CONTENTS

i

COMPUTER SOFTWARE COPYRIGHTS

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SAFETY

PRODUCT SAFETY AND RF EXPOSURE COMPLIANCE

⚠️ **Caution**

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet enclosed with your radio.

ATTENTION!

This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements. Before using this product, read the RF energy awareness information and operating instructions in the Product Safety and RF Exposure booklet enclosed with your radio to ensure compliance with RF energy exposure limits.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following web site which lists approved accessories: http://www.motorola.com/cgiss/index.shtml.

1

Notes

2

RADIO OVERVIEW

PARTS OF THE RADIO

Red/Yellow/Green
LED Indicators

Channel Selector
(Up/Down)

Programmable
Button 3 (P3)
(Interchangeable)

LCD Screen

On/Off/Volume
Knob

MOTOROLA

P1

P2

P3

P4

Microphone
Jack

Programmable
Button 1 (P1)
(Interchangeable)

Programmable
Button 2 (P2)
(Interchangeable)

Programmable
Button 4 (P4)
(Interchangeable)

3
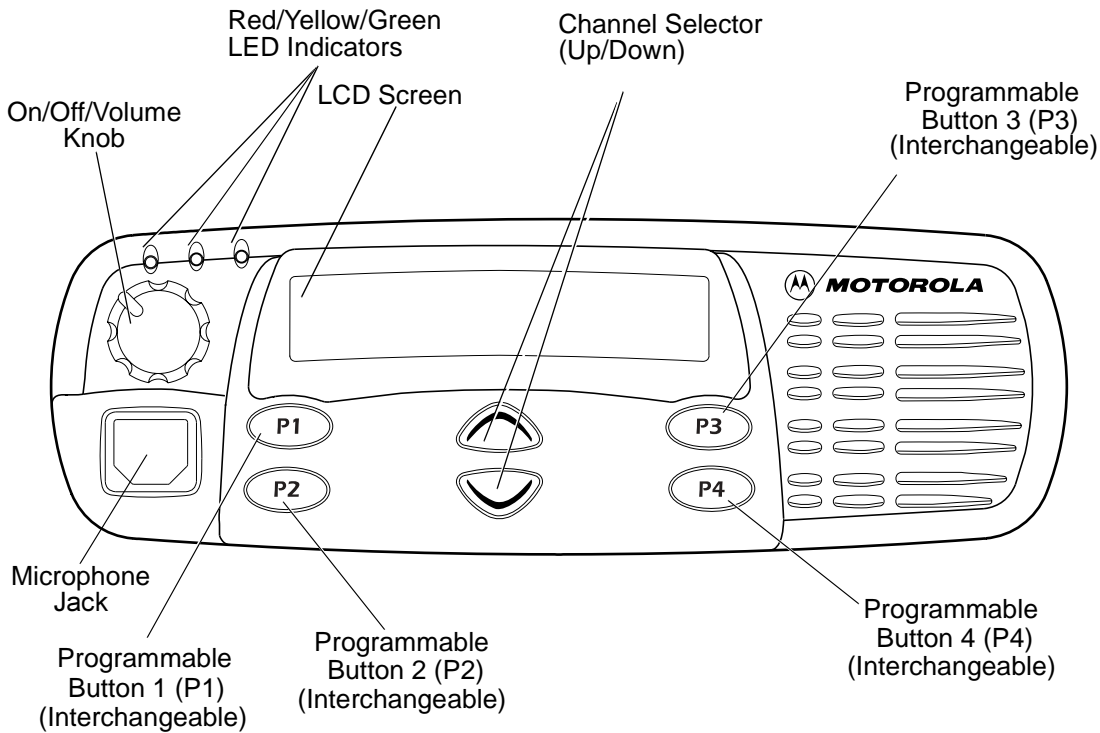
Optional Enhanced Keypad Microphone (RMN4026)

Your radio may be ordered with an optional DTMF (Dual-Tone Multi-Frequency) microphone that has a direct entry keypad. This enhanced keypad microphone has three buttons (A, B, C) below the keypad that can be programmed to conveniently activate select radio features.

By purchasing this enhanced keypad microphone, you will be able to gain access to menu capabilities and the radio's user-selectable features.

Push-to-Talk (PTT) button

Keypad

Programmable Buttons (A, B, C)

4
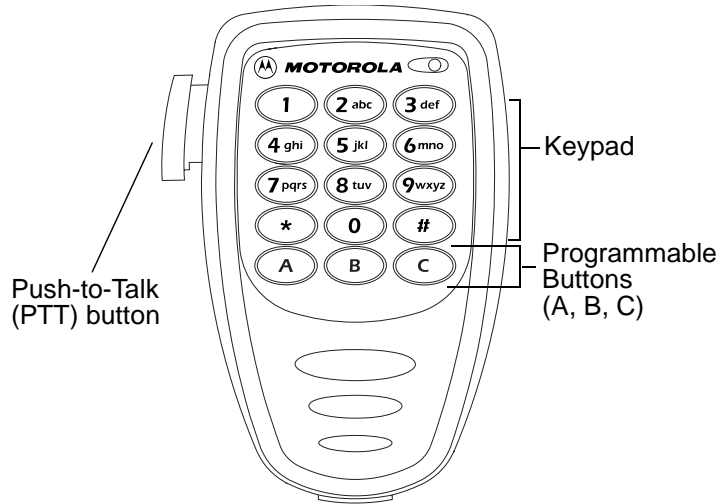
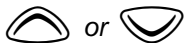**On/Off/Volume Knob**

Turns the radio on or off, and adjusts the radio's volume.

Channel Selector Buttons

⌃ or ⌄

Used for channel scrolling.

LED Indicators

Indicates channel, scan, and monitor status, as well as receipt of a selective call.

Programmable Buttons

Your radio has several programmable buttons. Your dealer can program these buttons as shortcuts to various radio features.

Check with your dealer for a complete list of functions your radio supports.

Programmable buttons include the ⌷P1⌷, ⌷P2⌷, ⌷P3⌷, and ⌷P4⌷ buttons (see page 3).

Some buttons can access up to two features, depending on the type of button press:

- short press—quickly pressing and releasing the programmable buttons
- long press—pressing and holding the programmable buttons for a period of time (default 1 1/2 seconds or programmed value)
- hold down—pressing and holding down the programmable buttons while checking status or making adjustments

A summary of programmable radio features and corresponding page references appears beginning on page 6.

In the "Button" column, have your dealer record the name of the programmable button next to the feature that has been programmed to it.

The dealer can use the abbreviations (P1, P2, P3, P4) shown in the radio illustration on page 3.

Also, where appropriate, have your dealer indicate whether the button press requires a short press, a long press, or needs to be held

RADIO OVERVIEW

5

down.

Function	Indicator	Short Press	Long Press	Hold Down	Page	Button
Volume Set	—	—	—	Sound a tone for adjusting your radio's volume level.	11	
Home Revert	—	Takes you directly to a preprogrammed zone/channel combination.†		—	12	
Direct Zone Access	—	Direct entry to zone selection menu.†		—	12	
Direct Channel Access	—	Direct entry to channel selection.† (Enhanced keypad microphone required.)		—	13	
PRTT (Priority Request-to-Talk)	—	Sends a priority access request to the dispatcher.		—	13	
Emergency	△	Initiate Emergency Alert.	Cancel Emergency status.	—	21	
Repeater/ Talkaround	⊢→⊢	Toggle between using a repeater or transmitting directly to another radio.†		—	24	
Power Level	LH	Toggle transmit power level between High and Low.†		—	25	
Scan/Nuisance Channel Delete	⇄	Toggle scan on and off.	Delete a nuisance channel while scanning.	—	29	
Phone	☎	Access Phone Mode.†		—	35	

6

Function	Indicator	Short Press	Long Press	Hold Down	Page	Button
† This function is activated by EITHER a short OR a long press, but not both.						
Speed Dial	—	Access your phone list directly.†		—	36	
Monitor	▷	Toggle silent monitor operation (also turn off open squelch monitor when it has been activated).	Turn on open squelch monitor.	—	—	
Option Board (if one is installed)	▨	Toggle between activating and deactivating the option board.†		—	—	
Radio Call	—	Access the radio call menu.†		—	—	
Light	—	Adjust brightness level (off/low/med/high).†		—	—	
Auxiliary Control (1/2)	—	Activate or deactivate a pin on the accessory connector.† (See your dealer.)		—	—	
Menu/Enter		Enter the menu or confirm selection.†		—	—	
Exit		Step one level back in the menu.	Exit the menu.	—	—	
Up/Down		Step through menu choices.		—	—	
Horn and Lights	—	Toggle external alarm feature or cancels a triggered alarm.†		—	—	

† This function is activated by EITHER a short OR a long press, but not both.

Push-to-Talk (PTT) Button

Press and hold down this button to talk; release it to listen.

Microphone

Hold the microphone 1 to 2 inches (2.5 to 5 cm) from your mouth, and speak clearly into it.

Use with Enhanced Keypad Microphone (RMN4026)
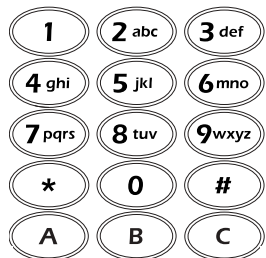
These keys are used to:

- Dial a phone number
- Make a radio call
- Directly access preprogrammed features

LCD Screen

The top screen row displays radio status information:

Symbol	Indication
Companding	The Companding feature is activated. When in narrow band, this feature improves audio quality.
∟H **Power Level**	Low Power "∟" or High Power "H" is activated.
▷ **Carrier Squelch (CSQ)**	The radio is on a CSQ channel, monitor is active, or the microphone is off-hook.
☾ **Phone**	Phone Mode is selected.

8

Symbol	Indication
⚠ **Emergency**	An Emergency Alert is being sent.
♪ **Call Received**	A Selective Call or Call Alert has been received.
⇄ **Scan**	The Scan feature is active.
⇄☀ **Priority 1 Scan** (● **flashing)**	During Scan, indicates that the scan has locked on to a priority 1 channel.
⇄● **Priority 2 Scan** (● **steady)**	During Scan, indicates that the scan has locked on to a priority 2 channel.
|→| **Talkaround**	The radio is not transmitting through a repeater.
▢ **Programming Mode**	The radio is in Program List editing mode.

Symbol	Indication
▼ꜟꜟꜟꜟ **Signal Strength**	Indicates signal strength. The more bars, the stronger the signal.
⍥ **Option Board**	Option board is enabled.
◰	**Not currently assigned.**
⊘	**Not currently assigned.**

9

AUDIO INDICATORS FOR PROGRAMMABLE BUTTONS

Low-High Tone

High-Low Tone

In addition to having associated visual indicators, some programmable buttons use tones to indicate one of two modes:

Button	Low-High Tone	High-Low Tone
Scan	Start scan	Stop scan
Power Level	High power selected	Low power selected
Option Board	Enabled	Disabled
Repeater/ Talkaround	Does not use repeater	Uses repeater

10

GETTING STARTED

TURNING THE RADIO ON OR OFF

ON	OFF
Push the **On/Off/Volume Control** knob until you hear a click. If power-up is successful, you will hear the Self-Test Pass Tone (if programmed) ⎍⎍ . If the radio fails to power up, you will hear the Self-Test Fail Tone ⎍ .	Push the **On/Off/Volume Control** knob until you hear a click and the display clears.

ADJUSTING THE VOLUME

Turn the **On/Off/Volume Control** knob clockwise to increase the volume, or counterclockwise to decrease the volume.

–or–

1 Hold down the **Volume Set** button (see page 6). You will hear a continuous tone.

2 Turn the **On/Off/Volume Control** knob to the desired volume level.

3 Release the **Volume Set** button.

11

SELECTING A ZONE

A zone is a group of up to 16 channels. Before you can access a channel in a zone, you must select the zone in one of two ways:

Method 1 (if programmed by your dealer [see pages 6 - 7])

1 Press the **Direct Zone Access** button.

2 ⌃ or ⌄ until you reach the desired zone.

3 Press the **Direct Zone Access** button to select the zone.

Method 2 (enhanced keypad microphone required)

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ or ⌄ until ⌈ Zone ⌉

3 Press the **Menu/Enter** button to select ⌈ Zone ⌉

4 ⌃ or ⌄ until you see the desired zone name.

5 Press the **Menu/Enter** button to select the zone.

SELECTING A RADIO CHANNEL

Your radio offers 64 channels (4 zones of 16 channels each).

Note: Due to government regulations, some channels may not be programmed. See your dealer for more information.

There are three ways to select a channel:

Method 1

1 Select the appropriate Zone, if required.

2 ⌃ or ⌄ until you reach the desired channel, shown on the LCD display.

Method 2 (if programmed by your dealer [see pages 6 - 7])

Press the **Home Revert** button.

12

Method 3 (if programmed by your dealer [see pages 6 - 7]. Enhanced keypad microphone required.)

1   Press the **Direct Channel Access** button.

2   Enter the desired channel using the enhanced keypad microphone.

3   Press the **Direct Channel Access** button to confirm your selection.

SENDING A CALL

1   Turn your radio on.

2   ⌃ *or* ⌄ to select the desired channel.

3   Hold the microphone vertically 1 to 2 inches (2.5 to 5 cm) from your mouth. Press the **PTT** to talk; release it to listen.

If your system uses the request-to-talk feature, use the following method to send a call:

1   Turn your radio on.

2   ⌃ *or* ⌄ to select the desired channel.

3   Press the **PTT** (for priority requests to talk, the **PRTT**) button and wait for the talk permit tone.

4   Hold the microphone vertically 1 to 2 inches (2.5 to 5 cm) from your mouth. Press the **PTT** to talk; release it to listen.

RECEIVING A CALL

1   Turn your radio on.

2   Adjust the radio's volume, if necessary (see page 11).

3   Select the desired channel.

4   To respond, hold the microphone vertically 1 to 2 inches (2.5 to 5 cm) from your mouth. Press the **PTT** to respond to an incoming call; release it to listen.

13

Notes

RADIO CALLS

MAKING A SELECTIVE CALL
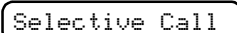
You can make a selective call to a particular radio or group of radios, provided the signalling protocol supports it.

Note: An enhanced keypad microphone is required to operate this feature.

To make a Selective Call:

Method 1

1   Press the **Radio Call** button to enter Menu mode.

2   ⌃ *or* ⌄ until | Selective Call |

3   Press the **Radio Call** button to select | Selective Call |

4   ⌃ *or* ⌄ to locate the desired ID in the Radio Call list;

   –or–

   using the enhanced keypad microphone, enter the ID number of the radio you want to call.

5   Press the **PTT** to send the call. The radio sounds a continuous tone.

6   Press the **PTT** to talk; release it to listen.

7   When finished with the call, press the **Radio Call** button to exit.
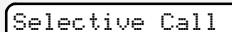
Method 2

1   Press the **Menu/Enter** button to enter Menu Mode.

2   ⌃ *or* ⌄ until | Radio Call |

3   Press the **Menu/ Enter** button to select | Radio Call |

4   ⌃ *or* ⌄ until | Selective Call |

5   Press the **Menu/ Enter** button to select | Selective Call |

15

6 ⌃ *or* ⌄ to locate the desired ID in the Radio Call List;

   –or–

using the enhanced keypad microphone, enter the ID number of the radio you want to call.

7 Press the **PTT** to send the call. The radio sounds a continuous tone.

8 Press the **PTT** to talk; release it to listen.

9 When finished with the call, press the **Exit** button to return to

   `Selective Call`

   –or–

Hold down the **Exit** button to exit Menu Mode.

RECEIVING A SELECTIVE CALL ♪

When you receive a selective call:

- You will hear two alert tones.
- The yellow LED Indicator flashes.
- The LCD screen displays ♪ and the preprogrammed name or ID of the calling radio, if available.

SENDING A CALL ALERT™ PAGE

You can alert another person by sending a Call Alert page.

Note: An enhanced keypad microphone is required to operate this feature.

To send a Call Alert page:

Method 1

1 Press the **Radio Call** button to enter Menu Mode.

2 ⌃ *or* ⌄ until

   `Call Alert`

3 Press the **Radio Call** button to select

   `Call Alert`

4 ⌃ *or* ⌄ to locate the desired ID in the Radio Call list;

   –or–

using the enhanced keypad microphone, enter the ID number of the radio you want to page.

5 Press the **PTT** to send the page. You will see

   `Call In Prog`

6 If the Call Alert page is received,

you will see
```
Acknowledge
```

If not,
you will see
```
No Acknowledge
```

7 Press the **Exit** button
to return to
```
Call Alert
```
–*or*–

Hold down the **Exit** button to exit Menu Mode.
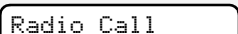
Method 2

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ *or* ⌄ until
```
Radio Call
```

3 Press the **Menu/Enter** button to select
```
Radio Call
```

4 ⌃ *or* ⌄ until
```
Call Alert
```

5 Press the **Menu/Enter** button to select
```
Call Alert
```

6 ⌃ *or* ⌄ to locate the desired ID in the Radio Call List;

–*or*–

using the enhanced keypad microphone, enter the ID number of the radio you want to page.

7 Press the **PTT** to send the page.

You will see
```
Call In Prog
```

8 If the Call Alert page is received,

you will see
```
Acknowledge
```

If not,
you will see
```
No Acknowledge
```

9 Press the **Exit** button
to return to
```
Call Alert
```

–*or*–

Hold down the **Exit** button to exit Menu Mode.

RECEIVING A CALL ALERT PAGE

When your radio receives a Call Alert page, it sounds four alert tones continuously and the following are displayed until you respond:

17

the ♪ symbol, and the ID of the calling radio alternating with ⌊ Call Received ⌋ .

Press the **PTT** to answer the page, or press any other key to clear it.

Note: Your radio will display only the last Call Alert page received. Also, your radio will not receive any Selective Calls until you clear the page.

RADIO CHECK

This feature allows you to determine if a radio is in range without disturbing the user of the radio. Radio Check can also be used when attempts with Selective Call and Call Alert fail. (This feature is available only if your signalling protocol supports it.)

Note: An enhanced keypad microphone is required to operate this feature.

To perform a Radio Check:

Method 1

1 Press the **Radio Call** button (if programmed) to enter the Radio Call menu.

2 ⌃ *or* ⌄ until   `Radio Check`

3 Press the **Radio Call** button to select   `Radio Check`

4 ⌃ *or* ⌄ to locate the desired ID in the Radio Call List;

    –or–

using the enhanced keypad microphone, enter the ID number of the radio you wish to check.

19

5 Press the **PTT**.

You will see

`Call In Prog`

6 If the Radio Check is received,

you will see

`Acknowledge`

If not, you will see

`No Acknowledge`

7 Press the **Exit** button
to return to
   –or–

`Radio Check`

Hold down the **Exit** button to exit Menu Mode.

Method 2

1 Press the **Menu/Enter** button to enter Menu Mode.

2 △ *or* ▽ until

`Radio Call`

3 Press the **Menu/Enter**
button to select

`Radio Call`

4 △ *or* ▽ until

`Radio Check`

5 Press the **Menu/Enter**
button to select

`Radio Check`

6 △ *or* ▽ to locate the desired ID in the Radio Call List;

   –or–

using the enhanced keypad microphone, enter the ID number of the radio you wish to check.

7 Press the **PTT**.

You will see

`Call In Prog`

8 If the Radio Check is received,

you will see

`Acknowledge`

If not, you will see

`No Acknowledge`

9 Press the **Exit** button
to return to
   –or–

`Radio Check`

Hold down the **Exit** button to exit Menu Mode.

20

RESPONDING TO EMERGENCY ALERTS E

Your radio offers choices for initiating and responding to Emergency Alert communications. Choices may include:

- Emergency Cycles - Allows the radio to automatically cycle between transmit and receive mode over a preprogrammed number of times by keying with voice after it has received an Acknowledge to the alarm you send. The default number of transmits is one (10, maximum); the default value of the retransmit interval is 5 seconds (one, minimum; 60, maximum).
- Emergency Alarm/Call - Gives you access to a voice resource, on a priority basis, over all other types of call traffic.
- Emergency Remote Monitor - Enables the dispatcher to activate the transmit circuit of your radio, during an Emergency, to hear the situation through your microphone. See page 23 for more about sending an Emergency Remote Monitor.
- Remote Monitor - Enables the dispatcher to activate the transmit circuit of your radio,

during a normal dispatch, to hear the situation through your microphone. See page 23 for information about sending a Remote Monitor.

Note: All the choices listed above are dealer preprogrammed. See your dealer for more details.

Decoding an Emergency Alarm

If preprogrammed by your dealer, and provided the signaling protocol supports it, your radio decodes (responds to) an Emergency Alarm or Emergency Call by:

- Sounding a unique, repeating alert tone
- Activating an external alarm
- Displaying alternating message parts on a single line, similar to the following example

```
  ┌─────────────────────────┐
  │ ╱──────────────╲        │
  │              ⚠          │
  │  03:55                  │
  │ ╲──────────────╱        │
  └─────────────────────────┘
```
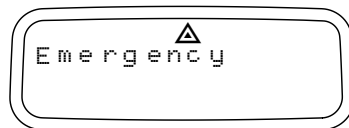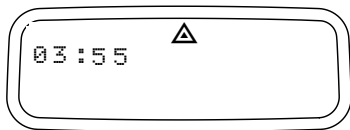
■ the word Emergency, followed by

```
  ┌─────────────────────────┐
  │ ╱──────────────╲        │
  │              ⚠          │
  │  MDC  CALL  01          │
  │ ╲──────────────╱        │
  └─────────────────────────┘
```
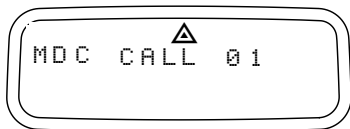
■ Emergency Alias from the Radio Call List (example, MDC CALL 01), followed by

■ Timestamp of the Emergency Alert (example, 03:55).

• Flashing the ⚠ icon (while decoding only; lights steady when encoding)

Multiple Queued Emergencies

Clearing the existing displayed Emergency shows the next in the queue, if one exists.The display updates and shows "Emerg (queued number) of (total number)". If no additional Emergencies are queued, the radio exits Emergency mode and resumes normal mode.

Three Minute Timer

Responding to an Emergency starts a three-minute timer. The radio does not generate another Emergency Alert tone against that Emergency Alias or ID until the three-minute period expires. If cleared within 3 minutes, the alarm will regenerate the alert. If the radio receives another Emergency Alert from the same Alias or ID, the radio acknowledges the Emergency but does not restart the tone, activate the external alarm, or display updated information.

After the Timer Expires

If the three-minute timer has expired for a specific Emergency Alias or ID, and the radio decodes an Emergency that is currently in queue, the radio:

• Acknowledges the Emergency
• Restarts the Emergency Alert tone
• Activates the external alarm
• Updates the time stamp on the matching Emergency

22

Note: If the Radio Call List does not include an alias for the radio ID, the ID displays. Radios that do not support the signaling protocol sound the alert tone, activate the external alarm and display data.

CLEARING AN EMERGENCY ALERT E

To clear an Emergency Alert:

1	Press any button on the radio to cancel the Emergency Alert tone.
2	Press (or activate) an external pushbutton or foot switch.

Note: You must press an external switch to clear the visible Emergency Alias and display the next queued Emergency Alias, if present. You must clear all decoded Emergency Alerts before encoding (sending) your own Emergency Alert.

SENDING AN EMERGENCY REMOTE MONITOR

As your radio responds to an Emergency Alert, only the Emergency Queue menu is available.

To access the Emergency Queue menu:

1	🔲/• to enter Menu Mode.
2	The radio displays the list of aliases currently in the Emergency queue, similar to that shown, oldest to newest.	⬭ MDC CALL 01
3	▽ or △ to view the next oldest Emergency Remote Monitor packet and to choose the packet to send.
4	Press the PTT to send the packet.

23

SENDING AN EMERGENCY ALERT ⚠

A priority Emergency Alert can be sent to a specific radio or dispatch center by pressing:

- A button preprogrammed by your dealer (see pages 6 - 7)
- The footswitch
- A pushbutton accessory

Emergency Alerts have priority over all other calls.

The ⚠ symbol will appear on the display when your radio is in the Emergency Alert state.

An Emergency Alert can be programmed to:

- Show ⚠ and sound a tone

  –or–

- Show ⚠ (Silent Emergency)

  –or–

- Activate the enhanced keypad microphone so that all activity can be transmitted (for a predetermined amount of time). See your dealer for more information.

To cancel the Emergency Alert, press and hold down the **Emergency** button.

SELECTIVE RADIO INHIBIT

Your radio is equipped with a security feature that can temporarily render the unit inoperative when an inhibit signal is sent from the base station.

This feature is commonly used to disable radios:

- In case of theft
- When your vehicle is being serviced
- For system control reasons

Note: When your radio has been disabled by the base station, all controls will be inoperative except for the **On/Off** button. When the radio is powered up, the display will

show: | Radio Disabled |

REPEATER OR TALKAROUND |→| MODE

Talkaround Mode enables you to communicate with another radio when either:

- The repeater is not operating

  –or–

- Your radio is out of the repeater's range but

within communicating distance of another radio. The |➔| symbol appears on the display when Talkaround Mode is selected.

To select either Repeater Mode or Talkaround Mode:

Press the preprogrammed **Repeater/ Talkaround** button (see page 6) to toggle between Repeater Mode and Talkaround Mode.

   –or– (using the enhanced keypad microphone)

1	Press the **Menu/Enter** button to enter Menu Mode.
2	⌃ *or* ⌄ until `Rptr/Talkarnd`
3	Press the **Menu/ Enter** button to select `Rptr/Talkarnd`
4	⌃ *or* ⌄ until `Repeater Mode`
	or until `Talkarnd Mode`
5	Press the **Menu/Enter** button to confirm your selection.

SETTING THE POWER LEVEL ∟H

Each channel in your radio has a predefined transmit power level that can be changed.

- High power (H)
- Low power (L)

You can set the power level in two ways:

Method 1
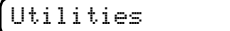
Press the preprogrammed **Power Level** button (see page 6) to toggle between *low* and *high*.

   –or–

Method 2 (using the keypad microphone)

1	Press the **Menu/Enter** button to enter Menu Mode.
2	⌃ *or* ⌄ until `Utilities`
3	Press the **Menu/ Enter** button to select `Utilities`
4	⌃ *or* ⌄ until `Power Level`
5	Press the **Menu/ Enter** button to select `Power Level`

The display shows the current power level.

6 ⌃ *or* ⌄ until

Power High?

or until

Power Low?

7 Press the **Menu/Enter** button to confirm the selection.

NAME AND CALL TONE TAGGING

You can program your radio to sound a particular alert tone when:

- a specific user is calling—**name tone tagging**, *or*
- your radio is receiving a type of radio call—**call tone tagging**.

There are seven alert tones to select from.

Note: The enhanced keypad microphone is required to operate this feature.

To tag a specific user's name or ID:

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ *or* ⌄ until

Audio/Tones

3 Press the **Menu/Enter** button to select

Audio/Tones

4 ⌃ *or* ⌄ until

Name Tone Tag

5 Press the **Menu/Enter** button to select

Name Tone Tag

6 ⌃ *or* ⌄ until you see the name or call you want to tag.

7 Press the **Menu/Enter** button to confirm the selection.

8 ⌃ *or* ⌄ until you hear one of the seven tones you want to use for this name or call.

9 Press the **Menu/Enter** button to confirm the selection.
You will see

Name Tag Set

10 Press the **Exit** button to return to

Name Tone Tag

–or–

Hold down the **Exit** button to exit Menu Mode.

26

To tag a type of radio call:

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ or ⌄ until

| Audio/Tones |

3 Press the **Menu/ Enter** button to select

| Audio/Tones |

4 ⌃ or ⌄ until

| Call Tone Tag |

5 Press the **Menu/ Enter** button to select

| Call Tone Tag |

6 ⌃ or ⌄ until you see the call type you want to tag.

7 Press the **Menu/Enter** button to confirm the selection.

8 ⌃ or ⌄ until you hear the tone you want to use for this type of call.

9 Press the **Menu/Enter** button to confirm the selection.

You will see

| Call Tag Set |

10 Press the **Exit** button to return to

| Call Tone Tag |

–*or*–

Hold down the **Exit** button to exit Menu Mode.

27

Notes

28

SCAN

Your radio can monitor multiple channels in a scan list. Your dealer can program up to 16 different channels into each scan list. When your radio detects activity on a scan list channel, it will automatically switch to that channel.

Note: The same channels can be assigned to different scan lists.

STARTING OR STOPPING SCAN ⚡

The ⚡ symbol, and the number of the channel you are transmitting on, will appear on the display when you start a scan operation.

The green LED indicator blinks during a scan operation and stops blinking when the radio switches to a channel.

Note: If you enter Menu Mode while the radio is scanning, scanning will stop. It will resume when you exit Menu Mode.

You can start or stop a scan operation in one of three ways:

Method 1

Press the preprogrammed **Scan** button (see page 6) to start or stop scanning.
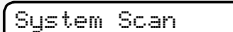
–or–

Method 2 (with the enhanced keypad microphone)
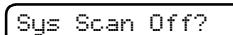
1   Press the **Menu/Enter** button to enter Menu Mode.

2   ⌃ or ⌄ until ⠀⠀⠀⠀⠀ `System Scan`

3   Press the **Menu/Enter** button to select ⠀⠀⠀ `System Scan`

4   ⌃ or ⌄ until ⠀⠀⠀⠀⠀ `Sys Scan On?`

⠀⠀*–or–*⠀⠀⠀⠀⠀⠀⠀⠀⠀ `Sys Scan Off?`

5   Press the **Menu/Enter** button to confirm your selection.

–or–

Method 3

If programmed by your dealer, the radio will start scanning when you select a channel that has auto scan enabled.

TALKBACK

The Talkback feature allows you to respond to a transmission while scanning. If a transmission on a channel is detected while scanning, the radio will stop on that channel for a preprogrammed period of time. During this "hangtime" you may respond by pressing the **PTT**.

Note: If transmission stops/ceases or if the **PTT** is not pressed for a preprogrammed duration, the radio will continue scanning. Also, the LED scan indicator stops blinking while the radio is in hangtime.

DELETING A NUISANCE CHANNEL

If a channel continually generates unwanted calls or noise (a "nuisance" channel), use the **Scan** button to temporarily delete the channel from the scan list.

Note: You cannot delete a priority channel (see page 32) or the last remaining channel in a scan list.

1   While the radio is on the nuisance channel, hold down the **Scan** button until you hear a tone.

2   Release the **Scan** button. The nuisance channel is deleted.

Restoring a Channel to the Scan List

To restore a previously deleted channel to the scan list, restart the scan operation or turn your radio off and on again.

EDITING A SCAN LIST

Note: The enhanced keypad microphone is required to operate this feature.

A scan list is a group of up to 16 channels. Each channel can have a scan list assigned to it. The same channel can be included in several scan lists, and the same scan list can be assigned to several Channel Selector positions. For example:

	Position 2	Position 14
C h a n n e l s	1	1
	3	2
	5	3
	6	11

When you edit a scan list, you can either add, delete, or prioritize channels. The ☐ symbol will appear on the display while you are in edit mode.

Note: Your radio cannot receive any calls while you are editing a scan list.

30

Adding or Deleting Channels in a Scan List

Note: The enhanced keypad microphone is required to operate this feature.

To add or delete channels in a scan list:
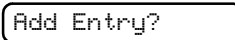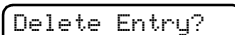
1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌒ or ⌄ until `Program Lists`

3 Press the **Menu/Enter** button to select `Program Lists`

4 ⌒ or ⌄ until `Scan List`

5 Press the **Menu/Enter** button to select `Scan List`

6 ⌒ or ⌄ until `Add Entry?`

or until `Delete Entry?`
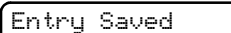
7 Press the **Menu/Enter** button to confirm your selection.
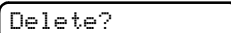
8 ⌒ or ⌄ until you see the channel you want to add or delete.

Note: You cannot delete the last remaining channel in a scan list.

9 Press the **Menu/Enter** button to confirm your selection.
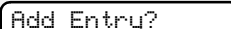
10 If you added a channel,

you will see `Entry Saved`

–or–

If you deleted a channel,

you will see `Delete?`

Press the **Menu/Enter** button to confirm the deletion.

You will see `Entry Deleted`

11 Press the **Menu/Enter** button to return to `Add Entry?`

or to return to `Delete Entry?`

–or–

Hold down the **Exit** button to exit Menu Mode.

Prioritizing a Channel in a Scan List

Note: The enhanced keypad microphone is required to operate this feature.

You may want to check the activity on one or two channels more frequently than others. You can do this by assigning them priority:

Note: Even if there may be activity on a non-priority channel, your radio will automatically switch to an active priority channel and indicate the activity with a short tone.

Priority Channel	Scanning Sequence
None specified	Ch1➡Ch2➡Ch3➡Ch4➡Ch1
Channel **2** (Priority 1)	Ch**2**➡Ch1➡Ch**2**➡Ch3➡Ch**2**➡Ch4➡Ch**2**➡…Ch1
Channel **2** (Priority 1) Channel **8** (Priority 2)	Ch**2**➡Ch1➡Ch**8**➡Ch3➡Ch**2**➡Ch4➡Ch**8**➡…Ch1

Setting Priority Channels

Note: You cannot reprioritize a *Priority 1* channel to *Priority 2.*

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ *or* ⌄ until   `Program Lists`

3 Press the **Menu/Enter** button to select   `Program Lists`

4 ⌃ *or* ⌄ until   `Scan List`

5 Press the **Menu/Enter** button to select   `Scan List`

6 ⌃ *or* ⌄ until   `Edit Priority?`

7 Press the **Menu/Enter** button to select   `Edit Priority?`

8 ⌃ *or* ⌄ until   `Priority #1?`

     or until   `Priority #2?`

32

9	Press the **Menu/Enter** button to select the desired priority level.

10   ⌃ *or* ⌄ until you see the channel you want to prioritize.

11	Press the **Menu/Enter** button to prioritize that channel.

12   Press the **Exit** button to return to

                 `Edit Priority?`

     −or−

Hold down the **Exit** button to exit Menu Mode.

Note: If you want to reprioritize all channels, you must first delete each priority channel from the scan list, and then addit back.

Notes

34

PHONE

If your radio has access to a telephone system, you can make a phone call. To do this, your radio must send an access code to a station that connects it to a phone line. (Ask your dealer for more details.) After completing a call, your radio must send a deaccess code to hang up.

MAKING A PHONE CALL ⒥

You can make a phone call using the preprogrammed **Phone** button (see page 6) or the radio menu. The ⒥ symbol appears on the LCD screen when you are in Phone Mode.

To initiate a phone call:

Press the **Phone** button.

–or–

Do the following (an enhanced keypad microphone is required):

1 Switch to the desired channel.

2 Press the **Menu/Enter** button to enter Menu Mode.

3 △ *or* ▽ until

> Phone

4 Press the **Exit** button to select

> Phone

5 You will hear a series of tones indicating that an access code is being sent automatically. You will also see your access code displayed;

   –or–

when using the enhanced keypad microphone only, enter your access code using the keypad.

35

6 When you hear a dial tone, enter or select a phone number:

⬡ or ⬡ to select a number from the phone list;

–or–

when using the enhanced keypad microphone only, enter the phone number using the keypad;

–or–

when using the enhanced keypad microphone only,

a Press and release the preprogrammed **Speed Dial** button (see page 7) to use the Speed Dial feature.

b Press the key (1 to 8) corresponding to the number you want to call,

–or-

press "0" if you want to call the last number dialed.

Note: To redial the last number dialed (if not using Speed Dial), do not choose a number. Proceed to step 7.

Alternatively, if you entered your access code using the keypad, press ⬡ once to access the last number dialed; then press and release the **PTT**.

7 To end a phone call, do one of the following:

If your radio has the deaccess code preprogrammed, proceed to step 8.

–or–

Enter the deaccess code using the keypad.

8 Press the **Phone** button to exit Phone Mode.

–or–

Press the **Exit** button to exit Phone Mode and return to

```
Phone
```

–or–

Hold down the **Exit** button to exit Menu Mode.

AUDIO/TONE SETTINGS

You can customize the audio and tone feature settings on your radio.

Note: The enhanced keypad microphone is required to use this feature.

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ or ⌄ until

| Audio/Tones |

3 Press the **Menu/Enter** button to select

| Audio/Tones |

4 ⌃ or ⌄ until you see the feature you want to change. (See the table below.)

5 Press the **Menu/Enter** button to select the feature. You will see the feature's current setting.

6 ⌃ or ⌄ for available settings. (See the table below.)

7 Press the **Menu/Enter** button to select the desired setting.

Audio/Tone Settings

Feature	What it Does	Settings
Alert Vol Lvl	Allows the volume level of the audio and the volume level of the alert tones to be set independently.	Ind Alert Off Ind Alert On
Tone Disable	Turns all tones on or off.	Tones On Tones Off

37

Audio/Tone Settings

Feature	What it Does	Settings
Name Tone Tag	Assigns a specific tone to all calls from a specific user (see page 26 for details).	Standard Alert #1 – #7
Call Tone Tag	Assigns a specific tone when receiving a specific type of radio call (see page 27 for details).	Standard Alert #1 – #7
Escalert	Gradually increases the volume of the alarm tones when a call is not answered.	Escalert On Escalert Off
Companding (XPand™)	Approximates the same audio quality for 12.5kHz channels to that of 25kHz channels.	Compand On Compand Off
Keypad Tones	Turns keypad tones on or off.	Tones On Tones Off

38

UTILITIES

You can customize some of your radio's features.

Note: The enhanced keypad microphone is required to access this feature.

1 Press the **Menu/Enter** button to enter Menu Mode.

2 ⌃ *or* ⌄ until

> `Utilities`

3 Press the **Menu/Enter** button to select

> `Utilities`

4 ⌃ *or* ⌄ until you see the feature you want to change (see table below).

5 Press the **Menu/Enter** button to select the feature. You will see the feature's current setting.

6 ⌃ *or* ⌄ for available settings.

7 Press the **Menu/Enter** button to select the desired setting.

Utilities Features

Feature	What it Does	Settings
`Power Level`	Changes the power level of the radio to high or low (see page 25).	`Power High` `Power Low`

39

Utilities Features

Feature	What it Does	Settings
Language Selection	Allows you to select the language displayed on the display.	English Spanish Portuguese French
Option board	Activates/deactivates the option board installed in your radio.	Opt Board On Opt Board Off
Software Ver #	Displays the radio's software version number.	___

SELECTING THE DISPLAY LANGUAGE

To select the display language:

1   Press the **Menu/Enter** button to enter Menu Mode.

2   ⌃ or ⌄ until   [Utilities]

3   Press the **Menu/Enter** button to select   [Utilities]

4   ⌃ or ⌄ until   [Language Selct]

5   Press the **Menu/Enter** button to confirm your selection.

6   ⌃ or ⌄ until desired language is displayed.

7   Press the **Menu/Enter** button to select desired language.

8   Hold down the **Exit** button to exit the menu.

WARRANTY

LIMITED WARRANTY
MOTOROLA COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

MOTOROLA INC. ("MOTOROLA") warrants the MOTOROLA manufactured Communication Products listed below ("Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

CDM1250 Mobile Units	Two (2) Years
Product Accessories	One (1) Year

Motorola, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it (with a new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided it is returned in accordance with the terms of this warranty. Replaced parts or boards are warranted for the balance of the original applicable warranty period. All replaced parts of Product shall become the property of MOTOROLA.

This express limited warranty is extended by MOTOROLA to the original end user purchaser only and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by MOTOROLA. MOTOROLA assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of MOTOROLA. Unless made in a separate agreement between MOTOROLA and the original end user purchaser, MOTOROLA does not warrant the installation, maintenance or service of the Product.

MOTOROLA cannot be responsible in any way for any ancillary equipment not furnished by MOTOROLA which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, MOTOROLA disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

41

II. GENERAL PROVISIONS:

This warranty sets forth the full extent of MOTOROLA's responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at MOTOROLA's option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

III. STATE LAW RIGHTS:

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY.

This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. HOW TO GET WARRANTY SERVICE:

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by Motorola through one of its authorized warranty service locations. If you first contact the company which sold you the Product (e.g., dealer or communication service provider), it can facilitate your obtaining warranty service. You can also call Motorola at 1-800-927-2744 US/Canada.

V. WHAT THIS WARRANTY DOES NOT COVER:

A   Defects or damage resulting from use of the Product in other than its normal and customary manner.

B   Defects or damage from misuse, accident, water, or neglect.

C   Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.

D   Breakage or damage to antennas unless caused directly by defects in material workmanship.

E   A Product subjected to unauthorized Product modifications, disassemblies or repairs (including, without limitation, the addition to the Product of non-Motorola supplied equipment) which adversely affect performance of the Product or interfere with Motorola's normal warranty inspection and testing of the Product to verify any warranty claim.

F   Product which has had the serial number removed or made illegible.

G   Freight costs to the repair depot.

H   A Product which, due to illegal or unauthorized alteration of the software/ firmware in the Product, does not function in accordance with MOTOROLA's published specifications or the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from MOTOROLA.

I   Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.

J   Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS:

MOTOROLA will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and MOTOROLA will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

A   that MOTOROLA will be notified promptly in writing by such purchaser of any notice of such claim;

B   that MOTOROLA will have sole control of the defense of such suit and all negotiations

for its settlement or compromise; and

C   should the Product or parts become, or in MOTOROLA's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit MOTOROLA, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by MOTOROLA.

MOTOROLA will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by MOTOROLA, nor will MOTOROLA have any liability for the use of ancillary equipment or software not furnished by MOTOROLA which is attached to or used in connection with the Product. The foregoing states the entire liability of MOTOROLA with respect to infringement of patents by the Product or any parts thereof.

Laws in the United States and other countries preserve for MOTOROLA certain exclusive rights for copyrighted MOTOROLA software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola software. MOTOROLA software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such MOTOROLA software or exercise of rights in such MOTOROLA software is permitted. No license is granted by implication, estoppel or otherwise under MOTOROLA patent rights or copyrights.

VII.GOVERNING LAW:

This Warranty is governed by the laws of the State of Illinois, USA.

44

ACCESSORIES

Motorola offers a number of accessories to enhance the productivity of your two-way radio. Many of the available accessories are listed below. For a complete list, see your Motorola dealer.

AUDIO

RMN4025	Compact Remote Speaker Microphone
RMN4026	Enhanced Keypad Microphone
RMN4038	Heavy Duty Microphone
RSN4001	External Speaker 13W
HSN8145	External Speaker 7.5W

MOUNTING

GLN7324	Low Profile Trunnion
RLN4780	High Profile Trunnion
HLN8097	Removable Slide Mount
RLN4779	Key Lock Mount
RLN4774	3 Point Lowband Mount
RLN4782	DIN Mounting Kit (in dash)
RKN4077	Remote Mount Cable - 3 m
RKN4078	Remote Mount Cable - 5 m
RKN4079	Remote Mount Cable - 7 m

ANTENNAS

RAB4002ARB	Lowband 29.7-36 MHz, 1/4 Wave Base Load
RAB4003ARB	Lowband 36-42 MHz, 1/4 Wave Base Load
RAB4004ARB	Lowband 42-52 MHz, 1/4 Wave Base Load
HAD4006A	VHF 136-144 MHz, 1/4 Wave Roof Mount
HAD4007A	VHF 146-150.8 MHz, 1/4 Wave Roof Mount
HAD4008A	VHF 150.8-162 MHz, 1/4 Wave Roof Mount
HAD4009A	VHF 162-174 MHz, 1/4 Wave Roof Mount
HAD4014A	VHF 146-172 MHz, 3dB Gain Roof Mount
HAE4002A	UHF 403-430 MHz, 1/4 Wave Roof Mount
HAE4003A	UHF 450-470 MHz, 1/4 Wave Roof Mount
HAE4010A	UHF 406-420 MHz, 3.5dB Gain Roof Mount
HAE4011A	UHF 450-470 MHz, 3.5dB Gain Roof Mount
HAE4019A	UHF 450-470 MHz, 5dB Gain Roof Mount

HAE4004A	UHF 470-512 MHz, 1/4 Wave Roof Mount
HAE4012A	UHF 470-494 MHz, 3.5dB Gain Roof Mount
09-02105F01	BNC Connector

CONTROL STATION

GPN6145	Desktop Power Supply 1-25W (EMC)
HPN4002	Desktop Power Supply 1-25W
GPN6149	Desktop Power Supply 25-45W (EMC)
HPN4001	Desktop Power Supply 25-45W
RMN4030	Desktop Microphone
GLN7318	Desktop Tray without Speaker
GLN7326	Desktop Tray with Speaker

Note: A variety of interchangeable buttons are available for use in the P1-P4 locations on your radio (page 3). See your dealer for further details.

Sending a Call

1. Turn radio on and select appropriate zone and channel.
2. Press **PTT**, hold the microphone 1 to 2 inches (2.5 to 5 cm) from your mouth, and speak clearly into it.
3. Release **PTT** to listen.

Receiving a Call

1. Turn radio on and adjust volume to the desired level.
2. Select desired channel.
3. To respond to an incoming call, press **PTT**, hold the microphone 1 to 2 inches (2.5 to 5 cm) from your mouth, and speak clearly into it.

Deleting a Nuisance Channel During Scanning

1. While radio is on a nuisance channel, hold down preprogrammed **Scan** button until you hear a tone.
2. Release **Scan** button.

Making a Phone Call

1. Press **Phone** button, or select **Phone** from the menu.
2. If access code is not displayed, send access code if required.
3. Send phone number in one of the following ways:
   - Press and release **PTT** to send last dialed number.
     —or—
   - when using enhanced keypad microphone only, press preprogrammed **Speed Dial** button, followed by a keypad key (1–8), to access first nine numbers in your phone list. (Press **PTT** if buffered dial.)
     —or—
   - when using enhanced keypad microphone only, enter phone number using the keypad. (Press **PTT** if buffered dial.)
4. Press **PTT**, hold the microphone 1 to 2 inches (2.5 to 5 cm) from your mouth, and speak clearly into it.

Ending a Phone Call

1. Send deaccess code if required.
2. Press preprogrammed **Phone** button, or press the **Exit** key.

Sending and Cancelling an Emergency Alert

- To activate *Emergency Alert*, press preprogrammed **Emergency** button or footswitch.
- To cancel, press and hold down **Emergency** button.

MOTOROLA

CDM1250™ Quick Reference Card

Record the functions for your radio's programmable buttons in the table provided below. For further information, see page 6 of this User Guide.

Red/Yellow/Green LED Indicators — Channel Selector (Up/Down) — LCD Screen — On/Off/Volume Knob — Programmable Button 3 (P3) (Interchangeable) — Microphone Jack — Programmable Button 1 (P1) (Interchangeable) — Programmable Button 2 (P2) (Interchangeable) — Programmable Button 4 (P4) (Interchangeable)

Button	Function	Short Press	Long Press	Hold Down	Page

Menu Navigation Chart

(Refer to Menu Navigation guidelines—
lower, left-hand corner of this page)

Menu/Enter

System Scan (p. 29)
on/off

Program Lists

Phone (p. 35)

Radio Call (p. 16)

Zone (p. 12)

Utilities (p. 39)

Rptr/ Talkarnd (p. 24)
repeater mode/ talkarnd mode

Audio/ Tones (p. 37)

Scan List (p. 30)

add/delete entry

edit priority

Selective Call
select/ enter ID

Call Alert
select/ enter ID

Radio Check
select/ enter ID

Power Level
high/low

Language Select
select

Option Board
on/off

Software Ver #

Alert Vol Lvl
on/off

Tone Disable
on/off

Name Tone Tag
standard/alert #1 - #7

Call Tone Tag
standard/alert #1 - #7

Escalert
on/off

Companding
on/off

Keypad Tones
on/off

Menu Navigation

Press the **Menu/Enter** button to enter Menu Mode.

or to scroll through the list.

Press the **Menu/Enter** button to select Menu item.

or to scroll through sub-list.

Press the **Exit** button to return to previous menu level
—*or*—
Hold down the **Exit** button to exit Menu Mode.

Press the **Menu/Enter** button to select sub-menu item.