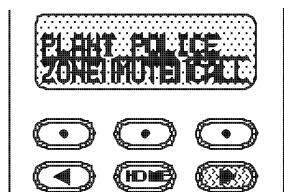
Muting Keypad Tones Using the Keypad

1. Press the right arrow key (▶) until "**MUTE**" appears on the display.
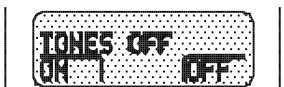
2. Press the key below "**MUTE**." The upper line of the display shows the current mute state ("**TONES ON**" = tones unmuted; "**TONES OFF**" = tones muted). The lower line of the display shows the selections, "**ON**" and "**OFF**."

3. Press the key below the desired mute state (on or off). The radio automatically returns to the home display.

   Note: Pressing the **HOME** key or the PTT switch will exit this menu without changing the keypad tones selection.

MAEPF-23035-O

Muting the Keypad Tones
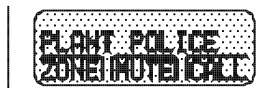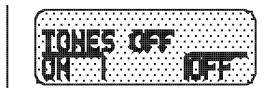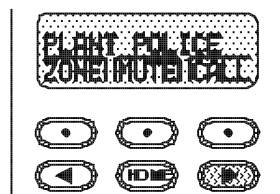
25 | General Radio Features Operation (cont.)

The scan feature allows you to monitor activity on different conventional or trunked modes by scanning a "scan list" of modes. Each scan list can contain as many as 16 different modes; each radio can have up to 20 different scan lists. The modes to be scanned in a scan list can be programmed with the radio service software (RSS).

Three types of scan lists are available (refer to the RSS manual for additional information):

Trunking Priority Monitor—Comprises modes that are all from the same trunked system.

Conventional—Comprises conventional-only modes.

Talkgroup Scan—Comprises conventional modes and trunked modes from more than one trunking system. Priority operation *is not* available in this type of list.

The radio supports both priority and non-priority scanning. With priority scanning enabled, a scan list can have one mode assigned as the first priority mode, and a second as the second priority mode.

All SABER SI radios support automatic scanning (autoscan), which is programmed into the radio through the RSS. With this feature, the radio begins scanning whenever you select a mode to which a scan list is assigned (strapped). The radio will continue autoscanning until you select a mode that does not have autoscan enabled.

Scan can be selected by the scan select switch (two-position A/B switch), or the menu.

Turning Scan On/Off Using the Scan Select Switch

1. To turn scanning on, place the scan select switch (programmable via the RSS) in the "scan on" position. The scan status annunciator appears on the display, indicating that scan is active, and the radio begins scanning. The scan annunciator will remain on until scan is turned off.

2. To turn scanning off, place the scan select switch in the "scan off" position. The scan status

Scan Operation

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PLANT POLICE
ZONE1 AUTO CALL

PLANT POLICE

26 | General Radio Features Operation (cont.)

Turning Scan On Using the Keypad

1. With scan turned off, press the right arrow key
(▶) until "**SCAN**" appears on the display.

2. Press the key below "**SCAN**." The upper line of
the display shows the current scan state (in this
case, "**SCAN OFF**"). The lower line of the display
shows the selections, "**ON**" and "**OFF**."

3. Press the key below "**ON**." On the display, the
scan status annunciator turns on, and will
remain on until scan is turned off. The radio
automatically returns to the home display.

Turning Scan Off Using the Keypad

1. With scan turned on, press the right arrow key
(▶) until "**SCAN**" appears on the display.

2. Press the key below "**SCAN**." The upper line of
the display shows the current scan state (in this
case, "**SCAN ON**"). The lower line of the display
shows the selections, "**ON**" and "**OFF**."

3. Press the key below "**OFF**." The radio stops
scanning. The scan status annunciator turns off
and the radio automatically returns to the home
display.

Note: Pressing the PTT switch or **HOME** key will

Scan Operation (cont.)

PLANT POLICE
TXINISCANIVIEU

SCAN OFF
ON   OFF

PLANT POLICE
ZONE MUTED CALL

PLANT POLICE
TXINISCANIVIEU

SCAN ON
ON   OFF

PLANT POLICE
ZONE MUTED CALL
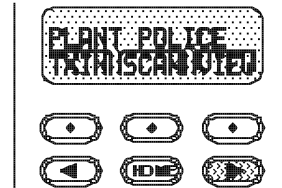
Deleting Nuisance Modes

When the radio scans to a mode that you do not wish to hear (nuisance mode), you can temporarily delete the mode from the scan list.

1. When the radio is locked onto the mode to be deleted, press the nuisance-mode delete button (programmed through the RSS). A valid-key press chirp is heard, indicating that the mode has been deleted.

   Note: Priority modes cannot be deleted.

2. The radio continues scanning the remaining modes in the list. To resume scanning the deleted mode, you must leave and reenter scan operation.

Dynamic Priority Change (Conventional Operation Only)

While the radio is scanning, the dynamic priority change feature lets you *temporarily* change any mode in a scan list (except the priority 1 mode) to the priority 2 mode. The present priority 2 mode becomes a non-priority mode. This change remains in effect until scan is turned off, then scanning reverts back to the preprogrammed state.

1. When the radio is locked onto the mode to be designated as priority 2, press the dynamic priority button (programmed through the RSS). A valid-key press chirp is heard, indicating that the priority change has occurred.

   Note: The priority 1 mode cannot be changed to priority 2.

2. The radio continues scanning the remaining modes in the list. To resume scanning the preprogrammed priority 2 mode, you must leave and reenter scan operation.

Scan Operation (cont.)

28 | General Radio Features Operation (cont.)

Viewing a Scan List

The "view scan list" feature allows you to view the members of the scan list associated with the currently selected mode.
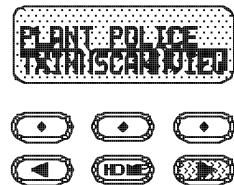
1. To view a scan list, press the right arrow key (▶) until "**VIEW**" appears on the display.

2. Press the key below "**VIEW**." The display changes to show the types of lists (scan, phone, call, etc.) that can be examined with the "list view" feature.
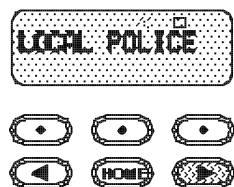
3. Press the key below "**SCAN**." The display shows the first member of the scan list. The scan status annunciator flashes (indicating that a scan list is being viewed), the priority scan annunciator flashes (indicating a priority 1 mode), and the programming-mode annunciator is on constantly (the radio is using the list view feature).

   Note: The programming-mode annunciator will remain on until the list view mode is exited.
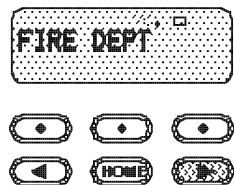
4. Press the right arrow key (▶). The display shows the second member of the scan list. The scan status annunciator is flashing, the priority scan annunciator is on constantly (indicating a priority 2 mode), and the programming-mode annunciator is on constantly.

Scan Operation (cont.)

PLANT POLICE
TXINISCANIVIEW

LOCAL POLICE

FIRE DEPT.'
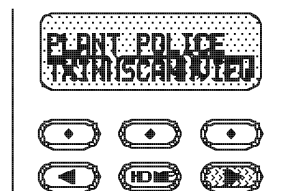
29 | General Radio Features Operation (cont.)

5. Press the right arrow key (▶) again. The display shows the next member of the scan list. The scan status annunciator is flashing, the priority scan annunciator is off (indicating a non-priority mode), and the programming-mode annunciator is on constantly.
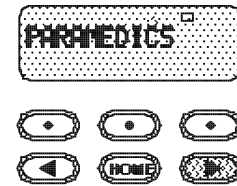
6. Each time you press the right arrow key (▶), the display changes to show the next member of the scan list. When the last member of the scan list is showing, the next press of the right arrow key will cause the display to scroll back to the first member of the list.

7. To leave the scan list feature, press the **HOME** key or the PTT switch, or turn the mode selector switch. The radio returns to the home display; the scan and programming mode annunciators turn off. Pressing the PTT switch will also cause the radio to transmit.
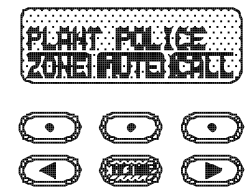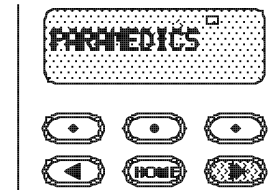
Scan Operation (cont.)

▶

▶

Programming the Telephone List Numbers

This feature lets you use the radio's keypad to change the telephone numbers assigned to any of the telephone list members. Each phone number can have up to 16 digits. Only the numbers can be changed from the keypad; to change the names of the members, the RSS must be used.

1. To change the telephone list, press the right arrow key (►) until "**PROG**" appears on the display.
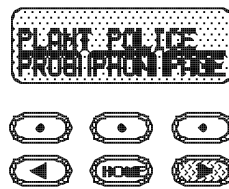
2. Press the key below "**PROG**." The display changes to show the types of lists (phone, call, etc.) that can be programmed.

3. Press the key below "**PHON**." The display shows the first programmable member of the telephone list and the programming-mode status annunciator flashes, indicating that the radio is in the program mode. The programming-mode annunciator will continue flashing while the radio is in the program mode.

4. To move around in the telephone list, press either the right (►) or the left (◄) arrow key. The right arrow key will take you forward to the next member of the list; the left arrow key will take you backward to the previous member of the list. You can also use the keypad to enter the desired member's position number (any preprogrammed location from 1 through 19) in the list to go directly to that member.

5. When you stop on a member of the list, the display will show the member's name on the upper line and telephone number on the lower line.

Programming the Radio's Lists
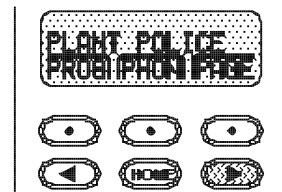
31 | General Radio Features Operation (cont.)

6. Press the "select" key (programmed via the RSS) to enter the number-edit mode. The display shows the current member's telephone number. You can now change numbers, using any of the numeric (0 – 9) keys, as well as the "*" and "#" keys. The blinking cursor indicates the position of the next number to be added.

   Some telephone networks require a pause in the phone dialing sequence to allow for delays in the telephone switches. A pause character can be placed in the 16-digit number by first pressing the "*" key, then pressing the "#" key. The display will show a "**P**" for pause.

   Note: In this mode, the left arrow key (◄) will function as a backspace key. Pressing this key will erase the previous digit, and the cursor will move to the left. When the last digit on the display has been erased, an additional press of this key or the right arrow key (►) will cause you to leave the number-edit mode without making any changes, and re-enter the procedure at step 5.

7. Begin changing the telephone number. The display shows the numbers as they are entered; the cursor flashes to indicate the location of the next number to be entered. When the maximum number of digits (16) has been entered, the cursor will disappear. If you try to add any more digits, you will hear an invalid (bad) keypress alert tone.

8. When you have finished changing the telephone number, press the select key again; the change is saved in the radio's memory and you are returned to step 5. The display will again show the member's name and telephone number; you can change additional numbers from this point.

9. When you have finished making changes, press the **HOME** key to exit the program mode. The radio will return to the home display.

Programming the Radio's Lists (cont.)

```
 ( 1 )  (2ABC)  (3DEF)
(4GHI)  (5JKL)  (6MNO)
(7PRS)  (8TUV)  (9WXY)
 ( * )  ( 0 )   ( # )
```

◄

►

```
┌─────────────────┐
│ SECURITY        │
│ 33372           │
└─────────────────┘
```

```
┌─────────────────┐
│ SECURITY        │
│ 33357234        │
└─────────────────┘
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```
┌─────────────────┐
│ PLANT POLICE    │
│ ZONE│MUTE│CALL  │
└─────────────────┘
  ( • )  ( • )  ( • )
  ( ◄ ) (HOME) ( ► )
```

## 32 | General Radio Features Operation (cont.)

Programming the Call List

This feature lets you use the radio's keypad to change the radio ID numbers assigned to the call list used by the trunked Private Conversation™ and Call Alert™ features.

1. To change the call list radio ID numbers, press the right arrow key (▶) until "**PROG**" appears on the display.

2. Press the key below "**PROG**." The display changes to show the types of lists (phone, call, etc.) that can be programmed.

3. Press the key below "**CALL**" or "**PAGE**" (either choice will access the same call list). The display shows the first member of the call list and the programming mode status annunciator flashes, indicating that the radio is in the program mode. The programming mode annunciator will continue flashing while the radio is in the program mode.

4. To move around in the list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the next member of the list; the left arrow key will take you backward to the previous member of the list. You can also use the keypad to enter the desired member's position number (from 1 through 19) in the list to go directly to that member.

5. When you stop on a list member, the display will show the member's name on the upper line and radio ID number on the lower line.

Programming the Radio's Lists (cont.)

PLANT POLICE
PROGI IPHON| PAGE

▶

PLANT POLICE
SCAN IPHON| CALL

BOB SMITH
ID: 700625

▶   ◀

KAREN CLARK
ID: 733951

33 | General Radio Features Operation (cont.)

6. Press the "select" key (programmable via the RSS) to enter the number-edit mode. The display shows the current member's radio ID number. You can now change numbers, using any of the numeric (0 – 9) keys. The blinking cursor indicates the position of the next number to be added.
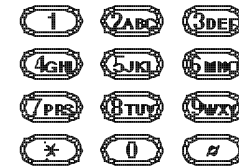
   Note: In this mode, the left arrow key (◀) will function as a backspace key. Pressing this key will erase the previous digit, and the cursor will move to the left. When the last digit on the display has been erased, another press of this key or the right arrow key (▶) will cause you to leave the number-edit mode without making any changes, and re-enter this procedure at step 5.

7. To change the radio ID number, use the left arrow key to erase the existing ID number's digits. Then, enter the new digits. The display shows the digits as they are being entered; the cursor flashes to indicate the location of the next digit to be entered. When the maximum number of digits has been entered, the cursor will disappear. If you try to add any more digits, you will hear an invalid (bad) keypress alert tone.

8. When you have finished changing the ID number, press the select key again; the change is saved in the radio's memory and you are returned to step 5. The display will again show the member's name and radio ID number; you can change additional numbers from this point.
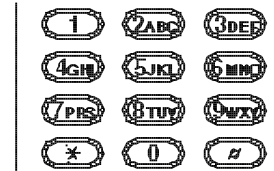
9. When you have finished making changes, press the **HOME** key to exit the program mode. The radio will return to the home display.

Programming the Radio's Lists (cont.)

◄

►
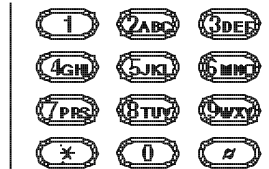
KAREN CLARK
ID: 751

KAREN CLARK
ID: 751326

PLANT POLICE
ZONE AUTE CALL
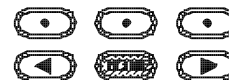
34 | General Radio Features Operation (cont.)

The conventional telephone feature allows you to use your conventional radio similar to a standard telephone. To make a call through the telephone system, your radio must send access and hangup codes to the system. Unless otherwise indicated, the conventional telephone sections in this manual assume that the access and hang up codes have been programmed into the radio by the RSS. These codes will then be automatically transmitted.

When you are dialing from the keypad (SABER SI III model only), your radio may be programmed with either *buffered dial* (you enter all digits and press the PTT before the digits are sent out) or *live dial* (each digit is sent out as it is pressed).

Calling the Last Number Dialed

1. To send a telephone call to the last number dialed, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed. At this point, either:

3a. If your radio is programmed for immediate access, the display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system. Go to step 4.

    Note: This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

    or

3b. If your radio is programmed for delayed access, the display does not change. Press the PTT switch. The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

    Note: This is a timed message. If you cannot access the telephone system (no dial tone

Conventional Telephone Operation

PLANT POLICE
PROG1 PHON PAGE

555-1185
LIST

PLEASE WAIT

PLEASE WAIT

35 | General Radio Features Operation (cont.)

4. If the access was successful, you will hear a dial tone. The display will again show the last number dialed.

5. Press the PTT switch to place the telephone call. The telephone number will be sent out; you will hear the tones as they are being sent. When the number has been completely sent out, you will hear either a busy signal or ringing.

6. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

    Notes:

    After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

    Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

7. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will return to the home display.

Conventional Telephone Operation (cont.)

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┌─────────────────┐
│ 555-1183        │
│ LIST            │
└─────────────────┘
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┌─────────────────┐
│ PLANT POLICE    │
│ ZONE AUTO CALL  │
└─────────────────┘

  ⬭ ⬭ ⬭
  ◀ HOME ▶
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Making a Delayed Access Telephone Call Using
the Keypad

1. To make a delayed access call using the keypad,
    press the right arrow key (▶) until "**PHON**"
    appears on the display.

    Note: If your radio has been so programmed,
    you can press the phone button for quick access
    to the telephone call feature. This will take you
    directly to the "last number dialed" display shown
    in step 2; skip to step 3.

2. Press the key below "**PHON**." The display
    changes to show the last telephone number
    dialed.

    The new telephone number can now be entered
    from the keypad, using any of the numeric (**0 –
    9**) keys, as well as the "***" and "*#*" keys. You can
    also enter a pause in the telephone number by
    first pressing the "***" key, then the "*#*" key. The
    pause will be shown on the display as a "**P**."

3. Enter the telephone number. The display shows
    the digits as they are being entered. The cursor
    flashes to indicate the location of the next
    number to be entered. When the maximum
    number of digits has been entered, the cursor
    will disappear.

    Note: Once you have started entering numbers,
    the left arrow key (◀) will function as a
    backspace key. Pressing this key will erase the
    last digit entered, and move the cursor to the
    left. When the last digit on the display has been
    erased, an additional press of this key will cause
    the last member of the preprogrammed
    telephone list to be displayed; pressing the right
    arrow key will show the first member of the list.

Conventional Telephone Operation (cont.)

37 | General Radio Features Operation (cont.)

4. When you have finished dialing your number, press the PTT switch. The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   Note: This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key or the phone button to hang up, and start again at step 1 of this procedure.
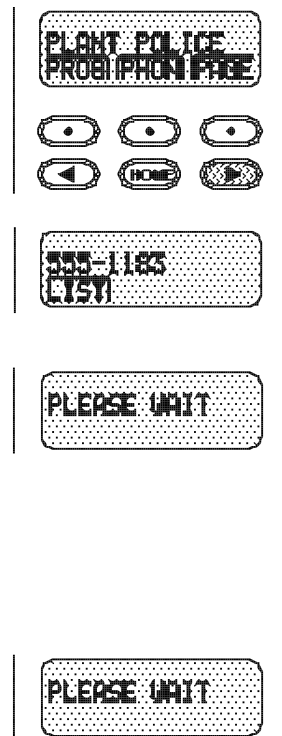
5. If the access was successful, you will hear a dial tone. The display will again show the number dialed.

6. To place the telephone call, press the PTT button again. The telephone number will be sent out; you will hear tones as they are being sent. When the number has been completely sent out, you will hear either a busy signal or ringing.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.
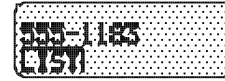
   Notes:

   > After reaching the number you are calling, you need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list.

   > Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will
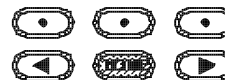
Conventional Telephone Operation (cont.)

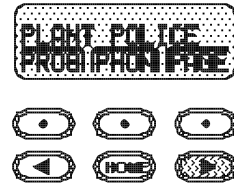PLEASE WAIT

5558987

PLANT POLICE
ZONE AUTO CALL

38 | General Radio Features Operation
(cont.)

Making an Immediate Access Telephone Call
Using the Keypad

1. To make an immediate access call using the keypad, press the right arrow key (▶) until "**PHON**" appears on the display.
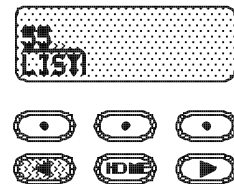
   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "**PLEASE WAIT**" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   Note: This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key or the phone button to hang up, and start again at step 1 of this procedure.

3. If the access was successful, you will hear a dial tone. The display will show the last number dialed.

   The new telephone number can now be entered from the keypad, using any of the numeric (**0 – 9**) keys, as well as the "*****" and "**#**" keys. You can also enter a pause in the telephone number by first pressing the "*****" key, then the "**#**" key. The pause will be shown on the display as a "**P**."
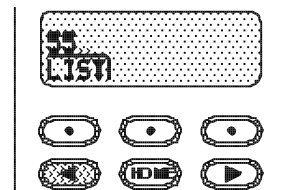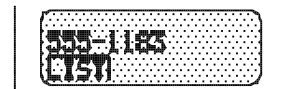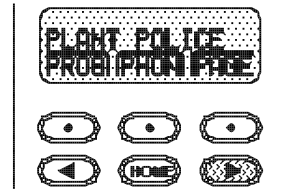
4. Enter the telephone number. The display changes to show the numbers as they are being entered. The cursor will flash to indicate the location of the next digit to be entered. When the maximum number of digits has been entered (buffered dial only), the cursor will disappear.
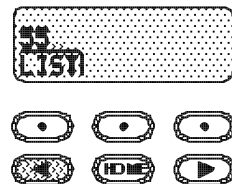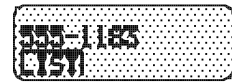
Conventional Telephone Operation (cont.)

▶

PLANT POLICE
PROBIPHONI PAGE
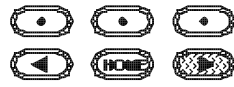
⊙ ⊙ ⊙
◀ HOME ⧩▶

PLEASE WAIT

555-1185
LIST]

55...
LIST]

⊙ ⊙ ⊙
◀◀ HOME ▶

5a. If your radio has been programmed by the RSS for "live dial," each digit is sent out as its key is pressed.

or

5b. If your radio has been programmed by the RSS for "buffered dial," the digits of the number are temporarily stored as you enter them. When you have completely entered the number, press the PTT switch to send out the number. The telephone number will be sent out; you will hear tones as they are being sent.

Note: Once you have started entering numbers, the left arrow key (◄) will function as a backspace key. Pressing this key will erase the last digit entered, and move the cursor to the left. When the last digit on the display has been erased, an additional press of this key will cause the last member of the preprogrammed telephone list to be displayed; pressing the right arrow key will show the first member of the list.

6. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

Notes:

After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

7. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone

Conventional Telephone Operation (cont.)

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PLANT POLICE
ZONE AUTO CALL

40 | General Radio Features Operation
(cont.)

Making a Delayed Access Call to a Number on the Telephone List

1. To make a delayed access call to a number on the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed.

3. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.

4. When you stop on a member of the list, the display will alternate between showing the member's name and telephone number.

Conventional Telephone Operation (cont.)

PLANT POLICE
PROG IPHON PAGE

555-1185
LIST

SECURITY
NUM

555-1825
NUM

41 | General Radio Features Operation (cont.)

4. When you have selected the member you wish to call, press the PTT switch. The display will show "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   PLEASE WAIT

   Note: This is a timed message. If you could not access the telephone system (no dial tone heard), press the **HOME** key or the phone button to hang up, and start again at step 1 of this procedure.

5. If the access was successful, you will hear a dial tone. The display will again show the member's name.

   SECURITY [NUM

6. To place the telephone call, press the PTT button again. The telephone number will be sent out; you will hear the tones as they are being sent.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Notes:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. Press the PTT switch again to send out the extension number.

   Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will return to the home display.
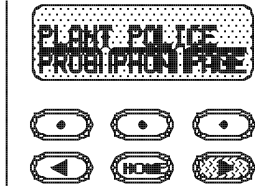
   PLANT POLICE ZONE[AUTE]CALL

Conventional Telephone Operation (cont.)

PLEASE WAIT

SECURITY
[NUM]

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PLANT POLICE
ZONE AUTE CALL

Making an Immediate Access Call to a Number
on the Telephone List

1. To make an immediate access call to a number
    on the preprogrammed telephone list, press the
    right arrow key (▶) until "**PHON**" appears on the
    display.

    Note: If your radio has been so programmed,
    you can press the phone button for quick access
    to the telephone call feature. This will take you
    directly to the "**PLEASE WAIT**" display shown in
    step 2; skip to step 3.

2. Press the key below "**PHON**." The display shows
    "**PLEASE WAIT**" while your radio attempts to
    access the telephone system.

    Note: This is a timed message. If you cannot
    access the telephone system (no dial tone
    heard), press the **HOME** key or the phone button
    to hang up, and start again at step 1 of this
    procedure.

3. If the access was successful, you will hear a dial
    tone. The display will show the last number
    dialed.

4. To enter the telephone list, press either the right
    (▶) or the left (◀) arrow key. The right arrow
    key will take you forward to the first or next
    member of the list; the left arrow key will take
    you backward to the last or previous member of
    the list.

Conventional Telephone Operation (cont.)

PLANT POLICE
PROG(PHON)PAGE

▶

PLEASE WAIT

555-1185
LIST]

◀ HOME ▶   ▶   ◀

43 | General Radio Features Operation (cont.)

5. When you stop on a member of the list, the display will alternate between showing the member's name and telephone number.

    SECURITY
    [NUM

    555-1825
    [NUM

6. To place the telephone call, press the PTT button. The telephone number will be sent out; you will hear the tones as they are being sent.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

    Notes:

    After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

    Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will

    PLANT POLICE
    ZONE1 PHONE CALL

Conventional Telephone Operation (cont.)

SECURITY
[NUM]

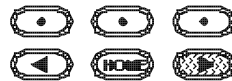555-1825
[NUM]

PLANT POLICE
ZONE AUTO CALL

44 | General Radio Features Operation (cont.)

Making a Delayed Access Call to a Number at a Location in the Telephone List

1. To make a delayed access call to a number at a location in the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed.

3. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.

4. Enter the location (any preprogrammed location from 1 through 19) of the number you wish to call.

5. The radio will go to the selected location. The display will alternate between showing the list member's name and telephone number.

Conventional Telephone Operation (cont.)

PLANT POLICE
PROG IPHON PAGE

▶

555-1183
LIST

▶   ◀

SECURITY
DNUM

555-1825
DNUM

45 | General Radio Features Operation (cont.)

6. When you have selected the member you wish to call, press the PTT switch. The display will show "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   Note: This is a timed message. If you could not access the telephone system (no dial tone heard), press the **HOME** key or the phone button to hang up, and start again at step 1 of this procedure.

   `PLEASE WAIT`

7. If the access was successful, you will hear a dial tone. The display will again show the member's name.

   `SECURITY [NUM`

8. To place the telephone call, press the PTT button again. The telephone number will be sent out; you will hear tones as they are being sent.

9. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Notes:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. Press the PTT switch again to send out the extension number.

   Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

10. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will return to the home display.

    `PLANT POLICE`
    `ZONE][MUTE][CALL`

Conventional Telephone Operation (cont.)

PLEASE WAIT

SECURITY
[NUM

PLANT POLICE
ZONE][AUTO][CALL

Making an Immediate Access Call to a Number at a Location in the Telephone List

1. To make an immediate access call to a number at a location in the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "**PLEASE WAIT**" display shown in step 2; skip to step 3.
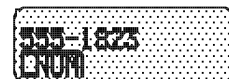
2. Press the key below "**PHON**." The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   Note: This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key or the phone button to hang up, and start again at step 1 of this procedure.

3. If the access was successful, you will hear a dial tone. The display will show the last number dialed.

4. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.
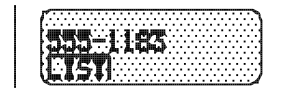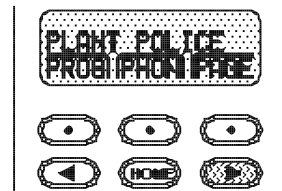
Conventional Telephone Operation (cont.)

47 | General Radio Features Operation (cont.)

5. Enter the location (any preprogrammed location from 1 through 19) of the number you wish to call.

6. The radio will go to the selected location. The display will alternate between showing the list member's name and telephone number.

SECURITY
LNUM

555-1823
LNUM

7. To place the telephone call, press the PTT button. The telephone number will be sent out; you will hear the tones as they are being sent.

8. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Note:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

   Many conventional telephone patches will generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party as an indication to begin talking.

9. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone

PLANT POLICE
ZONE1 MUTE CALL

Conventional Telephone Operation (cont.)

SECURITY
[NUM

555-1823
[NUM

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PLANT POLICE
ZONE AUTO CALL

48 | General Radio Features Operation
(cont.)

Making a Manual Access Telephone Call Using the Keypad

1. To make a manual access call using the keypad, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. Skip to step 3.
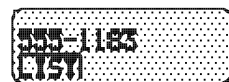
2. Press the key below "**PHON**." The display will show the last number dialed.

3. Enter the telephone access code. The display shows the numbers as they are entered. Each digit is sent as its key is pressed.

4. If the access was successful, you will hear a dial tone. If you cannot access the telephone system (no dial tone heard), press the "**HOME**" key or the phone button to hang up, and start again at step 1 of this procedure.
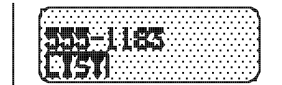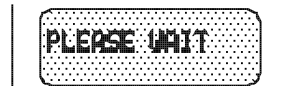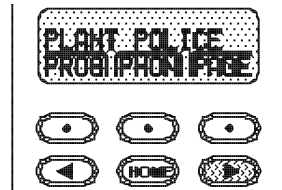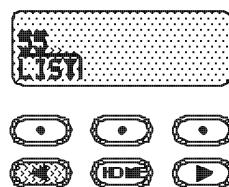
5. Enter the telephone number. The display shows the numbers as they are entered. Each digit is sent as its key is pressed.

6. If the party you are calling answers, carry on with the conversation in the normal manner. Press the PTT switch to talk; release the PTT switch to listen.

7. When you have finished your conversation, or if the number you are calling is busy or does not answer, you must send the manual de-access code to hang up.

    Enter the de-access code. The display shows the numbers as they are entered. Each digit is sent as its key is pressed.

8. After you have sent the de-access, press the "**HOME**" key or the phone button to return to the home display.

Conventional Telephone Operation (cont.)
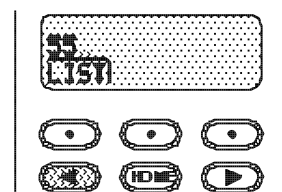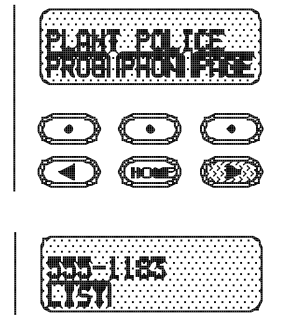
49 | General Radio Features Operation (cont.)

The trunked telephone feature allows you to use your trunked radio similar to a standard telephone.

When you are dialing from the keypad, your radio may be programmed with either *buffered dial* (you enter all digits and press the PTT before the digits are sent out) or *live dial* (each digit is sent out as it is pressed).

Answering a Telephone Call

1. When a telephone call is being received, you will hear telephone-type ringing. The display's top line alternates between showing the present mode and "**PHONE CALL**." The call-received status annunciator flashes to indicate that a call is being received.

    Note: Incoming phone numbers are not stored in the phone list.

2. To answer the call, press the phone button or call response button (programmed via the RSS). The call received annunciator turns off.
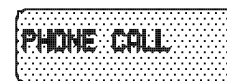
3. Carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

4. When you have finished your conversation, press the **HOME** key or the phone button to hang up. The radio returns to the home display.

Trunked Telephone Operation

PHONE CALL
ZONE AUTE CALL

PHONE CALL

PLANT POLICE
ZONE AUTE CALL

50 | General Radio Features Operation
(cont.)

Calling the Last Number Dialed

PLANT POLICE
PROGI PHON PAGE

1. To send a telephone call to the last number dialed, press the right arrow key (▶) until "**PHON**" appears on the display.

   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

555-1185
LIST

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed. At this point, either:

PLEASE WAIT

3a. If your radio is programmed for immediate access, the display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system. Go to step 4.

   Notes:

   This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

   If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHONE**" is displayed and a continuous low-pitched tone sounds.

   If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

   or

PLEASE WAIT

3b. If your radio is programmed for delayed access, the display does not change. Press the PTT switch. The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

Trunked Telephone Operation (cont.)

PLANT POLICE
PROG IPHONE PAGE

555-1185
LIST

PLEASE WAIT

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PLEASE WAIT
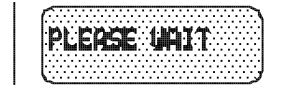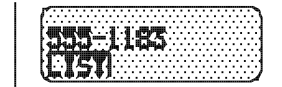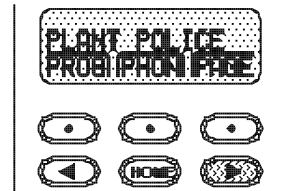
51 | General Radio Features Operation (cont.)

Notes:

This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

4. If the access was successful, you will hear a dial tone. The display will again show the last number dialed.

5. The telephone number will be sent out; you will hear the tones as they are being sent. When the number has been completely sent out, you will hear either a busy signal or ringing. If you hear a busy signal, go to step 7 for hang-up procedure.

6. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

Notes:

After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the landline party and is an indicator to begin talking.

7. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button

Trunked Telephone Operation (cont.)

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555-1185
[TST]

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PLANT POLICE
ZONE FMUTE CALL

Making a Delayed Access Telephone Call Using the Keypad

1. To make a delayed access call using the keypad, press the right arrow key (▶) until "**PHON**" appears on the display.

   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed.

   The new telephone number can now be entered from the keypad, using any of the numeric (**0 – 9**) keys, as well as the "*" and "#" keys. You can also enter a pause in the telephone number by first pressing the "*" key, then the "#" key. The pause will be shown on the display as a "**P**."

3. Begin entering the telephone number. The display changes to show the numbers as they are being entered. The cursor flashes to indicate the location of the next number to be entered. When the maximum number of digits has been entered, the cursor will disappear.

   Note: Once you have started entering numbers, the left arrow key (◀) will function as a backspace key. Pressing this key will erase the last digit entered, and move the cursor to the left. When the last digit on the display has been erased, an additional press of this key will cause the last member of the preprogrammed telephone list to be displayed; pressing the right arrow key will show the first member of the list.

Trunked Telephone Operation (cont.)

PLANT POLICE
PROG | PHON | PAGE

555-1183
LIST

LIST

53 | General Radio Features Operation (cont.)

4. When you have finished dialing your number, press the PTT switch. The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.
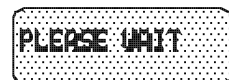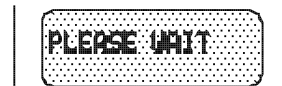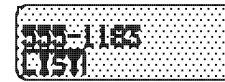
   Notes:

   This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

   If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

   If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

5. If the access was successful, you will hear a dial tone. The display will again show the number dialed.

6. The telephone number will be sent out; you will hear the tones as they are being sent. When the number has been completely sent out, you will hear either a busy signal or ringing. If you hear a busy signal, go to step 8 for the hang-up procedure.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Notes:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. Press the PTT switch again to send out the extension number.

   Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not

PLEASE WAIT

5558937

PLANT POLICE
ZONE1 AUTO CALL

Trunked Telephone Operation (cont.)

PLEASE WAIT

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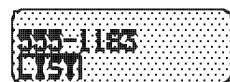
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PLANT POLICE
ZONE AUTO CALL

54 | General Radio Features Operation (cont.)

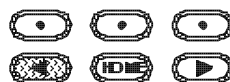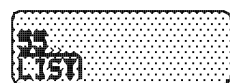Making an Immediate Access Telephone Call Using the Keypad

1. To make an immediate access call using the keypad, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "**PLEASE WAIT**" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

    Notes:

    > This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

    > If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

    > If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

3. If the access was successful, you will hear a dial tone. The display will show the last number dialed.

    The new telephone number can now be entered from the keypad, using any of the numeric (**0 – 9**) keys, as well as the "*" and "#" keys. You can also enter a pause in the telephone number by first pressing the "*" key, then the "#" key. (Buffered dial only - The pause will be shown on the display as a "**P**".)
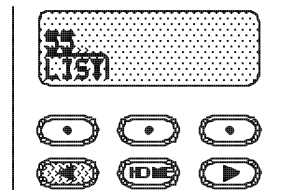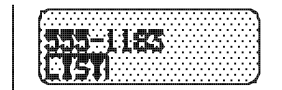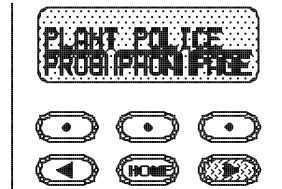
4. Enter the telephone number. The display changes to show the numbers as they are being entered. The cursor will flash to indicate the location of the next digit to be entered. When the maximum number of digits has been entered (buffered dial

Trunked Telephone Operation (cont.)

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5a. If your radio has been programmed by the RSS for "live dial," each digit is sent out as its key is pressed.

or

5b. If your radio has been programmed by the RSS for "buffered dial," the digits of the number are temporarily stored as you enter them. When you have completely entered the number, press the PTT switch to send out the number. The telephone number will be sent out; you will hear the tones as they are being sent. If you hear a busy signal, go to step 7 for hang-up procedure.

Note: Once you have started entering numbers, the left arrow key (◄) will function as a backspace key. Pressing this key will erase the last digit entered, and move the cursor to the left. When the last digit on the display has been erased, an additional press of this key will cause the last member of the preprogrammed telephone list to be displayed; pressing the right arrow key will show the first member of the list.

6. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

Notes:

After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

7. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone

Trunked Telephone Operation (cont.)

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PLANT POLICE
ZONE3 MUTE3 CALL
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Making a Delayed Access Call to a Number on the Telephone List

1. To make a delayed access call to a number on the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

   Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed.

3. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.

4. When you stop on a member of the list, the display will alternate between showing the member's name and telephone number.

Trunked Telephone Operation (cont.)

57 | General Radio Features Operation (cont.)

4. When you have selected the member you wish to call, press the PTT switch. The display will show "**PLEASE WAIT**" while your radio attempts to access the telephone system.

    Notes:

    This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

    If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

    If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

5. If the access was successful, you will hear a dial tone. The display again shows the member's name.

6. The telephone number will be sent out; you will hear the tones as they are being sent.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

    Notes:

    After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. Press the PTT switch again to send out the extension number.

    Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button
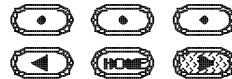
Trunked Telephone Operation (cont.)

PLEASE WAIT

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SECURITY
[NUM

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PLANT POLICE
ZONE AUTO CALL

58 | General Radio Features Operation (cont.)

Making an Immediate Access Call to a Number on the Telephone List

1. To make an immediate access call to a number on the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "**PLEASE WAIT**" display shown in step 2; skip to step 3.

2. Press the key below "**PHON**." The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

    Notes:

    This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

    If you are out of range of the trunked system, or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

    If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

3. If the access was successful, you will hear a dial tone. The display will show the last number dialed.

4. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of
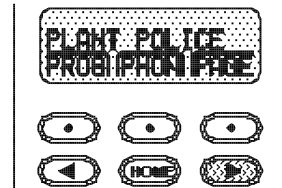
Trunked Telephone Operation (cont.)

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59 | General Radio Features Operation (cont.)

5. When you stop on a member of the list, the display will alternate between showing the member's name and telephone number.

6. To place the telephone call, press the PTT button. The telephone number will be sent out; you will hear tones as they are being sent. When the number has been completely sent out, you will hear either a busy signal or ringing, and the member's name will be displayed. If you hear a busy signal, go to step 8 to hang up.

7. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

    Notes:

    After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

    Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

8. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio will return to the home display.

Trunked Telephone Operation (cont.)
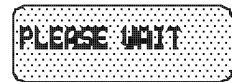

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60 | General Radio Features Operation (cont.)

Making a Delayed Access Call to a Number at a Location in the Telephone List

1. To make a delayed access call to a number at a location in the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

    Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "last number dialed" display shown in step 2.

2. Press the key below "**PHON**." The display changes to show the last telephone number dialed.

3. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.

4. Enter the location (any preprogrammed location from 1 through 19) of the number you wish to call.

5. The radio will go to the selected location. The display will alternate between showing the list member's name and telephone number.

Trunked Telephone Operation (cont.)

PLANT POLICE
PROG IPHON PAGE

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555-1185
LIST

◀ HOME ▶   ▶   ◀

SECURITY
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555-1825
CNUM

61 | General Radio Features Operation (cont.)

6. When you have selected the member you wish to call, press the PTT switch. The display will show "**PLEASE WAIT**" while your radio attempts to access the telephone system.

   PLEASE WAIT

   Notes:

   This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

   If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

   If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.
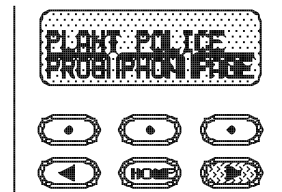
7. If the access was successful, you will hear a dial tone. The display will again show the member's name.

   SECURITY
   [NUM]

8. The telephone number will be sent out; you will hear the tones as they are being sent.

9. If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Notes:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. Press the PTT switch again to send out the extension number.

   Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

10. When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone button to send the hang-up code. The radio returns to the home display

    PLANT POLICE
    ZONE] [UTE] [CALL]

Trunked Telephone Operation (cont.)

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│ PLEASE WAIT      │ │
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│ SECURITY         │ │
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┌──────────────────┐ │
│ PLANT POLICE     │ │
│ ZONE[ AUTO][CALL]│ │
└──────────────────┘ │
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Making an Immediate Access Call to a Number at a Location in the Telephone List

1. To make an immediate access call to a number at a location in the preprogrammed telephone list, press the right arrow key (▶) until "**PHON**" appears on the display.

Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone call feature. This will take you directly to the "**PLEASE WAIT**" display shown in step 2.

2. Press the key below "**PHON**." The display shows "**PLEASE WAIT**" while your radio attempts to access the telephone system.

Notes:

This is a timed message. If you cannot access the telephone system (no dial tone heard), press the **HOME** key to hang up, and start again at step 1 of this procedure.

If you are out of range of the trunked system or the phone interconnect is out of service, "**NO PHON**E" is displayed and a continuous low-pitched tone sounds.

If the trunked phone interconnect is in use, a busy tone sounds and "**PHONE BUSY**" is displayed. Your number will automatically be dialed when the phone interconnect becomes available. If you hang up, you will lose your place in line.

3. If the access was successful, you will hear a dial tone. The display will show the last number dialed.

4. To enter the telephone list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of

Trunked Telephone Operation (cont.)

63 | General Radio Features Operation (cont.)

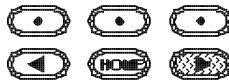5.   Enter the location (any preprogrammed location from 1 through 19) of the number you wish to call

6.   The radio will go to the selected location. The display will alternate between showing the list member's name and telephone number.

SECURITY
LNUM

555-1825
LNUM

7.   To place the telephone call, press the PTT button. The telephone number will be sent out; you will hear the tones as they are being sent.

8.   If the party you are calling answers, carry on with your conversation in the normal manner. Press the PTT switch to talk; release the PTT to listen.

   Notes:

   After reaching the number you are calling, you may need to dial an extension number before you can reach your party. If this is the case, enter the extension number from the keypad, or (if so programmed) use the arrow keys to find the extension number in the telephone list. If you have live dial, the number will be sent as the keys are pressed. If you have buffered dial, press the PTT switch again to send out the extension number.

   Motorola trunked radios generate a high-pitched go-ahead tone when the radio's PTT switch is released. This is heard by the land-line party and is an indicator to begin talking.

9.   When you have finished your conversation, or if the number you are calling is busy or does not answer, press the **HOME** key or the phone

PLANT POLICE
ZONE1 AUTEL CALL

Trunked Telephone Operation (cont.)

```
┌─────────────┐
│ SECURITY    │
│ [NUM]       │
└─────────────┘
```

```
┌─────────────┐
│ 555-1823    │
│ [NUM]       │
└─────────────┘
```

-

-

```
┌──────────────────┐
│ PLANT POLICE     │
│ ZONE3 [MUTE][CALL]│
└──────────────────┘
```

The repeat/direct feature allows you to bypass the repeater and talk directly to another portable radio. This is known as DIRECT operation. The transmit frequency is the same as the receive frequency.

In REPEAT operation, you talk through the repeater, which increases the radio's operating range. The transmit frequency is not the same as the receive frequency.

If the repeat/direct feature is slaved to a mode, that mode is programmed to either one or the other type of operation (direct or repeat).

If the repeat/direct feature is programmed, through the RSS, to the two-position (A/B) concentric switch, one position on the switch will select repeat operation, and the other position will select direct operation.

Smart PTT is a per-mode feature which gives the system manager better control of radio operators. When smart PTT is enabled in your radio, you will not be able to transmit on an active mode. In addition, the monitor function is disabled on modes programmed with smart PTT. Three radio-wide variations of smart PTT are available:

Transmit Inhibit on Busy Mode with Carrier—With this feature enabled, you will be prevented from transmitting if any activity is detected on the mode.

Transmit Inhibit on Busy Mode with Wrong Squelch Code—With this feature enabled, you will be prevented from transmitting on an active mode that has a squelch code other than your own. If the PL code is the same as yours, the transmission will not be prevented.

Quick-Key Override—This feature can work in conjunction with either of the two above variations. With this feature enabled, you will be able to override the transmit-inhibit state by quick-keying (two PTT presses within one second of each other) the radio.

Smart PTT radio operation is exactly the same as standard radio operation, except that, if you try to transmit (press the PTT) on a smart PTT mode, a continuous alert tone will be generated until you release the PTT, and the transmission will be inhibited.

The red LED will blink when the radio is receiving to indicate that the mode is busy.

Repeat/Direct

Smart PTT

-
-

-

65 | Trunked Radio Features
Operation

1. To view your radio's ID number, press the right arrow key (▶) until "**CALL**" appears on the display.
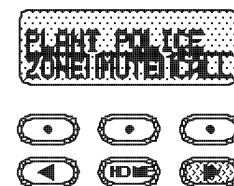
> PLANT POLICE
> ZONE! MUTE! CALL

2. Press the key below "**CALL**." The display changes to show the last ID number transmitted or received. This will be either "**RECEIVED ID**" (Private Conversation I) or the actual number (Private Conversation II).

> RECEIVED ID
> [LIST]

> ID: 722488
> [LIST]
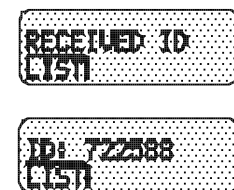
3. Press the left (◀) arrow key to view "**MY ID:**" or, if already in the preprogrammed call list, press the "★" key. The display shows "**MY ID:**," along with your radio's ID number.

    Note: Pressing the right arrow key will take you to the last ID number transmitted or received. Pressing the left arrow key will take you to the last member in the list.

> MY ID: 741317
> [NUM]
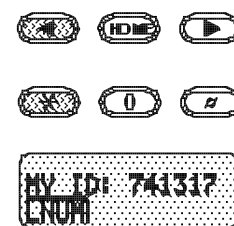
4. Press the **HOME** key to return the radio to the home display.

> PLANT POLICE
> ZONE! MUTE! CALL

Viewing Your Radio's ID Number

▶

```
PLANT POLICE
ZONE: MUTED CALL
```

```
( • )   ( • )   ( • )
( ◀ )  (IDE)  (X)
```

```
RECEIVED ID
[LST]
```

```
ID: 722488
[LST]
```

◀

```
(X)  (IDE)  (▶)
```

```
(X)   ( 0 )  (✓)
```

```
MY ID: 741317
[NUM]
```

```
PLANT POLICE
ZONE: MUTED CALL
```
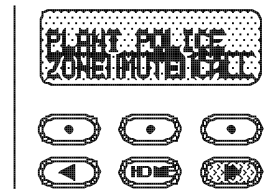
66 | Trunked Radio Features
     Operation (cont.)

The Private Conversation feature allows you to carry on a conversation that is heard only by the two parties involved. With Private Conversation II, the radio being called can also view the calling radio's ID number before answering.

Answering a Private Conversation Call

1. When your radio receives a Private Conversation call, you will hear two alert tones, the display's top line alternates between showing the current mode and "**CALL RECEIVED**," and you will hear the caller's voice. The green LED and call-received status annunciator flash to indicate that a call is being received.

2. Either *(a)* press the right arrow key (▶) until the display shows "**CALL**," then press the key below "**CALL**," or *(b)* press the call-response button (programmed through the RSS). The display changes to show "**RECEIVED ID**" (Private Conversation I), or the incoming caller's ID number (Private Conversation II), and the call-received annunciator turns off. At this point, you can decide to either answer the call, or go to step 4 to store the caller's ID number and hang up.

   Note: If you press the PTT switch before you press the call-response button, your response will be transmitted to everyone in the talkgroup.

3. If you decide to answer the call, press the PTT switch to carry on a Private Conversation with the caller.

   Note: If the system is busy when you attempt to answer the call, a busy tone sounds and your radio's busy indicator lights. When a mode becomes available, you will receive a call-back tone and your radio will automatically key-up for three seconds so that you can begin talking.

4. To hang up, press the **HOME** key, or the "**CALL**" menu button (see step 2a), or the call response button. The caller's ID number is stored as "the last ID number received," and the radio returns

Trunked Private Conversation™ I and II
Call Operation

CALL RECEIVED
ZONE1 MUTE CALL

RECEIVED ID
LIST

ID: 722088
LIST

PLANT POLICE
ZONE1 MUTE CALL

67 | Trunked Radio Features
Operation (cont.)

Calling the Last ID Number Transmitted or Received

1. To call the last ID number transmitted or received, press the right arrow key (▶) until "**CALL**" appears on the display.

   Note: If your radio has been so programmed, you can press the call button for quick access to the Private Conversation feature. This will take you directly to the "last number transmitted or received" display shown in step 2; skip to step 3.

2. Press the key below "**CALL**." The display changes to show the last ID number transmitted or received. This will be either "**RECEIVED ID**" (PC I) or the actual ID number (PC II).

3. Pause for a second to allow the alert tone to sound in the receiving radio, then begin talking.

4a. If the party you are calling *does not respond*, press the **HOME** key to exit the Private Conversation feature. You may then enter the Call Alert feature to leave a permanent page with the radio.

or

4b. If the party you are calling *does answer* the call, you will hear his/her voice.

5. Press the PTT switch to carry on a Private Conversation with the called person.

6. When you have finished your conversation, or if the radio you are calling does not answer or is not in service, press the **HOME** key to hang up; the radio returns to the home display.

Trunked Private Conversation™ I and II
Call Operation (cont.)

▶

```
╭─────────────────╮
│ PLANT POLICE    │
│ ZONE MUTE CALL  │
╰─────────────────╯
  ⬮    ⬮    ⬮
 ◀   HOME   ▶▶
```

```
╭─────────────────╮
│ RECEIVED ID     │
│ LIST            │
╰─────────────────╯
```

```
╭─────────────────╮
│ ID: 722588      │
│ LIST            │
╰─────────────────╯
```

```
╭─────────────────╮
│ PLANT POLICE    │
│ ZONE MUTE CALL  │
╰─────────────────╯
  ⬮    ⬮    ⬮
 ◀   HOME   ▶
```
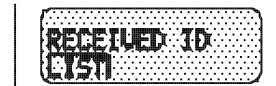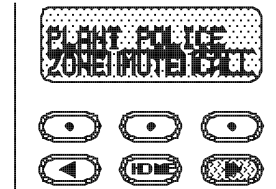
Direct Entry of the ID Number to be Called

1. To directly enter the ID number to be called, press the right arrow key (▶) until "**CALL**" appears on the display.
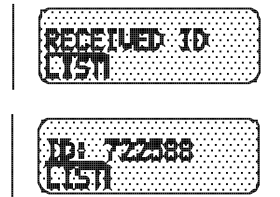
2. Press the key below "**CALL**." The display changes to show the last ID number transmitted or received (either "**RECEIVED ID**" [PC I] or the actual ID number [PC II]. You can now enter the ID number to be called.
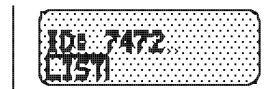
3. Enter the new six-digit ID number from the keypad. On the display, the old ID number disappears and the new digits appear as they are being entered. The cursor flashes to indicate the location of the next number to be entered.

    Notes:

    If more than, or less than, six digits are entered and the PTT switch is pressed, you will hear a bad-keypress tone.

    Once you have started entering numbers, the left arrow (◀) key will function as a backspace key. Pressing this key will cause the last digit entered to be erased, and the cursor to move to the left. When the last digit has been erased, an additional press of this key will cause the last member of the preprogrammed Private Conversation list to be displayed; Pressing the right arrow key will show the first member of the list.

MAEPF-23071-A   MAEPF-23073-A

Trunked Private Conversation™ I and II
Call Operation (cont.)

▶

```
┌─────────────────────┐
│ PLANT POLICE        │
│ ZONE1 MUTE] [CALL   │
└─────────────────────┘
   ╭───╮  ╭───╮  ╭───╮
   │ • │  │ • │  │ • │
   ╰───╯  ╰───╯  ╰───╯
   ╭───╮  ╭───╮  ╭───╮
   │ ◄ │  │ID▶│  │ ▶ │
   ╰───╯  ╰───╯  ╰───╯
```

```
┌─────────────────────┐
│ RECEIVED ID         │
│ [LIST]              │
└─────────────────────┘
```

```
┌─────────────────────┐
│ ID: 722588          │
│ [LIST]              │
└─────────────────────┘
```

```
┌─────────────────────┐
│ ID: 7472            │
│ [LIST]              │
└─────────────────────┘
```

•

•

◄
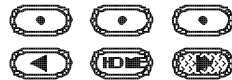
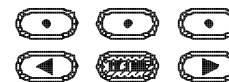4. Press the PTT switch. Pause for a second to allow the alert tone to sound in the receiving radio, then begin talking.

5a. If the party you are calling *does not respond*, press the **HOME** key to exit the Private Conversation feature. You may then enter the Call Alert feature to leave a permanent page with the radio.
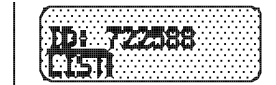
or

5b. If the party you are calling *does answer* the call, you will hear his/her voice.

6. Press the PTT switch to carry on a Private Conversation with the called person.

7. When you have finished your conversation, or if the radio you are calling does not answer or is not in service, press the **HOME** key to hang up; the radio returns to the home display.
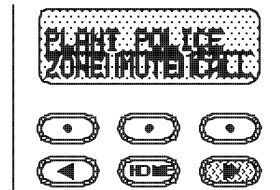
Trunked Private Conversation™ I and II
Call Operation (cont.)
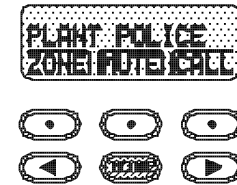
PLANT POLICE
ZONE AUTO CALL
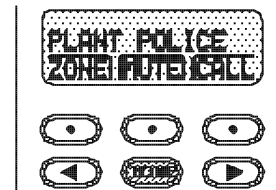
70 | Trunked Radio Features
     Operation (cont.)

PLANT POLICE
ZONE1 MUTE1 CALL
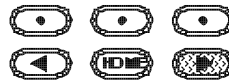
Scrolling to an ID Number in the Call List

1. To scroll to an ID number to be called from the preprogrammed call list, press the right arrow key (▶) until "**CALL**" appears on the display.

    Note: The same list is shared by both Private Conversation and Call Alert features.

RECEIVED ID
LIST

ID: 722588
LIST

2. Press the key below "**CALL**." The display changes to show the last ID number transmitted or received (either "**RECEIVED ID**" [PC I] or the actual ID number [PC II]. You can now select an ID number from the list.

3. To enter the list, press either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward to the first or next member of the list; the left arrow key will take you backward to the last or previous member of the list.

    Note: The last member of the list will be the "last ID transmitted or received." This member can also be found at location "OO" in the list (see "Calling an ID Number at a Location in the Call List").

BOB SMITH
CNUM

ID: 700825
CNUM

4. When you stop on a member of the list, the display will alternate between showing the member's name and ID number.

Trunked Private Conversation™ I and II
Call Operation (cont.)

PLANT POLICE
ZONE] [MUTE] [CALL]

▶

RECEIVED ID
[LIST]

ID: 722588
[LIST]

◀   ▶

BOB SMITH
[NUM]

ID: 700825
[NUM]
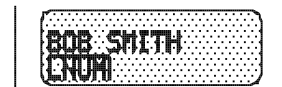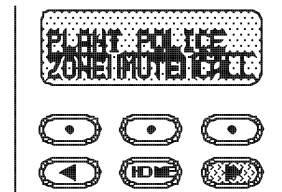
71 | Trunked Radio Features
Operation (cont.)

5. When you have selected the member you wish to call, press the PTT switch. The display freezes to show the selected member's name, and the member's ID number is transmitted. Pause for a second to allow the alert tone to sound in the receiving radio, then begin talking.

6a. If the party you are calling *does not respond*, press the **HOME** key to exit the Private Conversation feature. You may then enter the Call Alert feature to leave a permanent page with the radio.

or

6b. If the party you are calling *does answer* the call, you will hear his/her voice.

7. Press the PTT switch to carry on a Private Conversation with the called person.

8. When you have finished your conversation, or if the radio you are calling does not answer or is not in service, press the **HOME** key to hang up; the radio returns to the home display.

Trunked Private Conversation™ I and II
Call Operation (cont.)

```
┌─────────────────────┐
│ BOB SMITH           │
│ LNUM                │
└─────────────────────┘
```

```
┌─────────────────────┐
│ PLANT POLICE        │
│ ZONE1 MUTE CALL     │
└─────────────────────┘

  ( • )   ( • )   ( • )
  ( ◄ )  (ZOOM)  ( ► )
```

Calling an ID Number at a Location in the Call List

PLANT POLICE
ZONE1 MUTED CALL

1. You can also call an ID number at a particular location in the preprogrammed call list (for example, the fifth location in the list would be position "5"). To do this, press the right arrow key (▶) until "**CALL**" appears on the display.

    Notes:

    If your radio is so programmed, you can press the call button for quick access to the Private Conversation feature. This will take you directly to the "last ID number transmitted or received" display shown in step 2; skip to step 3.

    The same list is shared by both Private Conversation and Call Alert features.

RECEIVED ID
LIST

ID: 722588
LIST

2. Press the key below "**CALL**." The display changes to show the last ID number transmitted or received (either "**RECEIVED ID**" [PC I] or the actual ID number (PC II]. You can now select an ID number from the list.

3. Enter the list by pressing either the right (▶) or the left (◀) arrow key. The right arrow key will take you forward in the list; the left arrow key will take you backward in the list.

    Note: The last member of the list will also be the "last ID transmitted or received" at position "OO" in the list.

BOB SMITH
CNUM

4. Enter the first digit of the location number.

    a. If there are fewer than 1O members in the list, the radio goes immediately to that position in the list, and the display alternates between showing that list member's name and ID number. Go directly to step 7.

ID: 700825
CNUM

    b. If there are 1O or more members in the list, the display changes to show "**ID LOC#X_**" (where X is the the first digit). The cursor

ID LOC#

Trunked Private Conversation™ I and II
Call Operation (cont.)

▶

•

•

◀   ▶

73 | Trunked Radio Features Operation (cont.)

5. Enter the second digit of the location number.

6. Then, the radio goes to that position in the list, and the display alternates between showing that list member's name and ID number.

KAREN CLARK
CNUM

ID: 753951
CNUM

Note: If you enter a location number that does not exist (for example, "24"), the display will show "**INVALID ENTRY**," and the radio will return back to step 4 of this procedure. Continue from this point.

INVALID ENTRY
CNUM

7. To make the call, press the PTT switch. The display freezes to show the selected member's name, and the member's ID number is transmitted. Pause for a second to allow the alert tone to sound in the receiving radio, then begin talking.

KAREN CLARK
CNUM

8a. If the party you are calling *does not respond*, press the **HOME** key to exit the Private Conversation feature. You may then enter the Call Alert feature to leave a permanent page with the radio.

or

8b. If the party you are calling *does answer* the call, you will hear his/her voice.

9. Press the PTT switch to carry on a Private Conversation with the called person.

10. When you have finished your conversation, or if the radio you are calling does not answer or is not in service, press the **HOME** key to hang up; the radio returns to the home display.

PLANT POLICE
ZONE MUTE CALL

Trunked Private Conversation™ I and II
Call Operation (cont.)

KAREN CLARK
CNUM

ID: 753951
CNUM

INVALID ENTRY
CNUM

KAREN CLARK
CNUM

PLANT POLICE
ZONE MUTE CALL
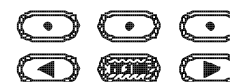
74 | Trunked Radio Features Operation (cont.)

The Call Alert page feature lets your radio function like a pager (beeper). Depending upon how it is programmed by the RSS, the radio can receive and respond to pages from other radios, and send pages to them.

Answering a Call Alert Page

1. When a Call Alert page is being received, you will hear a recurring four-beep tone until you answer the call or reset the radio. The display's top line alternates between showing the current mode and "**PAGE RECEIVED**." The green LED and the call-received status annunciator will flash.

    Note: Any button press, keypad press, or mode change will turn the Call Alert audible and visual indicators off.

2. To answer the page, press the PTT switch. The display constantly shows the current mode; the audible alert, LED, and call-received annunciator turn off. The ID number of the radio that paged you is stored as "the last ID number received."

3. Begin your conversation; all members of your talkgroup will hear your response. Press the PTT switch to talk; release the switch to listen.

Call Alert™ Page Operation

```
PAGE RECEIVED
ZONE1 MUTE1 CALL
```

```
PLANT POLICE
ZONE1 MUTE1 CALL
```

75 | Trunked Radio Features Operation (cont.)

Answering a Call Alert Page With a Private Conversation II Call

1. When a Call Alert page is being received, you will hear a recurring four-beep tone until the call is answered or the radio is reset. The display's top line alternates between showing the current mode and "**PAGE RECEIVED**." The green LED and the call-received status annunciator will flash to indicate that a page is being received.

    Note: Any button press, keypad press, or mode change (except for the light button or volume control) will turn the Call Alert audible and visual indicators off.

2. Press the call response button or call button (both programmed via the RSS), or press the right arrow key until the display shows "**CALL**," then press the key below call. The display will show the ID number of the radio that paged you.

3. Press the PTT switch to transmit the ID number; pause for a second to allow an alert tone to sound in the radio you are calling, then begin speaking. The ID number of the radio calling you is stored as the "last ID number transmitted or received."

4a. If the party you are calling *does not answer* the call, go to step 6 of this procedure to hang up.

or

4b. If the party you are calling *does answer* the call, you will hear his/her voice.

5. Press the PTT switch to carry on a Private Conversation will the called person

6. When you have finished your conversation, or if the radio you are calling does not answer, press the **HOME** key or the page button to hang up. The radio will return to the home display.

Call Alert Page Operation (cont.)

PAGE RECEIVED
ZONE1 MUTED CALL

PLANT POLICE
ZONE1 MUTED CALL

ID: 722588
LIST

PLANT POLICE
ZONE1 MUTED CALL
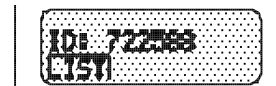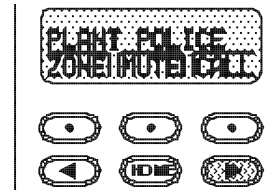
76 | Trunked Radio Features Operation (cont.)

Sending a Call Alert to the Last ID Number Transmitted or Received

1. To send a Call Alert to the last ID number transmitted or received, press the right arrow key (▶) until "**PAGE**" appears on the display.

   Note: If your radio has been so programmed, you can press the page button for quick access to the Call Alert feature. This will take you directly to the "last ID number transmitted or received" display shown in step 2; skip to step 3.
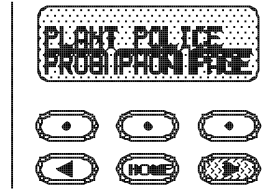
2. Press the key below "**PAGE**." The display shows the last ID number transmitted or received.
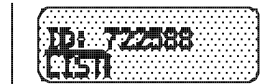
3. Press the PTT switch to send the ID number.
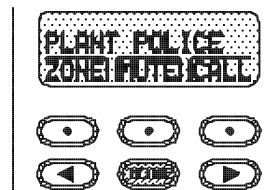
4a. *If you hear one beep*, the ID number has been received by the system, but the radio you are paging is not on the air; your radio remains in the Call Alert mode. You can either go back to step 3 and press the PTT switch to send the ID number again, or press the **HOME** key to hang up and return to the home display.

   Note: If after six seconds the called radio fails to acknowledge the alert, a low-pitched alert tone sounds and the display changes to "**NO ACKNOWLEDGE**." Try again or press the **HOME** key to exit

or

4b. *If you hear five beeps*, the ID number has been received by the system, and the radio you are paging is on the air and has received your page. The radio automatically returns to the home display.

Call Alert Page Operation (cont.)

PLANT POLICE
PROG1 PHON1 PAGE

▶

ID: 722588
LIST

PLANT POLICE
ZONE1 MUTE1 CALL

PLANT POLICE
ZONE1 MUTE1 CALL

77 | Trunked Radio Features Operation (cont.)

Direct Entry of the ID Number to be Call Alert Paged

1. To directly enter the ID number to be Call Alert paged, press the right arrow key (▶) until "**PAGE**" appears on the display.

   Note: If your radio has been so programmed, you can press the page button for quick access to the Call Alert feature. This will take you directly to the "last ID number transmitted or received" display shown in step 2; skip to step 3.

2. Press the key below "**PAGE**." The display changes to show the last ID number transmitted or received. You can now enter the ID number to be paged.

3. Enter the new six-digit ID number from the keypad. On the display, the old ID number disappears and the new digits appear as they are being entered. The cursor flashes to indicate the location of the next number to be entered.

   Notes:

   If fewer than, or more than, six digits are entered and the PTT switch is pressed, you will hear a bad-keypress tone.

   Once you have started entering numbers, the left arrow key (◀) will function as a backspace key. Pressing this key will cause the last digit entered to be erased, and the cursor to move to the left. When the last digit has been erased, an additional press of this key will cause the last member of the preprogrammed call list to be displayed; pressing the right arrow key will show the first member of the list.

Call Alert Page Operation (cont.)

▶ PLANT POLICE
PROGIPRON[PAGE

ID: 722588
[LIST]

ID: 7472
[LIST]

•

• ◀
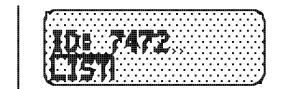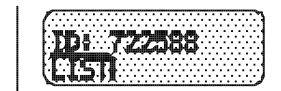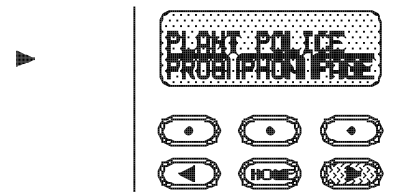
4. Press the PTT switch to send the ID number.

   Note: If the ID number you are trying to send is not a valid ID number for the system, the display will show "**INVALID ENTRY**" for a few seconds, then the radio will go back to the beginning of step 3 again.
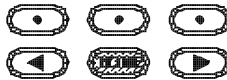
5a. *If you hear one beep*, the ID number has been received by the system, but the radio you are paging is not on the air; your radio remains in Call Alert operation. You can either go back to step 4 and press the PTT switch to send the ID number again, or press the **HOME** key to hang up and return to the home display.

   Note: If after six seconds the called radio fails to acknowledge the alert, a low-pitched alert tone sounds and the display changes to "**NO ACKNOWLEDGE**." Try again or press the **HOME** key to exit.

or

5b. *If you hear five beeps*, the ID number has been received by the system, and the radio you are paging is on the air and has received your page. The radio automatically returns to the home display.

Call Alert Page Operation (cont.)

INVALID ENTRY
LNUM

PLANT POLICE
ZONE MUTE CALL

PLANT POLICE
ZONE MUTE CALL
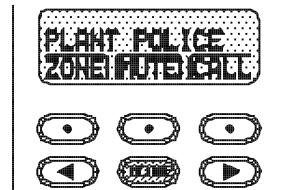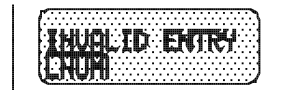
79 | Trunked Radio Features Operation (cont.)

Scrolling to an ID Number in the Call List

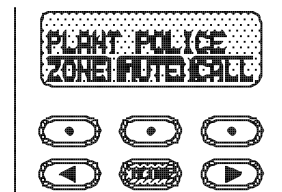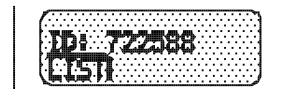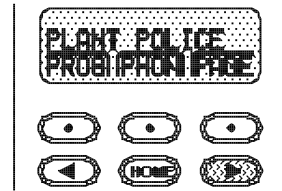1. To scroll to an ID number to be Call Alert paged from the preprogrammed call list, press the right arrow key (▶) until "**PAGE**" appears on the display.
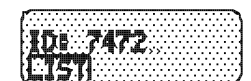
   Notes:

   If your radio has been so programmed, you can press the page button for quick access to the Call Alert feature. This will take you directly to the "last ID number transmitted or received" display shown in step 2; skip to step 3.

   The same list is shared by both Call Alert and Private Conversation features.

2. Press the key below "**PAGE**." The display changes to show the last ID number transmitted or received. You can now select an ID number from the list.

3. To enter the list, press either the right (▶) arrow key or the left (◀) arrow key. The right arrow key will take you forward in the list; the left arrow key will take you backward in the list.

   Note: The last member of the list will be the "last ID transmitted or received." This member can also be found at location "OO" in the list (see "Paging an ID Number at a Location in the Call List").

4. When you stop on a member of a list, the display will alternate between the showing the member's name and the ID number.

Call Alert Page Operation (cont.)

▶

•

•

◀   ▶

PLANT POLICE
PROG1PHON PAGE

ID: 722588
CLST1

BOB SMITH
CNUM

ID: 700825
CNUM
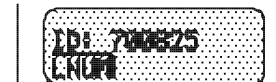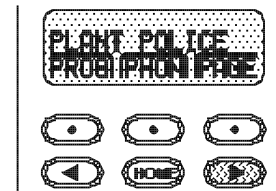
80 | Trunked Radio Features Operation (cont.)

5.   Press the PTT switch to send the ID number.
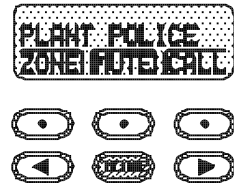
6a. *If you hear one beep*, the ID number has been received by the system, but the radio you are paging is not on the air; your radio remains in the Call Alert mode. You can either go back to step 5 and press the PTT switch to send the ID number again, or press the **HOME** key to hang up and return to the home display.

Note: If after six seconds the called radio fails to acknowledge the alert, a low-pitched alert tone sounds and the display changes to "**NO ACKNOWLEDGE**." Try again or press the **HOME** key to exit

or

6b. *If you hear five beeps*, the ID number has been received by the system, and the radio you are paging is on the air and has received your page. The radio automatically returns to the home display.

Call Alert Page Operation (cont.)

81 | Trunked Radio Features Operation (cont.)

Paging an ID Number at a Location in the Call List

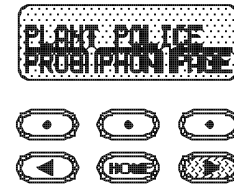1. You can also Call Alert page an ID number at a particular location in the preprogrammed call list (for example, the fifth location in the list would be position "5"). To do this, press the right arrow key (▶) until "**PAGE**" appears on the display.

Notes:

If your radio has been so programmed, you can press the page button for quick access to the Call Alert feature. This will take you directly to the "last ID number transmitted or received" display shown in step 2; skip to step 3.

The same list is shared by both Call Alert and Private Conversation features.

2. Press the key below "**PAGE**." The display changes to show the last ID number transmitted or received. You can now select an ID number from the list.

3. To enter the list, press either the right (▶) arrow key or the left (◀) arrow key. The right arrow key will take you forward in the list; the left arrow key will take you backward in the list.

Note: The last member of the list will be the "last ID transmitted or received." This member can also be found at location "OO" in the list.

4. Enter the first digit of the location number.

   a. If there are fewer than 10 members in the list, the radio goes immediately to that position in the list, and the display alternates between showing that list member's name and ID number. Go directly to step 7.

   b. If there are 10 or more members in the list, the display changes to show "**ID LOC#X_**" (where X is the first digit). The cursor will

Call Alert Page Operation (cont.)

▶

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•

▶   ◀
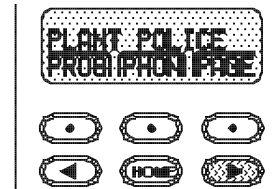
82 | Trunked Radio Features Operation (cont.)

5. Enter the second digit of the location number.

`KAREN CLARK`
`LNUM`

6. The radio goes to that position in the list, and the display alternates between showing that list member's name and ID number.

`ID: 753951`
`LNUM`

`INVALID ENTRY`
`LNUM`

Note: If you enter a location number that does not exist (for example, "24"), the display will show "**INVALID ENTRY**," and the radio will return back to step 4 of this procedure.

7. Press the PTT switch to send the ID number.

`PLANT POLICE`
`ZONE1 MUTE CALL`
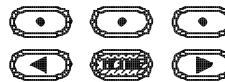
8a. *If you hear one beep*, the ID number has been received by the system, but the radio you are paging is not on the air; your radio remains in the Call Alert mode. You can either go back to step 7 and press the PTT switch to send the ID number again, or press the **HOME** key to hang up and return to the home display.

Note: If after six seconds the called radio fails to acknowledge the alert, a low-pitched alert tone sounds and the display changes to "**NO ACKNOWLEDGE**." Try again or press the **HOME** key to exit.

or

8b. *If you hear five beeps*, the ID number has been received by the system, and the radio you are paging is on the air and has received your page. The radio automatically returns to the home

`PLANT POLICE`
`ZONE1 MUTE CALL`

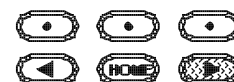Call Alert Page Operation (cont.)

```
KAREN CLARK
LNUM
```

```
ID: 755951
LNUM
```

```
INVALID ENTRY
LNUM
```

```
PLANT POLICE
ZONE1 MUTE1 CALL
```

```
PLANT POLICE
ZONE1 MUTE1 CALL
```

83 | Trunked Radio Features Operation (cont.)

The automatic multiple site selection (AMSS) feature extends communications beyond the reach of a single trunked site (antenna location). In a system where wide-area coverage is required, multiple trunking sites are used.

AMSS automatically switches the radio to a different site when the current-site signal becomes too weak. Typically, this happens when the radio is moved out of the range of one site and into the range of another. Under normal conditions, this switching is invisible to the user.

Viewing the Current Site and Forcing a Site Change

1. Momentarily press the search button (programmed via the RSS).

    a. If the radio is presently locked onto a site, the display will show the number of the current site.

    or

    b. If the radio is scanning for a new site, the display will show "**SCANNING SITE**" until it locks onto a new site, then it will show the number of the new site.

2. Press and hold down the search button to manually force the change to a new site. You will hear a tone and the display will show "**SCANNING SITE**" while the radio scans for a new site.

Then, the radio automatica y returns to the home

Automatic Multiple Site Selection (AMSS)

SITE 4
ZONE3 MUTE3 CALL

SCANNING SITE
ZONE3 MUTE3 CALL

SITE 7
ZONE3 MUTE3 CALL

SCANNING SITE
ZONE3 MUTE3 CALL

84 | Trunked Radio Features Operation (cont.)
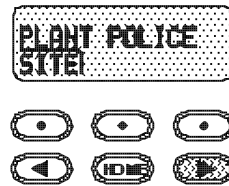
Locking and Unlocking a Site

1. Press the right arrow key (▶) until "**SITE**" appears on the display.

2. Press the key below "**SITE**." The upper line of the display shows the current lock state (in this case "**SITE LOCKED**"); the lower line of the display shows "**LOCK**" and "**UNLK**."

   Note: The search button is still operable, so you can view the current site if you choose.

3. Press the key below the desired lock state. The radio saves the new lock state, then automatically returns to the home display.

Automatic Multiple Site Selection (AMSS)
(cont.)

▶

```
┌──────────────────┐
│ PLANT POLICE     │
│ SITE1            │
└──────────────────┘
  (•)   (•)   (•)
  (◄)  (HOME) (►)
```

```
┌──────────────────┐
│ SITE LOCKED      │
│ LOCK      UNLK   │
└──────────────────┘
```

```
┌──────────────────┐
│ PLANT POLICE     │
│ ZONE1 MUTE  CALL │
└──────────────────┘
```
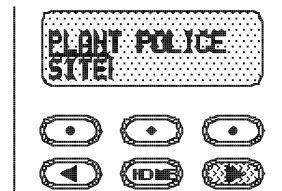
The dynamic regrouping feature allows the dispatcher to temporarily reassign selected radios, operating in the same or different trunked modes, to a single special mode so that they can communicate with each other. This feature, enabled in each radio via the RSS, is typically used during special operations. When your radio has been dynamically regrouped, you will hear a distinct "gurgle" tone.

Mechanical Mode Selection

You will not notice whether your radio has this feature enabled until a dynamic regrouping is sent by the dispatcher. If you turn your radio's mode selector switch to the dynamic-regrouping position without being dynamically regrouped, an invalid-mode tone will be heard.

1. When your radio has been dynamically regrouped, you will hear a "gurgle" tone. Your radio will be automatically switched to the dynamic regrouping mode; the display will show the name assigned to the dynamic regrouping mode.

2. Turn the mode selector switch to the dynamic regrouping position to transmit on the dynamic regrouping mode.

   Note: Until you select the correct position, you will hear a gurgle tone each time you press the PTT switch, reminding you that you are transmitting on the dynamic regrouping mode, not the mode indicated by the position of the mode selector switch.

3. Talk and listen as usual.

4. When the dynamic regrouping is cancelled by the dispatcher:

   a. If the mode selector switch is in the *dynamic regrouping* position, an invalid-mode tone will be heard until a normal mode is selected.

   b. If the mode selector switch is in *any other* mode position, the radio will transmit on the selected mode.
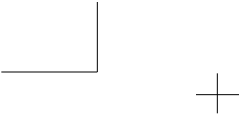
Electronic (Menu) Mode Selection

You will not notice whether your radio has this feature enabled until a dynamic regrouping command is sent by the dispatcher. If you select the dynamic regrouping mode via the menu without being dynamically regrouped, an invalid-mode tone will be heard.

1. When your radio has been dynamically regrouped, you will hear a "gurgle" tone. Your radio will be automatically switched to the dynamic regrouping mode.

2. Talk and listen as usual.

3. When the dynamic regrouping is cancelled by the dispatcher:

   a. If the dynamic regrouping mode was selected, the radio will automatically return to the mode that was selected before the radio was dynamically regrouped.

   b. If the dynamic regrouping mode was not selected, the radio will remain active on the selected mode.

Dynamic Regrouping

Select Enable and Disable

The dispatcher may classify regrouped radios into either of two categories: "select enabled," and "select disabled."

Select-enabled radios are free to make mode changes to any available mode, including the dynamic regrouping mode.

Select-disabled radios cannot change modes, since the dispatcher has specifically chosen to force the radio to remain in the dynamic mode.

Note: Scan, phone, and Private Conversation cannot be selected while the radio is select disabled.

Dynamic Regrouping (cont.)

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Radios that operate in a SmartZone system will enjoy the benefits that SmartZone brings over AMSS operation. Like AMSS, SmartZone is a wide-area coverage system that will allow up to 50 sites to be operational in the system. SmartZone brings several enhancements over AMSS operation such as:

Dynamic Site Assignment - Allows the zone controller to dynamically assign channels at sites where required, as opposed to bringing up channels at all of the sites as AMSS systems do.

Variable Density Sites - SmartZone allows sites to have varying numbers of channel resources to accommodate low-density areas as well as high-density areas.

Automatic Site Registration/De-registration - SmartZone radios automatically send in their unit IDs and current mode selections upon power up, power down, site switches, mode changes, and when they exit emergency operation. This allows the zone controller to know where the radio is at all times, and also what mode the radio has selected.

Critical Site Assignment - One or more sites can be designated as critical sites. This will instruct the zone controller to ensure that, before a channel grant is given to a radio that has been identified as a critical site user, every site that is designated as a critical site must have available channel resources, otherwise a busy signal will be sent to the unit.

Busy Override - This feature allows a SmartZone radio to send a busy-override request if a busy is issued. The zone controller will send a grant even though not all of the sites may have available channel resources.

Enhanced Automatic Site Switching - SmartZone radios will use received signal strength indication (RSSI) to determine if the radio should switch to another site; this will be transparent to the user. In addition, the zone controller continuously transmits up to seven adjacent site IDs (along with their active control modes) to the radios, so that the radio, at any time, will be able to quickly switch to the next site that has the highest RSSI rating, since the control mode and site ID is known in advance. This is an enhancement over AMSS systems.

Preferred Site—SmartZone radios can program certain sites to be *always* preferred, *most* preferred, or *least* preferred. This gives the user the flexibility to keep a radio on a particular site, regardless of the presence of a stronger signal from an adjacent site. This also forces the radio to always look for its preferred site and use it whenever possible.

Site Trunking—If the zone controller loses communication with any site, that site will revert to what is known as "site trunking." While in this condition, radios will still be able to operate in the trunking mode, but trunking operations will be limited to the site only.

Enhanced Failsoft Operation—If a site experiences a complete failure, it will revert to failsoft operation like today's SMARTNET system. A SmartZone radio, however, can be programmed to automatically migrate to the lowest failsoft

SmartZone™ Operation

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Site Switching in SmartZone

Site switching in SmartZone mainly uses signal strength to determine whether or not to switch sites. Other factors used to determine whether the radio should switch sites are the radio's preferred site selection (which is programmable via the RSS), and whether the radio is site locked or not. Because the radio knows, at all times, the site ID, active control mode, and the signal strengths of its adjacent sites, the radio is capable of quickly switching sites. Under normal conditions this is invisible to the user.

Viewing the Current Site and Forcing a Site Change

1. Momentarily press the search button (programmed via the RSS).

    a. *If the radio is presently locked onto a site*, the display will show either the name of the current site or the site number (determined by RSS programming).

    b. *If the radio is scanning for a new site*, the display will show "**SCANNING SITE**" until the radio locks onto a new site. This is a timed display which will disappear after a few seconds.

    c. *If the radio has not yet received a site ID outbound signalling word (OSW)*, the radio will display "**SITE XX**" until either the display times out or the radio receives the site ID OSW.

2. Press and hold down the search button to manually force the change to a new site. You will hear a tone and the display will show "**SCANNING SITE**" while the radio scans for a new site.

3. When a new site is found, the new site's name will be momentarily displayed if it is known, otherwise "**SITE XX**" will be displayed.

Locking and Unlocking a Site

As in an AMSS radio, the user can force the radio to stay locked onto a site regardless of whether the signal level of an adjacent site is higher or not. Of course, locking a radio onto a particular site will defeat the automatic site switching mechanisms of the radio. Note that you can still force the radio to scan to another site while site-locked. The radio will automatically become site-locked to the next site it finds. Refer to the section on AMSS operation for a description of how to enter the radio into and out of the locked state.

SmartZone Operation (cont.)

Preferred Site Selection

SmartZone radios can have up to eight sites that are individually set as either "always preferred," "most preferred," "non preferred", or "least preferred." The default value is non preferred. This feature is programmed via the RSS.

Always-Preferred Site—A SmartZone radio will always attempt to stay on this site whenever possible, unless the received signal strength indication (RSSI) level falls below the unacceptable level. The radio will periodically check the RSSI levels of its preferred site(s) to ensure that it will always operate on the best preferred site (more than one preferred site can be enabled).

Most-Preferred Site—A site marked in this fashion is one level of preference below "always preferred." The radio will attempt to remain on this site unless an always-preferred site has been determined to have either the same, or a higher RSSI level. The radio will always determine the best most-preferred site and switch to it whenever possible.

Non-Preferred Site—A radio operating in this site will switch sites if an always-preferred or most-preferred adjacent site with the same or higher RSSI level is discovered. The radio will always determine the best non-preferred site and switch to it whenever possible.

Least-Preferred Site—A radio operating in this site will switch sites if any of the above site rankings for any adjacent sites are discovered and their RSSI levels are at least at the acceptable range. The unit will always determine the best least-preferred site and switch to it whenever possible.

Busy Override

With the introduction of dynamic site assignment, critical site, and critical user concepts in SmartZone, the busy processing rules were changed in order to allow users to establish communication with *some* of the trunked mode members, instead of waiting for all trunked mode members in all sites to be available. A busy-override request can be made to request the grant even though one or more *non-critical* sites are busied. Busy override is not a radio codeplug option, but it is enabled or disabled via the SmartZone manager.

1. Assume that you have requested a mode by pressing the PTT, and have received a busy indication. Release the PTT and press it again. A busy indication will be received if modes are still busy.

2. Keep the PTT switch pressed for the amount of time specified in the codeplug for "busy override delay time" (typically about three seconds, but it can range from two to six seconds). After the timer times out, if the PTT is still pressed, the busy override request will be sent.

3. A programmable busy override chirp acknowledgement will be sounded when the busy override request is sent.

4. If a grant is received, you should be aware that not all of the members of the mode may be engaged in the call. You will not be able to determine this.

SmartZone Operation (cont.)

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Site Trunking

Site trunking occurs when a site is no longer able to participate in wide-area calls controlled by the zone controller. Radios operating in site trunking can only communicate with other radios at that site. All trunking features are still available. The radio will, of course, always be looking for a wide-area trunking site to lock onto if it roams into range of one. Also, busied call requests will automatically be queued at the new site if a site switch is done.

1. When a site goes into site trunking, the radio will receive this indication and will display "**SITE TRUNKING**."

2. The display will alternate between the current trunked mode and the site trunking display for as long as the radio remains in site trunking. A radio-wide codeplug option will specify whether a site-trunking indication will be displayed or not.

3. The radio will not be considered in site trunking if:

   a. The zone controller determines that the site should no longer be in site trunking and the radio receives this indication, or

   b. the radio is out of range, or

   c. the radio enters failsoft operation.

SmartZone Operation (cont.)

The SABER SI radio receives its power (7.5Vdc) from a rechargeable nickel-cadmium battery as listed in the accessories section. These batteries are a safe, dependable power source for your radio. Proper care of the battery will ensure its effectiveness and allow for peak radio performance.

Recharge the battery before use to ensure optimum capacity and performance. The battery was designed specifically to be used with a Motorola SABER charger. Charging in non-Motorola equipment may lead to battery damage and void the battery warranty.

Note: When charging a battery that is attached to the radio, turn the radio off to ensure a full charge.

The battery should be at about 77°F (room temperature) whenever possible. Charging a cold battery (below 50° F) may result in leakage of electrolyte and ultimately, in failure of the battery. Charging a hot battery (above 95°F) results in reduced discharge capacity, affecting the performance of the radio. SABER SI rapid-rate battery chargers contain a temperature-sensing circuit to ensure that the battery is charged within these temperature limits.

Care should be taken to avoid external short circuiting of the battery.

Memory effect was a phenomenon which caused a temporary loss in battery capacity or voltage due to repetitive shallow discharging or long-term overcharging. This memory effect has been virtually eliminated from Motorola batteries through the use of new cell technology.

For disposal, nickel-cadmium sealed rechargeable batteries should be

Battery Information

Recharging Nickel-Cadmium Batteries

WARNING: Do not attempt to change or charge the battery in a hazardous atmosphere.

Charging Temperature

Short Circuit

WARNING: A sustained high-rate discharge (for example, a paper clip placed accidentally across the battery contacts) may permanently damage the battery, void the battery warranty, and create a burn or fire hazard.

Memory Effect (Reduced Charge Capacity)

Nickel-Cadmium Battery Disposal

Motorola offers several accessories to increase communications efficiency. Many of the accessories available are listed below, but for a complete list, consult your local Motorola representative.

Antennas:

NAF5037	Whip (800MHz)
NAF5039	Dipole (800MHz)
NAF5042	Quarter Wave, Stubby (800MHz)

Batteries:

NTN4593	Medium-Capacity Nickel-Cadmium
NTN4595	Ultra-High-Capacity Nickel-Cadmium
NTN7014	Medium-Capacity Nickel-Metal-Hydride
NTN7251	High-Capacity Nickel-Metal-Hydride

Battery Chargers:

NLN7967	Wall-Mount Kit for Multi-Unit Charger
NLN7968	Rack-Mount Kit for Multi-Unit Charger
NTN5564	SABER Pocket Adapter (for MX Rapid-Rate Chargers Only)
NTN7258	Single-Unit Desktop, Rapid-Rate, 117Vac
NTN7259	Multi-Unit Desktop, Rapid-Rate, 117Vac
NTN7260	Single-Unit Desktop, Rapid-Rate, 220Vac (2-Prong Euro Plug)
NTN7261	Multi-Unit Desktop, Rapid-Rate, 220Vac (2-Prong Euro Plug)

Porta-Pocket Chargers (Regular 16-Hour Charge Rate):

HKN6289	12-Volt DC Ignition Wiring Cable (Includes Dash-Mount Bracket)
HKN6290	12-Volt DC Cigarette Lighter Receptacle Cable (Includes Dash-Mount Bracket)
NLN9559	Spare Dash-Mount Bracket for Radio Belt Clip
NTN5563	Single-Unit With 110Vac Power Supply/Cable

Audio Accessories:

NMN6187	Noise-Cancelling Remote Speaker/Microphone With Coiled-Cord Assembly, Earjack, and Swivel Clip
NMN6189	Swivel Clip Back Replacement for Remote Microphones
NMN6190	Swivel Clip with Button Back Replacement for Remote Microphones
NMN6197	Remote Speaker/Microphone
NMN6198	Noise-Cancelling Remote Speaker/Microphone
NMN6199	Remote Speaker/Microphone With Coiled-Cord Assembly, Earjack, and Swivel Clip
NTN5581	Thumbscrew (for Standard Screw Replacement)
NTN5627	Button Snap for Remote Microphones

Accessories List

Headset Accessories:

BDN6640   Headset Adapter Cable (Use With BDN6635, BDN6636, BDN6645)

BDN6635   Noise-Cancelling Boom Microphone Headset With VOX (Use With BDN6640)

BDN6636   Noise-Cancelling Throat Microphone Headset With VOX (Use With BDN6640)

BDN6645   Noise-Cancelling Boom Microphone Headset With PTT (Use With BDN6640)

NMN6050   Headset/Microphone, Safety Helmet (Use With NMN5665)

NTN5913   Headset Adapter Cable With Bayonet Jack (Use With NMN6050)

NTN5914   Headset Adapter Cable With Phono Jack (Use With Existing NMN6064 and NMN6065 Headsets)

Surveillance Accessories:

BDN6664   Earpiece With Standard Earphone (Use With BDN6713)

BDN6665   Earpiece With Extra-Loud Earphone (Exceeds OSHA Limits) (Use With BDN6713)

BDN6666   Earpiece Speaker With Volume Control (Use With BDN6713)

BDN6667   Earpiece, Microphone and PTT Combined (Use With BDN6713)

BDN6668   Earpiece, Microphone and PTT Separate (Use With BDN6713)

BDN6669   Earpiece, Microphone and PTT Combined With Extra-Loud Earpiece (Exceeds OSHA Limits) (Use With BDN6713)

BDN6670   Earpiece, Microphone and PTT Separate With Extra-Loud Earpiece (Exceeds OSHA Limits) (Use With BDN6713)

BDN6713   3.5mm Jack Adapter (Use With BDN6664, BDN6665, BDN6666, BDN6667, BDN6668, BDN6669, BDN6670)

NTN5664   SABER Surveillance Accessory Adapter With Keyload Capability

Accessories List (cont.)

Carrying Accessories:

NLN4529   2.5" Leather Swivel Belt Loop

NLN4530   3.0" Leather Swivel Belt Loop

NLN6349   Shoulder Carry Strap

NLN8559   Epaulet Strap

NTN4788   Removable Belt Clip Attachment

NTN5575   T-Strap for Leather Carry Cases

NTN5576   Leather Standard-Snap Carry Case with Snap Belt Loop for Medium-Capacity Nickel-Metal-Hydride Battery

NTN5577   Leather Standard-Snap Carry Case with Snap Belt Loop for Medium-Capacity Nickel-Cadmium or High-Capacity Nickel-Metal-Hydride Battery

NTN5578   Leather Standard-Snap Carry Case with Snap Belt Loop for Ultra-High-Capacity Nickel-Cadmium Battery

NTN5579   Leather Swivel-Snap Carry Case for Medium-Capacity Nickel-Metal-Hydride Battery

NTN5580   Leather Swivel-Snap Carry Case for Medium-Capacity Nickel-Cadmium or High-Capacity Nickel-Metal-Hydride Battery

NTN5644   Leather Swivel-Snap Carry Case for Ultra-High-Capacity Nickel-Cadmium Battery

NTN5728   Removable Swivel "D" Bracket Attachment for Use With Swivel Belt Loop

NTN7062   Nylon Standard-Snap Carry Case with Snap Belt Loop for SABER R Ultra-High-Capacity Nickel-Cadmium Battery

NTN7216   Nylon Swivel-Snap Carry Case for SABER R Ultra-High-Capacity Nickel-Cadmium Battery

NTN7527   Nylon Standard-Snap Carry Case with Snap Belt Loop for Medium-Capacity Nickel-Metal-Hydride Battery

NTN7528   Nylon Standard-Snap Carry Case with Snap Belt Loop for Medium-Capacity Nickel-Cadmium or High-Capacity Nickel-Metal-Hydride Battery

NTN7529   Nylon Standard-Snap Carry Case with Snap Belt Loop for Ultra-High-Capacity Nickel-Cadmium Battery

NTN7530   Nylon Swivel-Snap Carry Case for Medium-Capacity Nickel-Metal-Hydride Battery

NTN7531   Nylon Swivel-Snap Carry Case for Medium-Capacity Nickel-Cadmium or High-Capacity Nickel-Metal-Hydride Battery

NTN7532   Nylon Swivel-Snap Carry Case for Ultra-High-Capacity Nickel-Cadmium Battery

NTN7533   T-Strap for Nylon Carry Cases

NTN7534   2.5" Nylon Swivel Belt Loop

Miscellaneous:

Several conditions determine the distance that your radio will transmit a clear data/voice communication. The following list describes many conditions and their typical affect on your radio's transmitting distance.

Condition	Description	Effect
radio's power	more power	longer distance
radio's frequency	lower frequency (VHF compared to UHF)	longer distance
radio's tuning	properly tuned radio (on frequency, more power)	longer distance
stormy weather	adverse atmospheric conditions	shorter distance
at sea	better ground plane (clearer line-of-sight)	longer distance
city	large/tall buildings (interference problems)	shorter distance
in a building	structural boundaries (interference problems)	shorter distance
on a tall building's roof	less interference (clearer line-of-sight)	longer distance
in a subway	below ground level (interference problems)	shorter distance
on top of a hill	less interference (clearer line-of-sight)	longer distance
intervening hills	more interference (no line-of-sight)	shorter distance
inside a vehicle	metal structure (interference problems)	shorter distance

Cleaning

Clean external surfaces of the radio with a mild detergent and a stiff, non-metallic, short-bristled brush. A suitable detergent solution may be mixed by adding one teaspoon of mild dishwashing detergent to one gallon of water (0.5% solution). Apply the detergent solution sparingly with the brush, being careful not to allow excess detergent to remain entrapped near connectors and controls or in cracks and crevices. Do not submerse the radio in the detergent solution. Dry the radio thoroughly with a soft, lint-free cloth.

Clean all battery contacts with a lint-free cloth to remove dirt, grease, or other foreign material that may prevent good electrical connections.

Handling

Avoid physical abuse; do not pound, drop, or throw the radio unnecessarily. Do not carry the radio by the antenna.

Avoid subjecting the radio to an excess of liquids. Never allow the radio to become submersed.

Avoid subjecting the radio to corrosives, solvents, or spirits.

Do not disassemble the radio in any way. Keep the connector cover in place

Transmitting Distance

Radio Care

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CAUTION

Clean the radio with the recommended solution only. Cleaning the radio with solvents or spirits may be harmful and permanently damage the radio housing.

The Federal Communications Commission (FCC), with its action in General Docket 79-144, March 13, 1985, has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Motorola subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure substantially below FCC recommended limits:

Do not hold the radio with the antenna very close to, or touching, exposed parts of the body, especially the face, ears, or eyes, while transmitting. Hold the radio in a vertical position with the microphone two to three inches away from the lips.

Do not hold the transmit switch (PTT) on when not actually desiring to transmit.

Do not allow children to play with any radio equipment containing a transmitter.

Do not operate radio transmitters near explosive blasting caps.The transmitted radio energy may trigger a blasting cap and cause an explosion.

Do not operate radio transmitters in an explosive atmosphere unless it is a type especially qualified for such use. An explosion may result.

Do not replace or charge batteries in a hazardous atmosphere. Contact sparking may occur while installing or removing batteries and cause an explosion.

Turn radio off when removing or installing a battery.

Anyone intending to use a radio in a hazardous area is advised to become familiar with the subject of intrinsic safety and with Section 70 of the National Fire Code, which is commonly referred to as Article 500 of the National Electric Code. Use of anything but factory supplied components may affect the approval and safety of the radio. Likewise, it is advised that servicing should be performed only by qualified personnel who adhere to the following Factory Mutual (FM) required warning:

FCC Safety Standards

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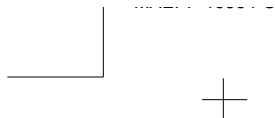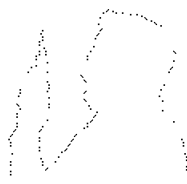
Because this radio contains a transmitter, federal law prohibits unauthorized, non-licensed personnel from adjusting or maintaining it. If any operational difficulties should arise while using this product, report them to authorized service personnel as soon as possible.

Proper repair and maintenance procedures will assure efficient operation and long life for this product. A Motorola maintenance agreement will provide expert service to keep this and all other communication equipment in perfect operating condition. A nationwide service organization is provided by Motorola to support maintenance services. Through its maintenance and installation program, Motorola makes available the finest service to those desiring reliable, continuous communications on a contract basis.

Motorola's Customer Service Division is the largest service organization specializing in mobile communications. It includes over 900 authorized or company-owned stations. In addition, our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations. For a contract service agreement, please contact your nearest Motorola service representative, authorized Motorola dealer, or Motorola sales representative. If you suspect a radio problem, check the following items before requesting service.

1. Radio Checks

    Be sure the radio is turned on and the mode selector is in the proper position.

    Replace or recharge the battery. The first time a new battery is used, it should charge a minimum of 16 hours.

    The antenna must be screwed on properly, with its base flush against the top of the radio.

    Could your radio problem be caused by accessories improperly connected?

    Try operating the radio from several different locations, especially when using the radio inside buildings.

    Check the transmitter by transmitting to an alternate portable radio.

2. Operating Instructions

    Review your operating instructions and ensure that you are using the radio properly.

3. Problem Not Solved

    If, after following steps 1 and 2, your radio still has a problem, review your service agreement and call the applicable Motorola service representative. If you do not have a service agreement on your radio, contact your nearest

Restrictions

WARNING: Do not attempt any unauthorized modification to the radio.

Service

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Express Service Plus (ESP) is an optional extended service coverage plan. ESP provides for the repair of this product, at the Motorola Service Depot listed in step 3, below, for a period of three years (one year warranty plus two years of extended service) from the date of shipment from the factory, or the date of delivery if purchased from an authorized Motorola two-way radio dealer. If ESP has been purchased, the serial number of this product has been registered for coverage under Express Service Plus at the depot listed in step 3, below.

To obtain service under Extended Service Plus:

1. Check to make sure the battery or battery charger of the unit is not defective. (Batteries and chargers are excluded from this service plan).

2. Include the following information:

    Your name

    Company name

    Address

    Telephone number

    A brief description of the nature of the problem or failure (be specific)

3. Pack and ship the unit (prepaid) to:

    Motorola Factory Service Center

    1700 N.W. 65th Avenue

    Plantation, FL 33313

    Express Service Plus is subject to Motorola standard terms and conditions. ESP does not include repairs which will be necessary due to damage caused by accidents, physical abuse or misuse of the product(s), acts of God, and fires. Batteries, battery chargers, and external accessories are excluded from this plan. Service under ESP is available only at the service center listed herein.

    If you are unsure as to whether your radio is covered under Express Service Plus, call the depot at (305) 475-6408.

Express Service Plus (ESP)

Patent Disclosure

This product is covered by one or more of the following United States patents:

4,512,035	4,551,856	4,653,117	4,816,774
4,829,594	4,837,853	4,864,252	4,885,550
4,914,321	4,918,403	4,959,617	4,975,650
4,994,768	5,006,730	5,021,754	5,079,526

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