



# **GP338**

# **Portable Radio**

User Guide

**6804110J55**

## Copyright Information

The Motorola products described in this manual may include copyrighted Motorola computer programs stored in semiconductor memories or other mediums. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted computer programs, including the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Motorola computer programs contained in the Motorola products described in this instruction manual may not be copied or reproduced in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents, or patent applications of Motorola, except for the normal non-exclusive, royalty free license to use that arises by operation of law in the sale of a product.

© 1999 by Motorola, Inc.

All Rights Reserved.

Motorola Technology Sdn. Bhd. (Company No. 455657-H),  
Bayan Lepas Free Industrial Zone, Phase 3,  
11900 Penang, Malaysia.  
Printed in Malaysia.












, and Motorola, are trademarks of Motorola, Inc.

## GP338 Quick Reference Card

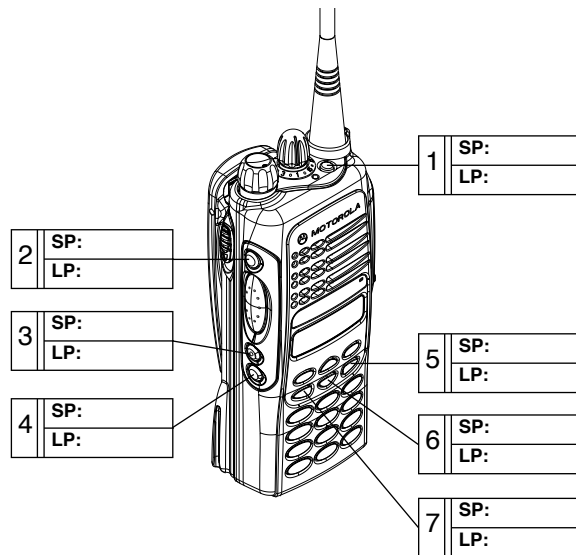
### Menu Navigation

(refer to the Menu Navigation Chart on the reverse side of this page)

1.  to enter Menu Mode.
2.  or  to scroll through the list.
3.  to select Menu items.
4. Continue to use  or  to scroll through sub-list, and  to select sub-menu items, if necessary.
5.  to exit sub-menu or hold  to exit Menu Mode.

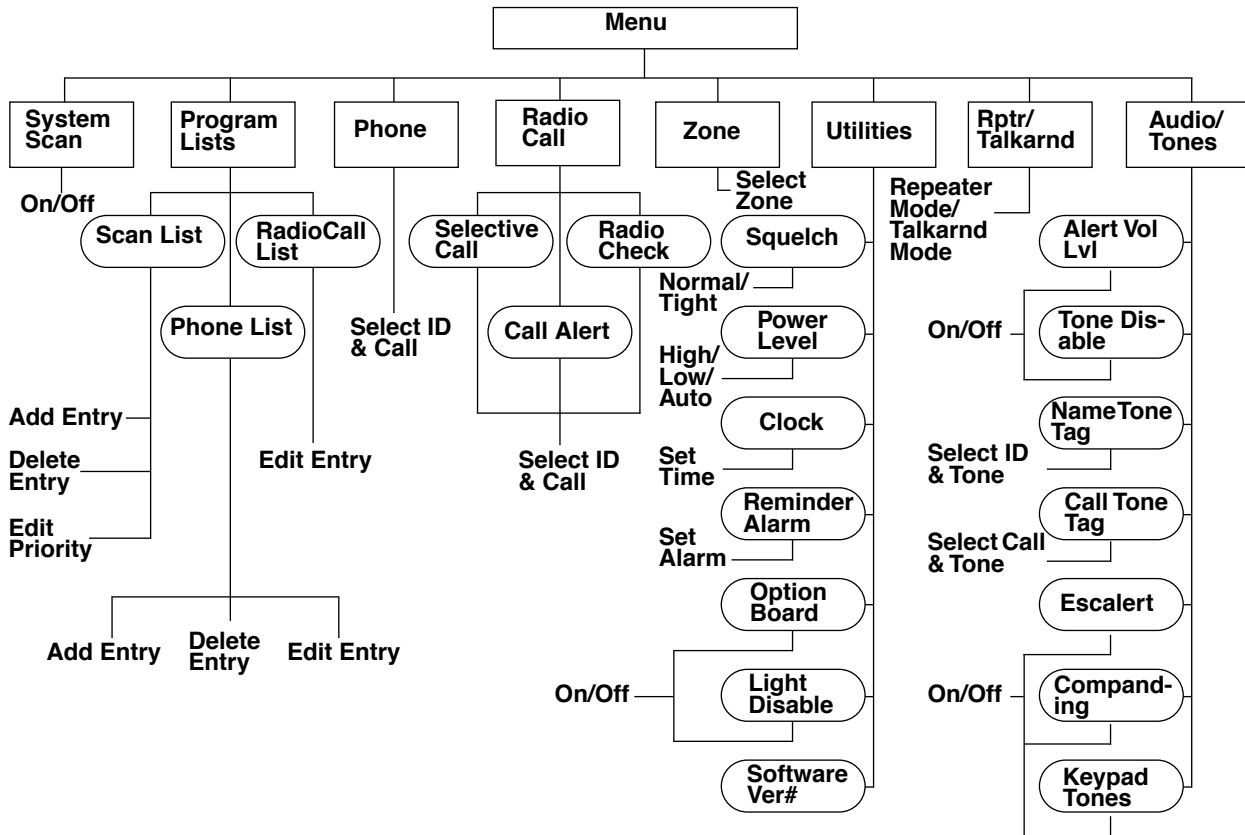
### Programmable Buttons' Audio Indicators

Programmable Buttons	Positive Indicator Tone	Negative Indicator Tone
Scan	<b>Start</b> Scan operation	<b>Stop</b> Scan operation
Tx Power	Radio transmits at <b>low</b> power	Radio transmits at <b>high</b> power
Squelch	Radio operates in <b>tight</b> squelch	Radio operates in <b>normal</b> squelch
Option Board	<b>Activates</b> radio's option board	<b>Deactivates</b> radio's option board
Keypad Lock	Radio's keypad is <b>locked</b>	Radio's keypad is <b>unlocked</b>
Repeater/Talkaround	Radio <b>DOES NOT</b> use the repeater	Radio uses the repeater



- NOTE:**
- Enter the functions for your radio's 7 programmable buttons in the boxes provided above.
  - In the boxes above, **SP** represents Short Press, while **LP** represent Long Press.

# Menu Navigation Chart



<b>CONTENTS</b>	
<b>Radio Overview</b> . . . . .	<b>1</b>
Parts of the Radio. . . . .	1
On/Off/Volume Knob . . . . .	2
Channel Selector Knob. . . . .	2
Push-to-Talk (PTT) Button . . . . .	2
Microphone . . . . .	2
LED Indicator. . . . .	2
Programmable Buttons. . . . .	2
Keypad Keys (for keypad radios only) . . . . .	5
LCD Screen . . . . .	7
Indicator Tones . . . . .	9
Programmable Buttons' Audio Indicators . . . . .	9
Improved Audio Features . . . . .	10
Low Level Expansion (LLE) . . . . .	10
Companding . . . . .	10
<b>Getting Started</b> . . . . .	<b>11</b>
Battery Information . . . . .	11
Battery Status . . . . .	11
Charging your Battery . . . . .	11
Accessory Information. . . . .	12
Attaching the Battery . . . . .	12
Removing the Battery . . . . .	12
Attaching the Antenna . . . . .	13
Removing the Antenna. . . . .	13

Attaching the Belt Clip . . . . .	14
Removing the Belt Clip . . . . .	14
Turning the Radio On or Off . . . . .	15
Adjusting the Radio's Volume . . . . .	15
Selecting a Radio Channel . . . . .	15
Sending a Call. . . . .	15
Receiving a Call . . . . .	16

## **Radio Calls** . . . . . **17**

Selective Call . . . . .	17
Making a Selective Call . . . . .	17
Receiving a Selective Call . . . . .	17
Call Alert . . . . .	17
Radio Check . . . . .	18
Emergency Alarms . . . . .	19
Radio Call List . . . . .	20
Editing an Entry (for keypad radios only) . . . . .	20
Select Zone . . . . .	20
Talkaround . . . . .	21
Squelch . . . . .	21
Power Level . . . . .	22
Tone Tagging . . . . .	22
Name Tone Tagging . . . . .	23
Call Tone Tagging . . . . .	23

## **Scan** . . . . . **24**

Starting or Stopping a Scan Operation . . . . .	24
---	----

Using the Menu . . . . .	24
Using the Scan key . . . . .	24
Talkback . . . . .	25
Deleting a Nuisance Channel . . . . .	25
Adding a Deleted Nuisance Channel back to the Scan List . . . . .	25
Editing the Scan List . . . . .	26
To Add or Delete Items in the Scan List . . . . .	26
Prioritization of a Scan List member . . . . .	27
Setting the priority of a scan list member . . . . .	28

**Phone . . . . . 29**

Making a Phone Call . . . . .	29
Entering the Phone Mode . . . . .	29
Sending the Access Code . . . . .	29
Sending the Phone Number . . . . .	30
The Phone Conversation . . . . .	31
Ending the Phone Call . . . . .	32
Phone List . . . . .	32
Adding an Entry to the Phone List (for keypad radios only) . . . . .	32
Deleting an Entry . . . . .	33
Editing an Entry (for keypad radios only) . . . . .	33

**Audio/Tone Settings . . . . . 35**

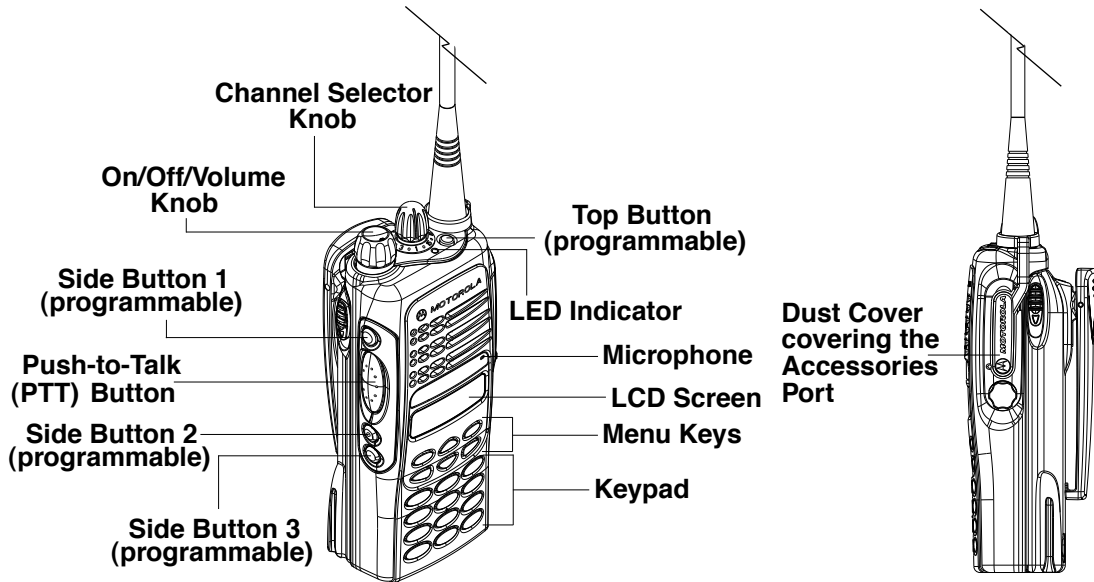
General Instructions . . . . .	35
--------------------------------	----

**Utilities . . . . . 37**

General Instructions . . . . .	37
Setting the Time . . . . .	38

# RADIO OVERVIEW

## PARTS OF THE RADIO



### On/Off/Volume Knob

Used to turn the radio on or off, and to adjust the radio's volume.

### Channel Selector Knob

Used to switch the radio to different channels.

### Push-to-Talk (PTT) Button

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

### Microphone

Speak clearly into the microphone when sending a message.

### LED Indicator

Used to give battery status, power-up status, radio call information and scan status.

### Programmable Buttons

Several of the radio's buttons can be programmed as short-cut buttons for many of the radio's features. Programmable buttons are the:

- Top button,
- three side buttons, and
- three front buttons (when the radio is NOT in Menu Mode)



Check with your dealer for a complete list of the functions your radio's programmable buttons support.

The following table shows the functions available by

- quickly pressing and releasing the programmable buttons (short press), or by
- pressing and holding the programmable buttons for a period of time (at least 1.5 seconds) before releasing (long press), or by
- pressing and holding down the programmable buttons while checking the status or making adjustments.



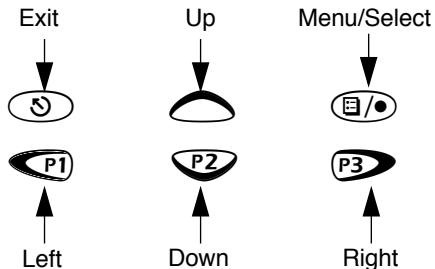
Button	Short Press	Long Press	Press and Hold
Emergency*	To initiate an Emergency Alarm.	To cancel your radio's Emergency status.	—
Monitor/Permanent Monitor	—	To continually monitor the selected channel.	To monitor the selected channel for any activity.
Volume Set	—	—	To sound a tone for adjusting the radio's volume level.
Battery Gauge	—	—	To check the battery's status.
Scan/Nuisance Channel Delete	To toggle between the start/stop of the Scan operation.	To delete a nuisance channel while scanning.	—
Tx Power	To toggle your radio's transmit power level between High and Low power.†	To toggle your radio's transmit power level between High and Low power.†	—
Keypad Lock	—	To toggle between locking/unlocking your radio's keypad.	—
Repeater/Talkaround	To choose to/not to transmit through the repeater.†	To choose to/not to transmit through the repeater.†	—
Squelch	To toggle your radio's squelch level between tight/normal squelch.†	To toggle your radio's squelch level between tight/normal squelch.†	—

Button	Short Press	Long Press	Press and Hold
Option Board	To toggle the activation/deactivation of your radio's option board (if one is installed).†	To toggle the activation/deactivation of your radio's option board (if one is installed).†	—
Phone	To make a Phone Call.†	To make a Phone Call.†	—
Speed Dial	To easily access the phone numbers in your phone list.†	To easily access the phone numbers in your phone list.†	—
Radio Call	To make a radio call.†	To make a radio call.†	—
Light	To turn on your radio's backlight.†	To turn on your radio's backlight.†	—

\* If Emergency function is required, it can ONLY be programmed to the Top Button.

† Depending on how your radio has been programmed by your dealer, these functions are activated EITHER through short press OR long press, but not both.

### Menu Keys



### Menu/Select Key

Used to enter Menu Mode. When already in Menu Mode, this key is also used to make Menu selections.

### Exit Key

Used to back up one level in the Menu hierarchy (short press); also used to exit the Menu Mode (long press).

**Up Key**

Used for scrolling when in Menu Mode.

**Down Key**

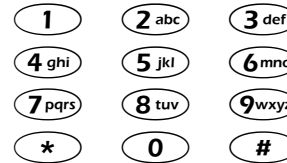
Used for scrolling when in Menu Mode. This key can also be programmed as a programmable key.

**Right Key**

Moves the cursor right or inserts a space when editing. This key can also be programmed as a programmable key.

**Left Key**

Used as a backspace key when editing. This key can also be programmed as a programmable key.

**Keypad Keys (for keypad radios only)**

These keys are used when dialing a phone number, making a radio call, and when entering information for the radio's programming lists.

When entering information for the programming lists, each key can generate numeric and character information.

Pressing a key will cause the first character of the key's character cycle to appear on the LCD screen; subsequent pressing of the same key will cause subsequent characters in the cycle to appear. For example, to enter the character "S", press the "7" key four (4) times.

The following table shows the character cycle for each key.

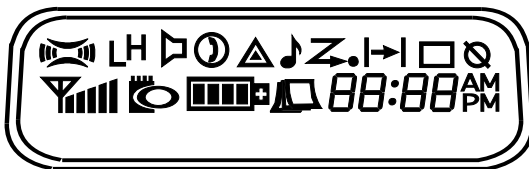
# Radio Overview



RADIO OVERVIEW






Key	Number of Times Key is Pressed										
	1	2	3	4	5	6	7	8	9	10	11
0	0	(	)	<	>						
1	1	&	%	#	*						
2 abc	A	B	C	2	a	b	c	2			
3 def	D	E	F	3	d	e	f	3			
4 ghi	G	H	I	4	g	h	i	4			
5 jkl	J	K	L	5	j	k	l	5			
6 mno	M	N	O	6	m	n	o	6			
7 pqrs	P	Q	R	S	7	p	q	r	s	7	
8 tuv	T	U	V	8	t	u	v	8			
9 wxyz	W	X	Y	Z	9	w	x	y	z	9	
*	*	/	+	-	=						
#	#	Blank Space	-	.	!	?	'	”	,	;	:






## LCD SCREEN





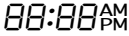
Used to display channel, menu as well as other iconic information.



Symbol	Name and Description
	<b>Companding Indicator</b> Indicates that you have activated the companding feature.
	<b>Power Level Indicator</b> "L" is lit up when your radio is configured to transmit in Low Power, while "H" is lit up when your radio is configured to transmit in High Power.

Symbol	Name and Description
	<b>Phone Indicator</b> Indicates that you are performing a Phone operation.
	<b>Scan Indicator</b> Indicates that you have activated the Scan feature. Also during Scan, indicates that there is some activity on a non-priority channel.
	<b>Priority 1 Scan Indicator ( ● flashing)</b> During Scan, indicates that there is some activity on a Priority 1 channel.
	<b>Priority 2 Scan Indicator</b> During Scan, indicates that there is some activity on a Priority 2 channel.
	<b>Emergency Indicator</b> Indicates that you are making an Emergency Call.

Symbol	Name and Description
	<p><b>Call Received Indicator</b></p> <p>Indicates that you are receiving a Selective Call/Call Alert.</p>
	<p><b>Monitor Indicator</b></p> <p>Indicates that you are monitoring the selected channel.</p>
	<p><b>Talkaround Indicator</b></p> <p>When lit, indicates that you are not transmitting through the repeater. When not lit, you are transmitting through the repeater.</p>
	<p><b>Programming Mode Indicator</b></p> <p>Indicates that you are editing one of the Program Lists.</p>
	<p><b>Keypad Lock Indicator</b></p> <p>Indicates that your keypad is locked.</p>

Symbol	Name and Description
	<p><b>Signal Strength Indicator</b></p> <p>Shows the signal strength. Five bars indicates the strongest signal.</p>
	<p><b>Option Board Indicator</b></p> <p>Indicates that an option board is activated.</p>
	<p><b>Battery Level Indicator</b></p> <p>Shows the remaining charge in your battery based on how many bars are displayed.</p>
	<p><b>Not applicable for this radio</b></p>
	<p><b>Clock</b></p> <p>Shows the time.</p>

## INDICATOR TONES

High pitched tone  Low pitched tone



Self Test Pass Tone



Self Test Fail Tone



Positive Indicator Tone



Negative Indicator Tone

## PROGRAMMABLE BUTTONS' AUDIO INDICATORS

Some programmable keys function as toggles (alternating between two different choices). These keys use audio indicators, and in most cases, visual indicators, to indicate the change.

Programmable Buttons	Positive Indicator Tone	Negative Indicator Tone
Scan	<b>Start</b> Scan operation	<b>Stop</b> Scan operation
Tx Power	Radio transmits at <b>low</b> power	Radio transmits at <b>high</b> power
Squelch*	Radio operates in <b>tight</b> squelch	Radio operates in <b>normal</b> squelch
Option Board	<b>Activates</b> radio's option board	<b>Deactivates</b> radio's option board
Keypad Lock	Radio's keypad is <b>locked</b>	Radio's keypad is <b>unlocked</b>
Repeater/Talkaround	Radio <b>DOES NOT</b> use the repeater	Radio uses the repeater

\* There is no visual indicator for the Squelch function.

## IMPROVED AUDIO FEATURES

### Low Level Expansion (LLE)

The LLE feature of your radio improves voice quality by reducing unwanted background noise when receiving a message. It is compatible with most major types of audio processing systems available today.

### Companding


Companding is a feature that allows further improvement of voice quality. It compresses your voice at transmission, and expands it when receiving while simultaneously reducing extraneous noise. However, to enjoy this benefit, **ALL** transmitting and receiving radios must have this feature activated.



## GETTING STARTED

### BATTERY INFORMATION

#### Battery Status

You can check your radio's battery status by either pressing the programmed Battery Gauge button (battery status is shown by the LED indicator) or by looking at the  icon.

Battery Level	LED Indicator	Iconic Indicator
High	Green	4 bars
Satisfactory	Yellow	2 or 3 bars
Low	Flashing Red	1 bar
Very Low	None	No bar, but flashing.

**NOTE:** If the Battery Gauge indicators (LED and display) does NOT appear, this indicates that the battery may not be a genuine Motorola product.

#### Charging your Battery

When the battery level is very low, you need to recharge the battery before you can continue to use your radio.

1. Place the radio with the battery attached or the battery alone in the charger.
2. The charger's LED would indicate the charging progress.

**NOTE:** Because new batteries or batteries that have not been used for several months could prematurely indicate full charge (solid green LED), charge the batteries for 14 to 16 hours prior to initial use to achieve optimal performance.

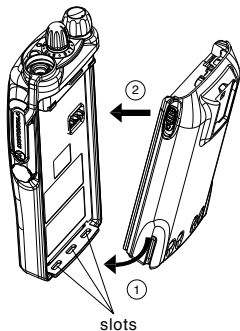
LED color	Status
Single flash of Green	Successful charger power-up.
Flashing Red*	Battery is unchargeable.
Flashing Yellow	Charger is getting ready to charge.
Red	Battery is charging.
Flashing Green†	Battery is 90% charged.
Green	Battery is fully charged.

\* Remove the battery from charger and use a pencil eraser to clean the four metal contacts on the bottom of the battery. Place the battery back into the charger. If the LED indicator continues to flash red, replace the battery.

† A standard battery may require one hour to charge to 90% capacity.

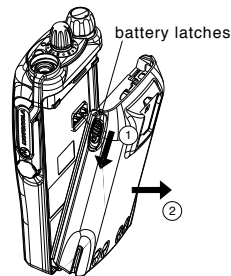
## ACCESSORY INFORMATION

### Attaching the Battery



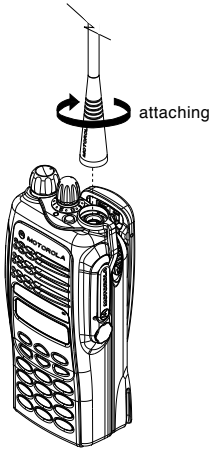
1. Fit the extensions at the bottom of the battery into the slots at the bottom of the radio's body.
2. Press the top part of the battery towards the radio until a click is heard.

### Removing the Battery



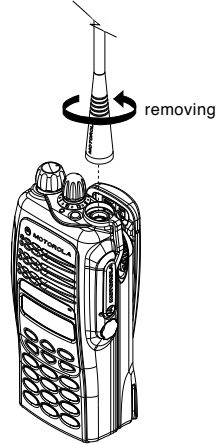
1. Turn off the radio, if it is turned on.
2. Slide the battery latches, on both sides of the battery, downwards.
3. Pull the top part of the battery away from the radio's body, and lift the battery from the radio's body.

## Attaching the Antenna



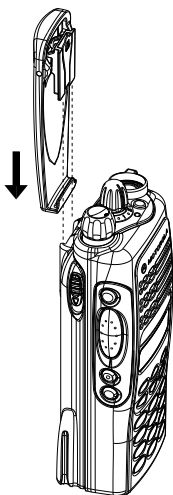
1. Align the threaded end of the antenna with the radio's antenna connector.
2. Turn the antenna clockwise to fasten it.

## Removing the Antenna



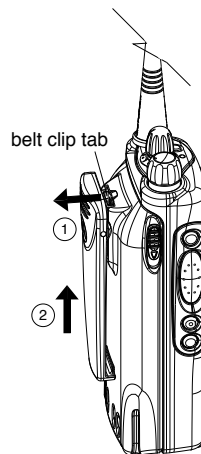
Turn the antenna counter-clockwise until you can remove it.

### Attaching the Belt Clip



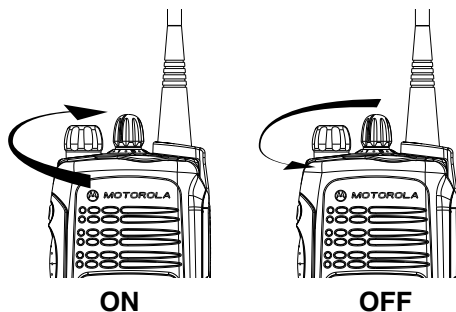
1. Align the grooves of the belt clip with those of the battery.
2. Press the belt clip downwards until a click is heard.

### Removing the Belt Clip



1. Use a key to press the belt clip tab away from the battery.
2. Slide the belt clip upwards to remove it.

## TURNING THE RADIO ON OR OFF



- Turn the **On-Off/Volume Control** knob clockwise to turn on the radio. You will hear the Self Test Pass Tone and see a green LED if the radio powers up successfully. If the radio fails its self test, you will hear the Self Test Fail Tone.
- Turn the **On-Off/Volume Control** knob counter-clockwise, until a click is heard, to turn off the radio.

## ADJUSTING THE RADIO'S VOLUME

1. Press and hold the **Volume Set** key; you will hear a continuous tone.
2. Turn the **On-Off/Volume Control** knob and adjust the volume level.
3. Release the **Volume Set** key.

## SELECTING A RADIO CHANNEL

Your radio offers 128 channels (8 zones of 16 channels each) for easy access to required conventional channels. Some channels on your radio may not be programmed. Check with your dealer for more information.

1. Select the appropriate Zone if required (see "Select Zone" on page 20).
2. Turn the **Channel Selector** knob clockwise or counter-clockwise until you reach the desired channel as shown on the LCD display.

## SENDING A CALL

1. Use the **Channel Selector** knob to change to the required channel.
2. Press the **PTT**, and speak clearly with your mouth about 2.5 to 5 cm (one to two inches) away from the microphone.
3. Release the **PTT** when you finish speaking.

## **RECEIVING A CALL**








1. Turn your radio on.
2. Adjust its volume level.
3. Switch to the desired channel.
4. If at any time a call comes through, you will hear the call at the volume level you have set.

## RADIO CALLS

### SELECTIVE CALL

#### Making a Selective Call

You can make a selective call, provided the signalling system supports it, to a particular radio or a particular group of radios.

1.  to enter Menu Mode.
2.  or  until: Radio Call
3.  to select: Radio Call
4.  to select: Selective Call
5.  or  to select from Radio Call List.  
or  
Enter ID number of radio you are calling (keypad radios only).
6. Press PTT button to make radio call.  
The radio sends out its ID and sounds a tone.


7. Press PTT button and talk with your mouth 2.5-5 cm (1-2 inches) from microphone. Release PTT to listen.
8. When finished with the call:

 to return to: Selective Call

or

Hold  to exit Menu Mode.


#### Receiving a Selective Call

When you receive a selective call, you will hear two (2) alert tones, and the LED Indicator will blink (yellow). The LCD will display the  icon and the programmed name or ID of the calling radio.

To answer the call, just press the PTT.










### CALL ALERT

If your call to a radio is unanswered, you can leave a page for the person. This is a Call Alert.

Any radio receiving a Call Alert will sound four alert tones continually and display the  icon until a response is made. Just press the PTT to answer the Call Alert, or any other key to cancel it.

## Radio Calls


- NOTE:**
- Your radio will only display the last Call Alert received.
  - Your radio will not receive any selective calls until the Call Alert is cleared.

1.  to enter Menu Mode.
2.  or  until: **Radio Call**
3.  to select: **Radio Call**
4.  or  until: **Call Alert**
5.  to select: **Call Alert**
6.  or  to select from Radio Call List.  
or (keypad radios only)  
Enter ID number of radio you are calling.
7. Press PTT button to send the Call Alert.

You will see:

**Call in Prog**

8. If Call Alert is received by the radio you are calling, you will see: **Acknowledge**  
If Call Alert is not received and all retries fail, you will see: **No Acknowledge**
9. When finished with the call:

 to return to:

**Call Alert**








or

Hold  to exit Menu Mode.



## RADIO CHECK

Before making a call, you might want to determine if the receiving radio is within range, without disturbing the user of the radio. Radio Check allows you to do this, provided the signalling system supports it.

You can also use this feature to determine if the called radio is actually within range, if attempts to call the radio with the Selective Call and Call Alert fail.

1.  to enter Menu Mode.
2.  or  until: **Radio Call**
3.  to select: **Radio Call**
4.  or  until: **Radio Check**
5.  to select: **Radio Check**



6.  or  to select from Radio Call List.  
or (keypad radios only)  
Enter ID number of radio you are calling.

7. Press PTT button to make radio call.

You will see:

**Call in Prog**

8. If radio call is received by the radio you are calling, you will see:

**Acknowledge**

If radio call is not received and all retries fail,  
you will see:

**No Acknowledge**

9. When finished with the call:

 to return to:

**Radio Check**

or

Hold  to exit Menu Mode.

## EMERGENCY ALARMS

Your radio can be programmed to emit one of the two emergency alarms described below:


- MDC Emergency Alarm (only if the signalling system you are on is MDC), and
- Emergency Siren

The **MDC Emergency Alarm** feature gives you a one-button quick access to call a particular

radio or center (predefined by your dealer) in emergency situations. When activated, the radio goes into an Emergency state, which can be programmed to


- continually give visual and audio feedback,
- give no audio feedback, but with visual feedback, or
- give no audio/visual feedback, but the radio can receive and transmit.

The **Emergency Siren** will cause the radio to sound a repetitive tone at the maximum volume.

The  icon will light up on the LCD screen, when your radio is in the Emergency state.




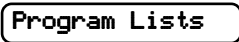




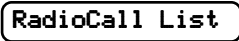

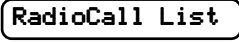








1. Press and release the **Emergency** button to initiate an Emergency Alarm.
2. Press and hold the **Emergency** button to cancel the Emergency Alarm.
3. Press and release the **Emergency** button to restart the Emergency sequence.


## RADIO CALL LIST


The  icon will light up on the LCD screen when you edit the radio call list.

**NOTE:** The radio will not receive any calls when you are editing the radio call list.

### Editing an Entry (for keypad radios only)

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until: 
5.  to select: 
6.  or  until: 
7.  to select: 
8.  or  until you see the Radio Call List entry you want to edit.
9.  to select the entry.
10. Use your keypad to edit the entry. See Keypad Keys (for keypad radios only) on page 5.

11.  to save your changes.
12. When finished with your edits:

 to return to:




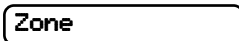







or


Hold  to exit Menu Mode.








## SELECT ZONE

Different radios may be distributed over different zones, depending on how the communications network is set up. Use this feature to select the appropriate zone when communicating with a radio from a different zone. To select a zone:

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until you see the programmed zone name you want.
5.  to select the zone.











## TALKAROUND

In your communications network, you may be using a repeater to cover a larger area than what is possible with your radio. However, you can communicate with another radio within your radio's range without going through the repeater by using the Talkaround feature. This is especially useful when the repeater is down. The  icon will light up on the LCD screen when you activate the Talkaround feature to talk without going through the repeater.

1.  to enter Menu Mode.
2.  or  until: **Rptr/Talkarnd**
3.  to select: **Rptr/Talkarnd**
4.  or  until: **Repeater Mode**  
(talk through repeater)  
or until: **Talkarnd Mode**  
(talk directly without going through repeater).
5.  to select the desired option.

## SQUELCH

If a particular channel receives many unwanted calls coming from radios that do not belong to your communications group and are some distance away, or the "background noise" is excessive, you can try to filter these transmissions out by tightening the channel's squelch. However, tightening squelch could cause calls from members of your communications group that are farther away to be filtered out as well. To set the squelch level:




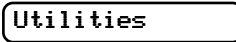









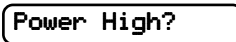

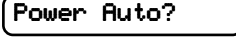

1.  to enter Menu Mode.
2.  or  until: **Utilities**
3.  to select: **Utilities**
4.  or  until: **Squelch**
5.  to select: **Squelch**
6.  or  until: **Sqlch Tight?**  
(tighten channel's squelch),  
or until: **Sqlch Normal?**  
(channel operates under normal squelch).
7.  to select the squelch setting.

## POWER LEVEL

You can transmit your calls at different transmit power levels. A higher level means you can reach a radio that is farther away. Lower power level conserves battery power. You are advised to transmit as frequently as possible on low power, and use high power only when needed.

You can also set the transmit power level to auto. In this setting, the radio would automatically set the transmit power based on the signal strength of the message received. If the signal strength of the message received is weak, the radio would set its transmit power level to high. If the signal strength of the message received is strong, the radio would set its transmit power level to low. However, you should be careful when communicating with a large group of people. A message received from a member of the group close to you may cause your radio to set its transmit power level to low. This means some members which are located some distance from you might not receive any of your replies.

The **L** icon will light up on the LCD screen when your radio transmits at low power, while the **H** icon will light up when it transmits at high power

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until: 
5.  to select: 
6.  or  until:   
(to transmit at high power),  
or until:   
(to transmit at low power).  
or until:   
(to transmit at Auto power).
7.  to select the power level.

## TONE TAGGING

You can program your radio to use a particular tone to alert you when a specific user is calling you (name tone tagging), or when receiving a particular type of radio call (call tone tagging).

## Name Tone Tagging

To tag a name:

1. to enter Menu Mode.
2. or until:
3. to select:
4. or until:
5. to select:
6. or until you see the name you want to tag.
7. to select the name.
8. or until you see and hear the tone you want to use for tagging.
9. to select the tone.  
You will see:
10. to return to:   
or  
Hold to exit Menu Mode.

## Call Tone Tagging

To tag a call:

1. to enter Menu Mode.
2. or until:
3. to select:
4. or until:
5. to select:
6. or until you see the call type you want to tag.  
  
or
7. to select the call type.
8. or until you see and hear the tone you want to use for tagging.
9. to select the tone.  
You will see:
10. to return to:   
or  
Hold to exit Menu Mode.


## SCAN

You can monitor several channels in order to receive any call that is transmitted on any of these channels. Sixteen different channels can be programmed into a scan list. Each channel can share the same scan list or have different scan lists assigned to them.

Once the radio's scan operation is activated and the radio detects a call coming through a channel in its scan list, it switches to that channel for you to receive the call.

## STARTING OR STOPPING A SCAN OPERATION




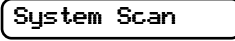







You can start a scan operation by using the menu or by using the scan key.

The  icon will light up on the LCD screen when you start a scan operation. The LCD screen will also show the channel you will transmit on if you press the PTT.

The LED Indicator will blink (green) during a scan operation. It will stop blinking when the radio switches to a channel.

**NOTE:** If you enter Menu Mode when the radio is scanning, the radio will stop scanning and resume when you exit Menu Mode.

### Using the Menu

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until:   
(to start a scan operation),  
or until:   
(to stop a scan operation).
5.  to select the desired option.

### Using the Scan key

1. Press the **Scan** key to start a scan operation.
2. Press the **Scan** key again to stop the scan operation.

## TALKBACK

If the programmable Talkback option is set, you can respond to any calls received during the scan operation by pressing the PTT before the programmed hang-time ends. Check with your dealer for details.

## DELETING A NUISANCE CHANNEL

If a channel continually generates unwanted calls/noise, you can temporarily remove it from the scan list by performing a Nuisance Channel Delete operation.

1. While the radio is on the Nuisance Channel, press and hold the **Scan** key until you hear a tone.
2. Release the **Scan** key.


**NOTE:** You cannot perform a Nuisance Channel Delete on a priority channel or if there is only one remaining channel in the scan list.

## ADDING A DELETED NUISANCE CHANNEL BACK TO THE SCAN LIST

1. Press the **Scan** key to stop the scan operation.
2. Press the **Scan** key again to re-start the scan operation.




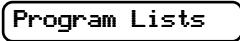

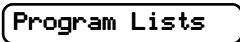




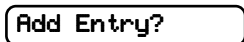









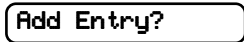


## EDITING THE SCAN LIST

You can choose the channels (up to a maximum of 16) that you wish to scan and list them in a scan list. You can assign this list to all of your channels, or have different lists assigned to each of your channels. When you start a Scan operation on a particular channel, the radio will fetch the scan list for that channel, and scan for activity on all the channels in the list.

When you edit a scan list, you are editing the list for the current channel. The  icon will light up on the LCD screen the moment you enter into editing mode.

**NOTE:** The radio will not receive any calls when you are editing the scan list.

### To Add or Delete Items in the Scan List

-  to enter Menu Mode.
-  or  until: 
-  to select: 
-  to select: 
-  or  until:   
(to add a channel to the scan list),  
or until:   
(to remove a channel from the scan list).
-  to select the desired option.
-  or  until you see the channel you want to add or delete.  
**NOTE:** You cannot delete the last remaining member of a scan list.
-  to complete the operation.  
You will see:   
(if you added a channel)  
or :   
(if you had pressed  again to confirm the deletion of the channel)
-  to return to:   
or return to:   
or hold  to exit Menu Mode.

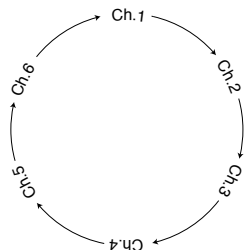


## PRIORITIZATION OF A SCAN LIST MEMBER

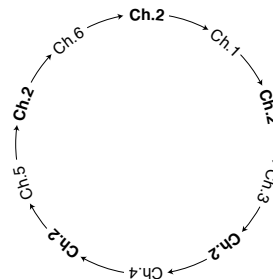
You may want your radio to check particular channels more frequently for calls. You can do this by prioritizing those channels.

Your radio allows you to prioritize two channels.

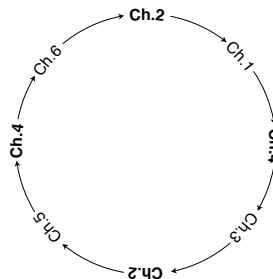
Assuming a scan list with 6 channels, if all your channels are non-prioritized, the normal scan operation would check for activity in the following sequence:



If you prioritize Channel 2 as Priority #1, the scan operation would change to



















If you prioritized Channel 2 as Priority #1 and Channel 4 as Priority #2, this cycle would change to



**NOTE:** Even though your radio has switched to a non-priority channel, your radio will still check for activity on the priority channels. If some activity is detected there, the radio will switch to that priority channel.

### Setting the priority of a scan list member


1.  to enter Menu Mode.
  2.  or  until: Program Lists
  3.  to select: Program Lists
  4.  to select: Scan List
  5.  or  until: Edit Priority?
  6.  to select: Edit Priority?
  7.  or  until: Priority #1?  
or until: Priority #2?
  8.  to select the desired priority level.
9.  or  until you see the channel you want to prioritize.
  10.  to prioritize that channel.
  11.  to return to: Edit Priority?  
or hold  to exit Menu Mode.

## PHONE

You can use your radio to connect to a phone line to make a phone call.

To do this, your radio must send an access code to a station that connects it to a phone line. After you have finished your call, the radio has to send a deaccess code to shutdown the connection to the phone line.

## MAKING A PHONE CALL

You can make a phone call by using the menu or by using the programmed Phone button. The  icon will light up on the LCD screen when you are in Phone mode.

A complete phone session consists of

- entering the Phone mode
- sending the access code
- sending the phone number
- having the phone conversation
- ending the phone call.



## Entering the Phone Mode

Before you can make a phone call, you must enter the radio's Phone mode.

1. Press the Phone button.

To enter the Phone mode via the menu:

1.  to enter Menu Mode.

2.  or  until:

Phone

3.  to select:

Phone

You will see the last phone number dialed; shown here as:

5554567

## Sending the Access Code

Your radio can be programmed to send the access code in any of the following ways:

- manual (for radios with keypad only)
- automatic delayed
- automatic immediate.

Check with your dealer for more details.

Method	Steps to Take
Manual*	Dial the access code from the keypad.
Automatic Delayed	Press and release the PTT; the radio automatically sends the pre-programmed access code.
Automatic Immediate	You do not have to do anything; the radio immediately sends the access code when it enters phone mode.

\* for radios with keypad only

## Sending the Phone Number

After the access code is sent, you should wait for a dialing tone before sending your phone number.

You can send

- a phone number that is stored in the radio, or
- a new number (for radios with keypad only).

Additionally, depending on how your radio is programmed, if you use the keypad to send a number, the radio can send the numbers in one of the following ways:



- live dial
- buffered dial.

Check with your dealer for details.

## Sending a Stored Phone Number

You can access the stored phone numbers by

- recalling the last number dialed,
- using the phone list, or
- using the speed dial feature (for radios with keypad only).

Method	Steps to Take
Last Number Redial*	Press and release the PTT; the radio sends the last number dialed.
Phone List	<ol style="list-style-type: none"> <li>1. Press  or  to scroll the phone list until you reach the desired phone number.†</li> <li>2. Press and release the PTT to send the number.</li> </ol>

Method	Steps to Take
Speed Dial <sup>‡</sup>	<ol style="list-style-type: none"> <li>1. Press and release the programmed Speed Dial button.</li> <li>2. Press the numbered keys (1-9) corresponding to the first nine phone numbers in the phone list. Press "0" if you want the last number dialed.</li> <li>3. If your radio uses buffered dial, press and release the PTT.</li> <li>4. The radio sends out the phone number.</li> </ol>

\* The method described is not applicable for radios which manually send the access code; these radios can access this number from the phone list or the speed dial.

† For radios that manually send the access code, press the Down Key once to access the last number dialed.

‡ For radios with keypad only.

### **Sending a New Number (for radios with keypad only)**

You enter the phone number by pressing the relevant keys on the keypad.

Method	Steps to Take
Live Dial	Enter the phone number by using the keypad; the radio sends out the numbers as the keys are pressed.
Buffered Dial	<ol style="list-style-type: none"> <li>1. Enter the phone number by using the keypad; the radio saves the selected numbers in a buffer.</li> <li>2. Press and release the PTT; the radio sends out the numbers in its buffer.</li> </ol>

### **The Phone Conversation**

Once the radio has connected to the intended party, you can begin the conversation. Even though this is a phone call, your conversation mimics a radio call (that is, both parties speak in turn).

1. Press and hold the PTT, while talking into the microphone.
2. Release the PTT when you finish what you want to say, and wait for the response.
3. Repeat steps 1 and 2 until the conversation ends.

**NOTE:** The radio starts a programmable Time-Out-Timer the moment both parties stop transmitting (talking). If the Time-Out-Timer expires, the radio will end the phone call.

## Ending the Phone Call

Just as the radio needs to send the access code when starting a phone call, the radio needs to send the deaccess code to end the phone call.

The radio can send the deaccess code in any of the following ways:

- manual (for radios with keypad only), and
- automatic.


Check with your dealer for details.

1. If your radio sends the deaccess code manually, dial the deaccess code from the keypad.
2. Press the **Phone** button to exit phone mode.

**NOTE:** Radios using the automatic method will send the deaccess code automatically.


or

2. Exit the phone mode using the menu:

 to exit phone mode and return to:


**Phone**

or

Hold  to exit the Menu Mode.











**NOTE:** Radios using the automatic method will send the deaccess code automatically.

## PHONE LIST

Your radio can store a list of frequently accessed phone numbers. The  icon will light up on the LCD screen when you edit the phone list.

**NOTE:** The radio will not receive any calls when you are editing the phone list.

### Adding an Entry to the Phone List (for keypad radios only)

1.  to enter Menu Mode.
  2.  or  until: **Program Lists**
  3.  to select: **Program Lists**
  4.  or  until: **Phone List**
  5.  to select: **Phone List**
  6.  or  until: **Add Entry?**
  7.  to select: **Add Entry?**
- You will see: **Enter Name**

8. Use the keypad to enter the name. See Keypad Keys (for keypad radios only) on page 5.

9. to store the name.

You will see:

**Enter Phone #**

10. Use the keypad to enter the phone number. Press the numeric keys to enter the numbers. You can also add a dash (press ) and a Pause Indicator (press and hold ) the key until the # character on the LCD screen changes to a "P".

11. to store the phone number.

again to confirm its storage.

12. to return to:

**Add Entry?**

or

Hold to exit Menu Mode.

### Deleting an Entry

1. to enter Menu Mode.

2. or until:

**Program Lists**

3. to select:

**Program Lists**

4. or until:

**Phone List**

5. to select:

**Phone List**

6. or until:

**Delete Entry?**

7. to select:

**Delete Entry?**

8. or until you see the entry you wish to delete.

9. to select the entry.

again to confirm the deletion.

10. to return to:

**Delete Entry?**

or

Hold to exit Menu Mode.

### Editing an Entry (for keypad radios only)

1. to enter Menu Mode.

2. or until:

**Program Lists**

3. to select:

**Program Lists**

4. or until:

**Phone List**









5. to select: **Phone List**
6. or **P2** until: **Edit Entry?**
7. to select: **Edit Entry?**
8. or **P2** until you see the entry you wish to edit.
9. to select the entry.
10. or **P2** until: **Edit Name?**  
(to edit the entry's name),  
or until **Edit Number?**  
(to edit the entry's phone number),  
or until **Edit Location?**  
(to edit the entry's location in the phone list).
11. to select the edit type.
12. Use the keypad to edit the entry. See Keypad Keys (for keypad radios only) on page 5.
13. to store the information.
14. to return to: **Edit Entry?**  
or  
Hold to exit Menu Mode.







## AUDIO/TONE SETTINGS

The Audio/Tones menu allows you to customize the audio and tone settings on your radio.

### GENERAL INSTRUCTIONS

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until you see the audio/tone setting you wish to change.

5.  to select the tones setting. You will see the current status of the setting.
6.  or  to see the available optional settings. (For Name Tone Tagging and Call Tone Tagging, details on selecting and assigning tones are given in Name Tone Tagging on page 23 and Call Tone Tagging on page 23.)
7.  to select the desired setting.

Use instructions above to change your radio's audio and tones settings shown in the table below.













Menu Items	Optional Settings	Function
Alert Vol Lvl	Ind Alert Off Ind Alert On	Allows you to make the volume level of the audio and alert tones independent. When turned on, the alert tones will remain at a fixed volume level, while the audio volume level can be adjusted with the On/Off/Volume Knob.
Tone Disable	Tones On Tones Off	Allows you to turn all tones on or off.

Menu Items	Optional Settings	Function
Name Tone Tag	Tone list: Alert 1 Alert 2 Alert 3 Alert 4 Alert 5 Alert 6 Alert 7  Name Tag Set	Allows you to assign a specific tone to ring when receiving a call from a specific user. Choice of eight tones are available from the tone list (for details see Name Tone Tagging on page 23).
Call Tone Tag	Tone list Alert 1 Alert 2 Alert 3 Alert 4 Alert 5 Alert 6 Alert 7  Call Tag Set	Allows you to assign a specific tone to be made when receiving a specific type of radio call (e.g. a call alert or a selective call). Choice of eight tones are available from the tone list (for details see Call Tone Tagging on page 23).
Escalert	Escalert On Escalert Off	Allows you to turn the escalating property of the tones associated with radio calls on or off.
Companding	Compand On Compand Off	Allows you to turn companding on or off.
Keypad Tones	Tones On Tones Off	Allows you to turn the tones associated with the radio keys on or off.

## UTILITIES

The Utilities menu allows you to customize some general settings on your radio.

### GENERAL INSTRUCTIONS

1.  to enter Menu Mode.
2.  or  until: 
3.  to select: 
4.  or  until you see the setting that you wish to change.
5.  to select the setting to change. You will see the current status of the setting.
6.  or  to see the available optional settings.
7.  to select the desired setting.

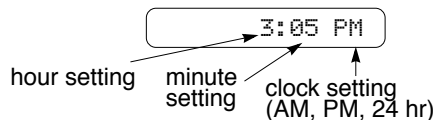
Use the instructions above to change your radio settings shown in the table below.

Menu Items	Optional Settings	Function
Squelch	Normal Tight	Allows you to change the squelch setting of the radio between normal and tight.
Power Level	High Auto Low	Allows you to change the power level of the radio between high, low or auto.
Clock	Clock On Clock Off Set Time	Allows you to set the time (including changing the format from 12 hour to 24 hour display) and to turn the clock on or off (for details see Setting the Time on page 38).
Reminder Alarm	Alarm On Alarm Off Set Time	Allows you to set the time for an alarm to sound and also to turn the alarm on or off.
Option Board	Opt Board On Opt Board Off	Allows you to enable or disable the features of the option board installed in your radio.

Menu Items	Optional Settings	Function
Light Disable	Lights On Lights Off	Allows you to turn the back-light feature of the radio on or off.
Software Version #	—	Displays the radio's software version number.

## SETTING THE TIME

1. to enter Menu Mode.
2. or **P2** until: **Utilities**
3. to select: **Utilities**
4. or **P2** until: **Clock**
5. to select: **Clock**
6. or **P2** until: **Set Time?**
7. to select: **Set Time?**
8. You are at the hour setting. Press **P3** once to change the minute setting, or twice to change the clock from a 12-hour clock to a 24-hour clock or vice-versa.



9. or **P2** to change the hour or minute setting, or to toggle between a 12-hour clock and a 24-hour clock.
- NOTE:** To change from AM to PM or vice-versa, press or **P2**, while in the hour setting, until the display shows the desired hour and AM or PM.
10. to save your changes.
  11. When finished with the call:

- to return to: **Utilities**
- or
- Hold to exit Menu Mode.