ASTRO® XTS™ 4000 Digital Portable Radio, Quick Reference Card
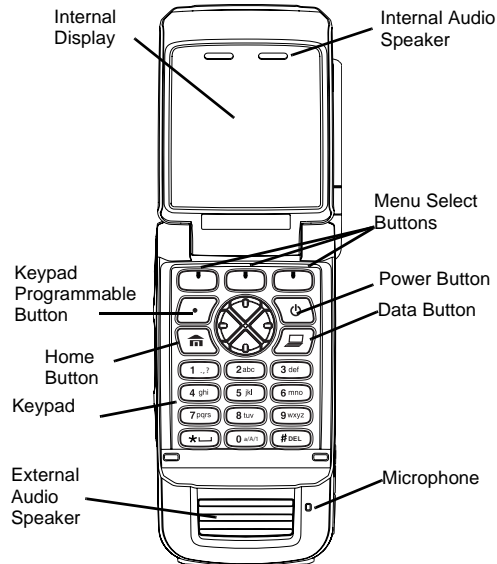
Product Safety and RF Exposure Compliance

> ⚠️ **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 (Motorola Publication part number 68P81095C98) to ensure compliance with RF energy exposure limits.

Internal Display
Internal Audio Speaker
Menu Select Buttons
Keypad Programmable Button
Power Button
Data Button
Home Button
Keypad
External Audio Speaker
Microphone

Radio On/Off

1. On - **Power On/Off** button
2. Off - **Power On/Off** button

Zones/Channels

1. Zone - **Menu entry** to select desired zone.
2. Channel - **Menu entry** to select desired channel.

Receive/Transmit

1. Radio on and select zone/channel.
2. Listen for a transmission.
   - or, if preprogrammed -
   Press **Monitor** button and listen for activity.
3. Adjust volume, if necessary.
4. Press **PTT** to transmit; release to receive.

Send Emergency Alarm

Radio on and press **Emergency** button. Display shows current zone/channel, and Emergency. You hear short, medium-pitched tone.

Note: To exit emergency at any time, press and hold **Emergency** button.

When acknowledgment is received, you hear four beeps; alarm ends; radio exits emergency.

Send Emergency Call

1. Radio on and press **Emergency** button.
Note: To exit emergency at any time, press and hold **Emergency** button.
2. Press and hold **PTT**. Announce your emergency into the microphone.
3. Release **PTT** to end call.
4. Press and hold **Emergency** button to exit emergency.

Send Silent Emergency Alarm

1. Radio on and press **Emergency** button. Display does not change and you hear no tone.
Note: To exit emergency at any time, press and hold **Emergency** button.
2. Silent emergency continues until you:
   - Press and hold **Emergency** button to exit emergency state.
     - or -
   - Press and release **PTT** to exit silent emergency and enter regular emergency (alarm, call, or alarm with call).

Display Status Symbols

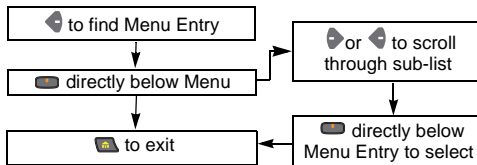| Symbol	Description
	Receiving an individual call.
	Received signal strength for the current site (trunking only). The more bars in the symbol, the stronger the signal.
	Displays the level of charge in the battery at external display. It blinks when the battery is low.
	Displays the level of charge in the battery at internal display. It blinks when the battery is low.
	You are talking directly to another radio or through a repeater; **Displayed** = direct; **Not Displayed** = repeater.
	This channel is being monitored (could make reference to Carrier Squelch).
	The radio is muted to normal dispatch calls (could make reference to PL, DPL or signaling Squelch).
	Your radio is in secure operation; **Displayed** = secure operation; **Not Displayed** = clear operation; **Blinking** = receiving an encrypted voice call
	The radio is scanning a scan list.
	Blinking = Priority 1 Channel during scan; **Steady** = Priority 2 Channel during scan.
	Audio is routed to the radio's external speaker;
	Audio is routed to the radio's internal speaker.
	Indicates the type of ring style selected for incoming calls and pages.
	Steady = Radio is transmiting in AES. Blinking = Radio is receiving in AES.

Menu Navigation

◀ to find Menu Entry	
↓	▶ or ◀ to scroll through sub-list
⬤ directly below Menu	↓
↓	⬤ directly below Menu Entry to select
🔒 to exit	

Menu Entries (Use With Menu Navigation)

Entry	Menu Selection	Page
Call	Private Call/Selective Call	43/46
Chan	Select a Channel	20
Dir	Repeater/Direct	53
Eras	Key Zeroization/Erase	58

Entry	Menu Selection	Page
Key	Key Selection	56
Kset	Keyset Selection	57
Logf	Radio Lock	24
Name	Text Select	34
Num	Number Select	33
Page	Call Alert Page	48
Phon	Phone	40
Prog	Editing	33
Pswd	Password	23
Pwr	TX Power Level	22
Reky	Rekey Request	59
Rpgm	Reprogram Request	61
Scan	Scan On/Off	37
Site	Site Lock/Unlock	65
Spkr	Loudspeaker	26
Sts	Status Call	51
Styl	Ring Style	25
Tgrp	Talkgroup Call	50
View	View a List	32
Zone	Select a Zone	20

MOTOROLA

ASTRO® XTS™ 4000
Digital Portable Radio

User Guide

6871618L01-C

This declaration is applicable to your radio *only* if your radio is labeled with the FCC logo shown below.

DECLARATION OF CONFORMITY

Per FCC CFR 47 Part 2 Section 2.1077(a)

FC

Responsible Party
Name: Motorola, Inc.

Address: 8000 West Sunrise Boulevard
Plantation, FL 33322 USA
Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **XTS 4000**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Product Safety and RF Exposure Compliance

⚠️ **C a u t i o n**	**Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet enclosed with your radio.**

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Table of Contents

General Radio Operation

Notations Used in This Manual

Throughout the text in this publication, you will notice the use of **WARNING**, **Caution**, and **Note**. These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.

WARNING

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

Caution

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

Note: *An operational procedure, practice, or condition, etc., which is essential to emphasize.*

The following special notations identify certain items:

Example	Description
Secure button or	Buttons and keys are shown in bold print or as a key symbol.
PHONE CALL	Information appearing on the radio's display is shown using the special display font.
Phone	Menu entries are shown similar to the way they appear on the radio's display.
Press	This means "Press the right side of the **4-way Navigation** button."

Physical Features of the XTS 4000 Radio

Table 1: Physical Features

No.	Feature	No.	Feature
1	Antenna	10	Menu Select Buttons
2	Home Button	11	Power Button
3	Volume Rocker	12	Data Button
4	PTT (Push-to-Talk) Button	13	4-Way Navigation Button
5	External Display	14	Keypad
6	External Audio Speaker	18	Audio Jack
7	Battery	19	CE Connector
8	Internal Audio Speaker	21	Microphone
9	Internal Display		

Note: *Do not block or cover the microphone when talking through the radio.*

Programmable Controls

The following radio controls can be programmed to operate certain software-activated features.

| No.	Feature	No.	Feature
15	Secure Button	17	Keypad Programmable Button
16	Emergency Button	20	Side Button

The features that can be assigned to these controls by a qualified radio technician, and the pages where these features can be found are listed in Table 2 on page 4. Check with your dealer for more information supporting the programmable buttons.

Any references in this manual to controls that are "preprogrammed" mean that a qualified radio technician must use the radio's programming software to assign a feature to a control.

Table 2: Programmable Features

Feature	Page	Feature	Page	Feature	Page
Call Alert	46	PL Defeat	27	Selective Call	45
Call Response	39	Private Call	42	Site Lock/ Unlock	65
Channel	20	Repeater/Direct	53	Site Search	66
Dynamic Priority	38	Reprogram Request	61	Speaker	26
Emergency	29	Ring Style	25	Status	51
Dim	5	Scan List Programming	34	TX Power Level	22
Monitor	21	Scan On/Off	37	Volume Set	19
Nuisance Delete	37	Secure/Clear	55	Zone	20
Phone	39	Select	36		

Display
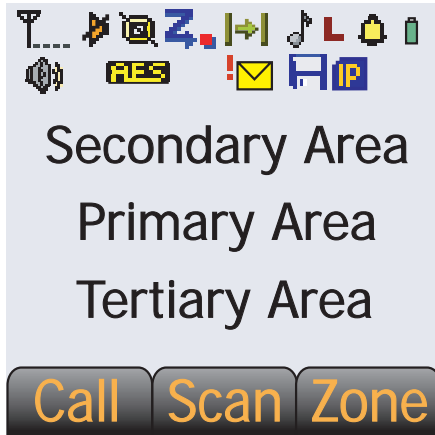
The above screen is typical of what you will see on your radio. The 130 x 130 pixel liquid crystal display (LCD) shows radio status, text, and menu entries.

Adjusting the Display Brightness

Press the preprogrammed Dim button or access this feature through the menu to change the display brightness to one of three levels.

* Off to high
* High to medium
* Medium to off

The level of brightness will remain on for a preprogrammed time before it turns off automatically, or you can turn it off immediately by pressing the **Dim** button again.

Status Icons

At the internal display, the top two display rows contain icons that indicate radio operating conditions. Some of these icons are also shown in external display, but in monochrome. The table below shows a list of these icons.

Table 3: Status Symbols

Icon	Description
	*Call Received Blinks when receiving an Individual Call.
	Received Signal Strength Indication (RSSI) The received signal strength for the current site, for trunking only. The more bars in the symbol, the stronger the signal.
	Fuel Gauge at External Display Displays the level of charge in the battery. Blinks when battery is low.
	*Fuel Gauge at Internal Display Displays the level of charge in the battery. Blinks when battery is low.
	Ring Style Indicates the type of ring style selected for incoming calls and pages. See "Ring Style" on page 25.

Table 3: Status Symbols (Continued)

Icon	Description
	Direct • **Displayed** = You are talking directly to another radio, not through a repeater, during conventional operation only. • **Not Displayed** = You are talking through a repeater
	Loudspeaker • Audio is routed to the radio's external speaker. • Audio is routed to the radio's internal speaker.
	Monitor (Carrier Squelch) The selected channel is being monitored during conventional operation only.
	In Call User Alert The radio is muted to normal dispatch calls. PL, DPL or signalling squelch will be heard when dispatching the calls.
	Secure Operation • **Displayed** = secure operation • **Not Displayed** = clear operation • **Blinking** = receiving an encrypted voice call
	Scan The radio is scanning a scan list.
	Priority-One/Priority-Two Channel Scan Indicates scanning of a priority mode (blinking for Priority-One mode; steady for Priority-Two mode).
	*Packet Data Activity Indicates the subscriber is transmitting and receiving data.
	*Packet Data IP Indicates the subscriber is ready to access the FNE.

Table 3: Status Symbols (Continued)

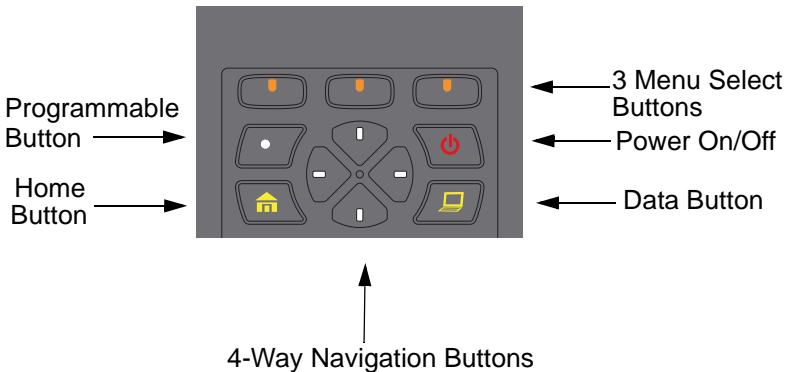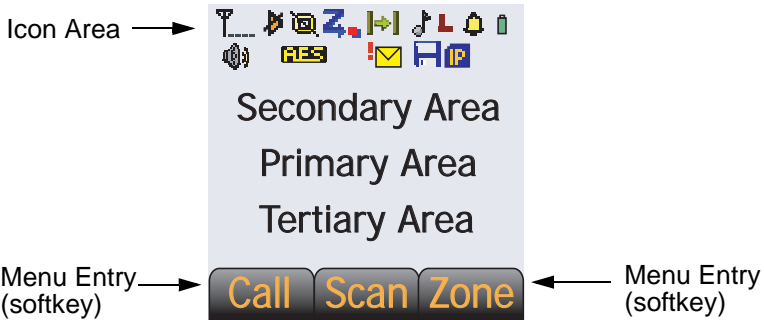| Icon	Description
	Tx Indicates the radio is transmitting data. Will not be displayed when the radio is sending a silent emergency alarm.
	Rx Indicates the radio is receiving data. Will not be displayed when the radio is sending a silent emergency alarm.
	Tx Power Level Indicates the transmission power is LOW.
	*PPP Link Establishment Indicates the subscriber is ready to receive data through a data cable.
	Vote Scan Indicates the mode is in a voting scan system.
	Priority Message Indicates the radio has received a priority message. Icon is displayed together with the Inbox Full or New Message icon.
	Inbox Full Indicates the radio has received a new message while the inbox is full.
	New Message Indicates the radio has received a new message.
	*Advanced Encryption Standard (AES) • **Displayed** = Radio is transmitting in AES. • **Blinking** = Radio is receiving in AES.

Note: *All these icons, except the ones marked with *, are also displayed in the external display.*

Menu Entry (Softkey)

The bottom row of the display contains one to three menu entries (also known as softkeys). The menu entries allow you to select one of several menus to access the radio's features. The menu entries are accessed through the **Menu Select** buttons.

Menu Select Buttons

The **Menu Select** buttons access the menu entries of features that have been activated by a qualified radio technician. Your radio may be programmed differently from the following example, but the display for turning Scan on or off might look like the example below. For instance, to turn Scan on, press 🔲 directly below Scan.

Icon Area

Menu Entry (softkey)

Secondary Area

Primary Area

Tertiary Area

Call Scan Zone

Menu Entry (softkey)

Programmable Button

Home Button

3 Menu Select Buttons

Power On/Off

Data Button

4-Way Navigation Buttons

■ Menu Entry Features

Table 4: Menu Entries

Feature	Menu Entry	Page	Feature	Menu Entry	Page
Private Call / Selective Call	Call	43/46	Password	Pswd	23
Channel Selection	Chan	20	TX Power Level	Pwr	22
Repeater/Direct	Dir	53	Rekey Request	Reky	59
Key Zeroization/ Erase	Eras	58	Reprogram Request	Rpgm	61
Key Selection	Key	56	Scan On/Off	Scan	37
Keyset Selection	Kset	57	Site Lock/Unlock	Site	65
Radio Lock	Logf	24	Loudspeaker	Spkr	26
Text Select	Name	34	Status Call	Sts	51
Number Select	Num	33	Ring Style	Styl	25
Call Alert Page	Page	48	Talkgroup Call	TGrp	50
Phone	Phon	40	View a List	View	32
Editing	Prog	33	Zone Selection	Zone	20

■ Home Button

The **Home** button, 🏠 always returns you to the home (default) display. In most cases, this is the current mode.

Some radio features that you can edit require saving information in memory. Pressing the **Home** button after editing those features causes information to be saved before going to the home display.

Some features do not require you to press the **Home** button to go to the home display. This reduces the required number of key presses.

■ ON/OFF Button

This button is used to power up or power down the radio.

■ Data Button

A CPS programmable button that can be programmed to launch specific data features such as text messaging and location service.

■ Programmable Buttons

The programmable buttons can be programmed for features as specified in the CPS. These buttons provide you convenient access to commonly used radio features.

■ 4-Way Navigation Button

This button is used to scroll through the radio's lists or items in the display, or both. It is also used to move the cursor while you are in data entry screen type.

Keypad

The 3 x 4-key alphanumeric keypad provides an interface to your radio's features.

The keypad functions in a manner similar to a standard telephone keypad when entering numeric digits.

When the keypad is used to edit a list, each key can generate different characters of the alphabet.

Refer to Table 5, for a complete list of characters.

Table 5: Keypad Characters

Key	Number of times the key is pressed								
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
0	0	(	)	<	>				
1	1	&	%						
2 abc	A	B	C	2	a	b	c		
3 def	D	E	F	3	d	e	f		
4 ghi	G	H	I	4	g	h	i		
5 jkl	J	K	L	5	j	k	l		
6 mno	M	N	O	6	m	n	o		
7 pqrs	P	Q	R	S	7	p	q	r	s
8 tuv	T	U	V	8	t	u	v		
9 wx yz	W	X	Y	Z	9	w	x	y	z
*	*	/	+	-	=				
#	#	.	!	?	,	;			

Alert Tones

An alert tone is a sound or group of sounds. Your radio uses alert tones to inform you of your radio's conditions. The following table lists these tones and when they occur.

Table 6: Alert Tones

You Hear	*Tone Name*	*Heard*
Short, Low-Pitched Tone	Invalid Key-Press	When wrong key is pressed.
	Radio Self-Test Fail	When radio fails its power-up self test.
	Reject	When unauthorized request is made.
	Time-Out Timer Warning	Four seconds before time out.
Long, Low-Pitched Tone	No ACK Received	When radio fails to receive an acknowledgment.
	Time-Out Timer Timed Out	After time out.
	Talk Prohibit/ PTT Inhibit	(Only when **PTT** button is pressed) transmissions are not allowed.
	Out-of-Range	(Only when **PTT** button is pressed) the radio is out of range of the system.
	Individual Call Warning Tone	When radio is in an individual call for greater than 6 seconds without any activity.
A Group of Low-Pitched Tones	Busy	When system is busy.

Table 6: Alert Tones (Continued)

You Hear	*Tone Name*	*Heard*
Short, Medium-Pitched Tone	Valid Key-Press	When correct key is pressed.
	Radio Self-Test Pass	When radio passes its power-up self test.
	Clear Voice	At beginning of a non-coded communication.
	Priority Channel Received	When activity on a priority channel is received.
	Emergency Alarm Entry	When entering the emergency state.
	Central Echo	When central controller has received a request from a radio.
Long, Medium-Pitched Tone	Volume Set	When volume is changed on a quiet channel.
	Emergency Exit	When exiting the emergency state.
A Group of Medium-Pitched Tones	Failsoft	When the trunking system fails.
	Automatic Call Back	When voice channel is available from previous request.
	Talk Permit	(Only when **PTT** button is pressed) verifying system accepting transmissions.
	Keyfail	When encryption key has been lost.
	Console Acknowledge	When status, emergency alarm, or reprogram request ACK is received.
	Received Individual Call	When Call Alert or Private Call is received.
	Call Alert Sent	When Call Alert is received by the target radio.

Table 6: Alert Tones (Continued)

You Hear	*Tone Name*	*Heard*
Short, High-Pitched Tone (Chirp)	Low-Battery Chirp	When battery is below preset threshold value. Happens only during transmit mode or standby mode.
Ringing	Fast Ringing	When system is searching for target of Private Call.
	Enhanced Call Sent	When waiting for target of Private Call to answer the call.
	Phone Call Received	When a land-to-mobile phone call is received.
Gurgle	Dynamic Regrouping	(Only when the **PTT** button is pressed) a dynamic ID has been received.

Standard Accessories

■ Battery

WARNING

To avoid a possible explosion:

• **DO NOT replace the battery in any area labeled "hazardous atmosphere".**

• **DO NOT discard batteries in a fire.**

Charging the Battery

The Motorola-approved battery shipped with your radio is uncharged. Prior to using a new battery, charge a 630mAh Standard Li-Ion Battery for a minimum of 5 hours to ensure optimum capacity and performance. Charge a new 1260mAh Standard Li-Ion Battery for a minimum of 7 hours to ensure optimum capacity and performance.

Batteries	Charge Complete Time (Hour)	Standby Mode Time (Hour)
630 mAh Standard Li-Ion Battery	5	4
*1260mAh High Capacity Li-Ion Battery	5	8

For a list of Motorola-authorized batteries available for use with your XTS 4000 radio, see "Batteries and Battery Accessories" on page 94.

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

Battery Charger

To charge the battery, place the battery, with or without the radio, in a Motorola-approved charger. The charger's LED indicates the charging progress. For a list of chargers, see "Chargers" on page 94.

Note: *If the radio is turned on while in the charger, the LED indicator will remain red due to the power draw of the radio. To determine if the battery has reached full charge, turn the radio off and wait 10 seconds. The LED will turn green if the battery is fully charged.*

■ Antenna

For information regarding available antennas, see page 93.

Zones and Channels

A zone is a grouping of channels. A channel is a group of radio characteristics, such as transmit/receive frequency pairs.

Before you use your radio to receive or send messages, you should select the zone and channel.

■ Select a Zone

1 Press ◀ to find Zone.

2 Press ▬ directly below Zone.

   The current zone blinks and the channel name, does not blink.

3 Press ◀ to find the zone you want.

4 Press ▬ directly below Sel to confirm the displayed zone and channel.

   OR

   Press the **PTT** button to transmit on the displayed zone/channel.

5 Press ▬ directly below Sel to return to home display.

■ Select a Channel

1 Press ◀ to find Chan.

2 Press ▬ directly below Chan.

   The display shows the current channel name blinking and the zone, not blinking.

3 Press ◀ to find the channel name you want.

   OR

   Use the keypad to enter the channel number.

4 Press ▬ directly below Sel to confirm the displayed zone and channel.

   OR

   Press the **PTT** button to transmit on the displayed zone/channel.

5 Press ▬ directly below Sel to return to home display.

Receive / Transmit

Radio users who switch from analog to digital radios often assume that the lack of static on a digital channel is an indication that the radio is not working properly. This is not the case. Digital technology quiets the transmission by removing the "noise" from the signal and allowing only the clear voice or data information to be heard.

This section emphasizes the importance of knowing how to monitor a channel for traffic before keying up to send a transmission.

■ Without Using the Monitor Buttons

1 Turn the radio on and select the desired zone and channel.

2 Listen for a transmission.

3 Adjust the **Volume Rocker** if necessary.

4 Press and hold the **PTT** button to transmit. Tx icon appears on the display.

5 Release the **PTT** button to receive (listen).

■ Use the Preprogrammed Monitor Button

1 Turn the radio on and select the desired zone and channel.

2 Press the **Monitor** button and listen for activity. The Carrier Squelch indicator is displayed.

3 Adjust the **Volume Rocker** if necessary.

4 Press and hold the **PTT** button to transmit. Tx icon appears on the display.

5 Release the **PTT** button to receive (listen).

Common Radio Features

Transmit Power Level

This feature lets you select the power level at which your radio will transmit. The radio will always turn on to the default setting. This feature must be preprogrammed by a qualified radio technician.

- Select Low for a shorter transmitting distance and to conserve power.
- Select High for a longer transmitting distance.

■ Select Power Level

1 Press ◀ to find Pwr.

2 Press ▬ directly below Pwr to toggle between Low and High.

Radio Lock

This feature changes your radio to a more robust security system that protects the use of the secure encryption keys. If this feature is enabled in your radio by a qualified radio technician, when you turn the radio on, you see `Radio locked`.

■ Unlock Your Radio

1   Enter your numeric password.

Note:

- *Secure-equipped radios — **6** to **8** characters.*

- *Clear radios — **0** to **8** characters.*

   If you make a mistake, press ◆ *to backspace.*

2   Press the preprogrammed **Select** button after you enter your password. If the password is *correct*, the radio unlocks.

Note:

- *If the password is incorrect, the radio remains locked.*

- *If you enter three incorrect passwords in a row, you see* `Deadlock`. *Turn the radio off and then on, and begin again at step **1**.*

- *Secure Radios Only — If you enter a total of **15** consecutive incorrect passwords (turning the radio off and on does not reset this number), the radio erases all of its encryption keys. See a qualified radio technician.*

■ Change Your Password

1   Press ◀ to find `Pswd`.

2   Press 🔘 directly below `Pswd`.

3   Enter the old password.

4   Press 🔘 directly below `Sel`.

5   Enter the new password.

6   Press ▭ directly below `Sel`.

7   Re-enter the new password.

8   Press ▭ directly below `Sel`. The password is updated.

Note:

- *If the two passwords do not match, repeat steps **5** through **8**.*

- *If you enter three incorrect old passwords, the radio exits the password feature. You cannot access this feature again until you turn the radio off and on.*

■ Enable or Disable the Radio Lock Feature (Secure Radios Only)

This feature (programmable by a qualified radio technician) allows you to enable or disable the radio lock feature.

1   Press ◀ to find `Logf`.

2   Press ▭ directly below `Logf` to toggle between "Pswd enabled" and "Pwsd disabled".

Ring Style

This feature allows you to select the type of alert when your radio receives incoming individual calls or pages.

Ring Style	Icon	Description
Vibrate and Ring		Radio vibrates and rings when incoming individual calls and pages are received.
Vibrate Only		Radio vibrates when incoming calls and pages are received.
Ring Only		Radio rings when incoming calls and pages are received.
Silent		Radio is in silent mode.

■ Select Ring Style

1 Press ◀ to find `Styl`.

2 Press ▭ directly below `Styl`.

3 Press ▶ or ◀ to select the ring style.

Note: *The default factory setting is Vibrate and Ring.*

4 Press directly below `Sel`.

5 Press ▭ directly below `Cncl` or 🏠 to return to home display.

Loudspeaker

The external speaker allows you to share your call with your group.

■ Change to External Speaker

1   Press ◀ to find Spkr.

2   Press ⬤ directly below Spkr to toggle the audio to the external speaker. The 🔊 icon is shown on the display.

Note: *When the earpiece or headset is plugged into the audio jack, the external speaker will not work.*

3   Press ⬤ directly below Spkr again to route the audio back to the internal speaker.

■ Turn off External Speaker and Activate Vibration

When the flip is closed, you can manually turn off the external speaker and activate the vibration alert, using the radio's preprogrammed **Spkr** side button.

1   Close the flip of the radio.

2   Press the preprogrammed **Spkr** side button to turn off the external speaker. The vibration alert is now activated whenever a dispatch or talkgroup call is received.
The 🔇 icon is shown on the display.

Note: *The vibration will stop once the flip is opened or when an audio accessory is plugged into the audio jack.*

The external speaker will remain turned off even after you open the flip to answer a call and then close it back.

When the external speaker is turned off, the vibration alert is always turned on regardless of the ring style setting.

3   Press the side button again to turn on the external speaker.

Conventional Squelch Operation

■Digital Options

One or more of the following options may be programmed in your radio. Consult your service technician for more information.

This option	*Will allow you to hear*
Digital Carrier-Operated Squelch (COS)	any digital traffic.
Normal Squelch	any digital traffic having the correct Network Access Code (NAC).
Selective Switch	any digital traffic having the correct network access code and correct talkgroup.

Time-out Timer

The time-out timer turns off your radio's transmitter. The timer is set for 60 seconds at the factory, but it can be programmed from 0 to 7.75 minutes (465 seconds) by a qualified radio technician.

1   Hold down the **PTT** button longer than the programmed time. You will hear a short, low-pitched warning tone, the transmission will cut-off.

2   Release the **PTT** button.

3   Press the **PTT** to re-transmit. The time-out timer restarts.

Emergency

If the top (orange) button is programmed to send an emergency signal, then this signal overrides any other communication over the selected channel.

Your radio can be programmed for the following:

- Emergency Alarm
- Emergency Call
- Emergency Alarm with Emergency Call
- Silent Emergency Alarm

Consult a qualified radio technician for emergency programming of your radio.

■Send an Emergency Alarm

An emergency alarm will send a data transmission to the dispatcher, identifying the radio sending the emergency.

1 With your radio turned on, press the **Emergency** button. The current zone/channel is displayed alternately with `Emergency` on the external display and a short, medium-pitched tone sounds.

If the selected channel does not support emergency, the display shows `No Emergency`. Select a channel that does show `Emergency`.

Note: *To exit emergency at any time, press and hold the* **Emergency** *button for about a second.*

2 When you receive the dispatcher's acknowledgment, you see `ACK Received`, four tones sound, the alarm ends, and the radio exits the emergency mode.

If no acknowledgement is received, you see `No Acknowledge`, the alarm ends, and the radio exits the emergency mode.

Note: ***For Emergency Alarm with Emergency Call:*** *The radio enters the Emergency Call state either after it receives the dispatcher's acknowledgment, or if you press the* ***PTT*** *button while in Emergency Alarm. Go to step 2 of "Send an Emergency Call", below.*

■Send an Emergency Call

This type of dispatch gives your radio priority access on a channel.

The radio operates in the normal dispatch manner while in Emergency Call, except, if enabled, it will return to one of the following:

- Tactical/Non-Revert — You talk on the channel you selected before you entered the emergency state.
- Non-Tactical/Revert — You talk on a preprogrammed emergency channel. The emergency alarm is sent on this same channel.

1. With your radio turned on, press the **Emergency** button.The current channel is displayed alternately with `Emergency`, on the external display and a short, medium-pitched tone sounds.

Note: *To exit emergency at any time, press and hold the **Emergency** button for about a second.*

2 Press and hold the **PTT** button and announce your emergency into the microphone.

3 Release the **PTT** button to end the transmission and wait for a response from the dispatcher.

4 Press and hold the **Emergency** button for about a second to exit emergency.

■Send a Silent Emergency Alarm

1 With your radio turned on, press the **Emergency** button. The display does not change, the LED does not light, and you hear no tones.

Note: *To exit emergency at any time, press and hold the **Emergency** button for about a second.*

■ Site View and Change

You can view the number of the current site or force your radio to change to a new one.

View the Current Site

Press the preprogrammed **Site Search** button.

The display momentarily shows the name of the current site and its corresponding received signal strength indicator (RSSI). (See Table 3 on page 5.)

OR

If the radio is scanning for a new site, you momentarily see Scanning site.

Change the Current Site

Press and hold down the preprogrammed **Site Search** button. You momentarily see Scanning site and hear a tone.

When the radio finds a new site, it returns to the home display.

ARS User Login and Text Messaging Features

Automatic Registration Service (ARS)

Automatic Registration Service feature provides an automated data application registration for the radio. When you turn on the radio, the device automatically registers with the server. Data applications within the fixed network can determine the presence of a device on the system and send data to the device. For example: Text Messaging Service (TMS).

Automatic Registration Service for the radio consists of 2 modes:

* ARS Server Mode (default mode)
* ARS Non Server Mode

> **Note:** *ARS default mode can be changed by a qualified radio technician using the radio's programming software.*

Table 8: TMS Menu Options

Menu Options	Description/ Function
Inbx	This is used to store new incoming messages or messages that you have received. Inbox can hold up to 30 messages.
Comp	This menu option brings you to the compose screen.
Drft	This is used to store all saved messages or messages that are to be sent at a later time. Draft folder can hold up to 10 messages.
Sent	This is used to store the messages that you have already sent. Sent folder can hold up to 10 messages.
Back	This menu option brings you back to the TMS main menu or previous menu.
Edit	This menu option brings you to the Quick Text Messages screen.
Save	This menu option allows you to save your messages to the Draft folder.
Rply	This menu option allows you to reply a message.
Del	This menu option allows you to delete a message.
Addr	This menu option allows you to key in the target address, or select one from the list.
New	This menu option allows you to compose a new message.
List	This menu option allows you to select a predefined message.
Impt	This menu option is used to toggle on/off the "Priority" flag for an outgoing message.

Menu Options	Description/ Function
Rgrp	This menu option is used to toggle on/off the "Request reply" flag for an outgoing message.
Curr	This menu option is used to delete the current selected message.
All	This menu option is used to delete all the messages in the current message inbox.

Table 9: TMS Status Symbols

Symbol	Indication
	Priority Message This icon is displayed • when "Priority" is toggled on before sending the message. • in the Inbox folder for messages which are flagged with 'Priority'.
	Request Receipt This icon is displayed • when "Request Receipt" is toggled on before sending the message. • in the Inbox folder for messages which are flagged with 'Request Receipt'.
	Inbox Full This icon is displayed when the Inbox Folder is full. If a new message is received when the inbox is full, the icon will be blinking.
	New Message Icon The radio has received a new message.

Symbol	Indication
	Message Sent This icon is displayed if the selected message has been successfully sent.
	Message Unsent This icon is displayed if the selected message was not successfully sent.
	Read Message This icon is displayed when the selected message in the Inbox has been read.
	Unread Message The selected message in the Inbox folder has not been read.
Inbox 3/6	**Message Index** This icon indicates the index of the current message the user is viewing. Example: if the user is looking at the third message out of a total of 6 messages in the Inbox folder, the icon is displayed as the icon on the left column.
	Num Lock The text entry is currently in num lock mode.
	Normal Mode The text entry is currently in the normal mode.
	Uppercase The text entry is currently in uppercase mode.

■ Receive a Message

When you receive a message, a momentary text, New msg appears on the display along with a new message icon.
If inbox is full, the message icon will be blinking.

New Msg

■ To View Message from the Inbox

1 Access TMS (Launch TMS).

2 Press ▭ directly below Inbx.

User
00000004

Inbx Comp Drft
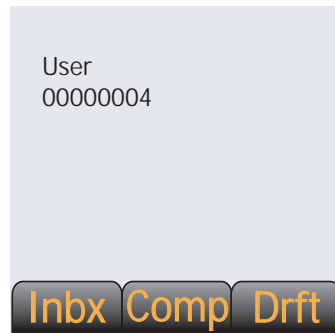
3 The Inbox screen appears. The first message in the list is displayed. Inbox can hold up to 30 messages. Message status icons are displayed at the top of the screen.

Inbox 01/01

From:User
Hello

Rply Del Back
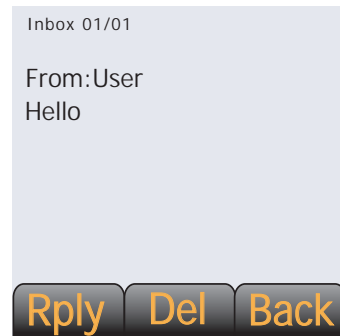
4 Scroll to the message you want to read by pressing the ⬤ or ⬤ button.

> **Note:** *If the message fills more than one screen, scroll to read it by pressing ⬤ or ⬤ button.*

5 To delete the message, press ⬤ below Del. See "Delete a Message" on page 85. for further details.

■ Compose a New Text Message

1   Press ▭ below Comp to compose a new
message.

The Compose Message Screen appears.
List or New option appears on the
display.

> List or new
>
> New   List   Back
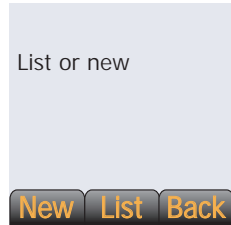
2   Press ▭ below New to type a new message.

A blinking cursor appears on the display indicating point of input.

3   **Writing Text**

Type your message using the keypad.
Press the key labeled with the desired character, once for the
first character, twice for the second, and so on. Refer to table 10
below for complete list of characters.
For example:
To enter "s", press (7 pqrs) key four times. To enter "7", press the
key five times. If you do not press a key for a few seconds, the
character is accepted, and the cursor moves to the next position.

Press (#) key to delete a character.

Press (*) key to add a space.

You can move the cursor by pressing ◀ or ▶.

Press and hold 0 to toggle between normal text entry mode,
uppercase mode and num lock mode.

Note: *i) During the uppercase mode, multi-tapping the keys will
only scroll through the uppercase letters.
(Example : A->B->C->2)*

ii) During the num lock mode, pressing the keypad will
only enter the numeric digits. Subsequent presses of
the same key will insert the same digit to the text
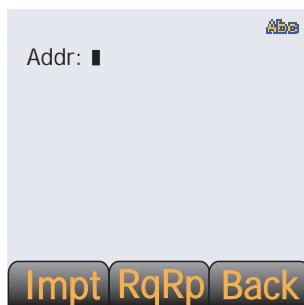message (no multi-tap).

Table 10: Keypad Characters

Key	Number of times the key is pressed (in normal mode)								
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
0	0	or press and hold to toggle between normal text entry mode, uppercase mode and num lock mode.							
1	1 . , ? ! ; @ _ - * # & $ / + = \ " ' ( )								
1 *	1	.	@	_	-	*	#	/	
2 abc	a	b	c	2	A	B	C		
3 def	d	e	f	3	D	E	F		
4 ghi	g	h	i	4	G	H	I		
5 jkl	j	k	l	5	J	K	L		
6 mno	m	n	o	6	M	N	O		
7 pqrs	p	q	r	s	7	P	Q	R	S
8 tuv	t	u	v	8	T	U	V		
9 wxyz	w	x	y	z	9	W	X	Y	Z
*	Space								
#	Delete a character								

Note: ** Only applicable when addressing a message.*

4   Addressing a Message

Press 🔸 below Addr to address your outgoing message.

The Address input screen appears.

Abc

Addr: ▌

Impt RqRp Back

Press ◀ or ▶ to scroll through the address list.
OR
Use direct address entry via multi-tap.

5   Append a Priority Message or Request Receipt

Before sending your message, you can append a priority message or a request receipt to your message. Press ▭ below Impt to toggle on/off a "Priority" flag for an outgoing message. A 'Priority' flag icon is displayed at the top of the screen when it is toggled on.

Press ▭ below Rqrp to toggle on/off the "Request Receipt" icon for an outgoing message. A 'Request

receipt' status icon is displayed at the top of the screen when it is toggled on.

Note:

- *The "Priority" flag on a message does not imply that the message will get higher priority over the other messages when it is being transmitted. It is just an indication that can be embedded into a message to indicate to the receiver that the message is important.*

- *When you receive a message that is flagged with the "Request Receipt" icon, you must manually respond to the sender that you have received the message. The system will not automatically send back a notification that the radio received such message.*

6   When an address has been appended to the outgoing message, press the **PTT** button to send your message.

   OR

   Press ⬜ below Save to save your message for sending at a later time.

   The message will be saved in the "Draft folder". See "To Access the Draft Folder" on page 86. for further details.

■ Send a Predefined Message

Quick Text Messages are messages that are predefined and usually consist of messages that are used most frequently.

1   Press ⬜ below List to use the predefined message.

   The first predefined message appears.

> QT 01/01
>
> I am late today ▮
>
> Addr Edit Back
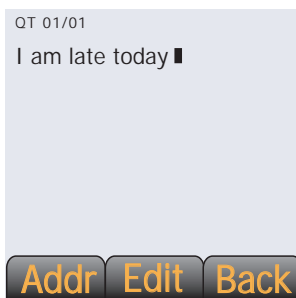
2   When a message has been selected from the list, press ⬜ below Addr to append an address to the outgoing message.

3   Press the PTT button to send the predefined message.

■ Edit a Quick Text Message

1   Press ▭ below Edit to edit a quick text message.

The Editing Screen appears. A blinking cursor appears at the end of the predefined text.

Edit your message using the keypad.

```
QT 01/01                    Abc

I am late today ▐




Addr   Save   Back
```
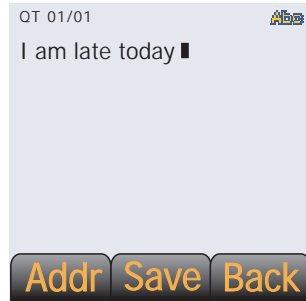
2   Press ▭ below Save to save the edited changes. The message is saved in the Draft folder.

3   When an address has been appended to the outgoing message, press the PTT button to send the edited message.

■ Reply to a Received Message

1   Press ▭ below Rply to reply to a message

The Compose Message Screen appears.

```



List or new




New   List   Back
```
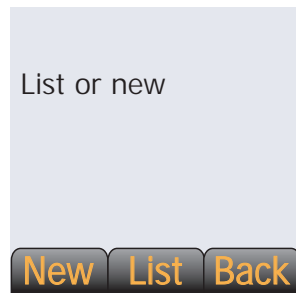
2   Press ▭ below New to type a new message.

   OR

   Press ▭ below List to use the predefined message / Quick text message.

   OR

   Press ▭ below Back to return to TMS main menu.

■ Delete a Message

1 From the Inbox, Draft or Sent screen, scroll to select a message for deletion.

2 After selecting a message, press ▣ below Del. The display shows 2 delete options.

Press ▣ below Curr to delete only the current message.
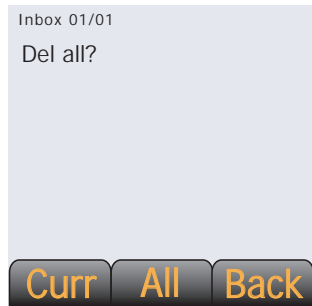
OR

Press ▣ below All to delete all messages.
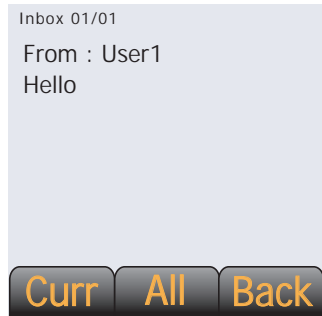
OR

Inbox 01/01
From : User1
Hello

Curr   All   Back

Press ▣ below Back to return to previous menu.

3 When you select to delete all messages,a confirmation screen appears.

Press ▣ below Yes to delete all messages.
Press ▣ below No to return to previous screen.

Inbox 01/01
Del all?

Curr   All   Back

■ To Access the Draft Folder

The Draft folder stores the messages that were saved previously. Newest saved message is appended at the bottom of the list. Draft folder can hold up to 10 messages. The oldest draft in the folder is deleted when the 11th message comes in.

1   Press 🔲 below Drft. The Draft screen appears.

The first draft in list is displayed.

2   Press ◀ or ▶ to scroll through the list of drafts.

> Draft 01/01
>
> I have a meeting at 9am tomorrow
>
> Edit   Del   Back
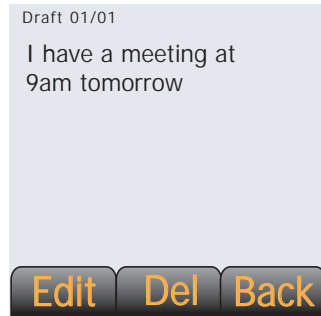
■ To Access the Sent Folder

The Sent folder stores the messages that were sent out previously. Newly sent message is appended where the newest message is at the beginning of the list and the oldest message is at the bottom of the list. The oldest Sent message in the folder is deleted when the 11th message comes in.

1   Press 🔲 below Sent. The Sent screen appears.
The first sent message in the list is displayed. A message delivery icon will be displayed at the top right corner of the screen.

> 📧 Abs
>
> To: User
> Have a nice day
>
> Impt   RqRp   Back
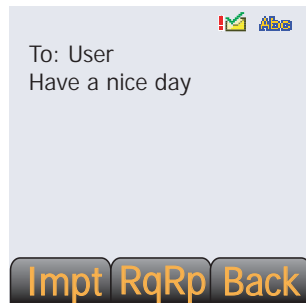
2   Press ◀ or ▶ to scroll through the list of other messages that have been sent.

Helpful Tips

Radio Care
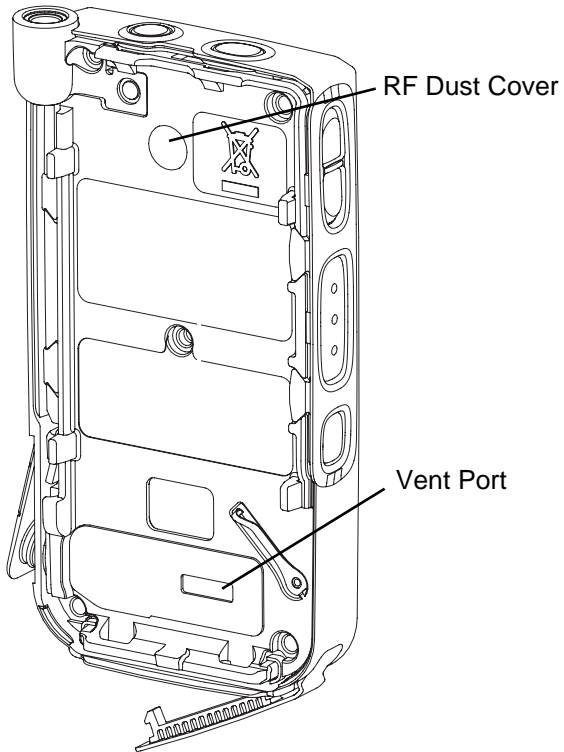
RF Dust Cover

Vent Port

	• The XTS 4000 radio casting has a RF Dust cover. Never remove this cover as this would create leak paths into the radio.
C a u t i o n	• Never insert any objects into the vent port, such as needles, tweezers, or screwdrivers. This could create leak paths into the radio.

C a u t i o n

- If the radio battery contact area has been submerged in water, dry and clean the radio battery contacts before attaching a battery to the radio. Otherwise, the water could short-circuit the radio.

- If the radio has been submerged in water, shake the radio well so that any water that may be trapped inside the speaker grille and microphone port can be removed. Otherwise, the water will decrease the audio quality of the radio.

- Do not disassemble the radio. This could damage radio seals and result in leak paths into the radio. Any radio maintenance should be performed only by a qualified radio technician.

Cleaning

To clean the external surfaces of your radio:

1　Combine one teaspoon of mild dishwashing detergent to one gallon of water (0.5% solution).

2　Apply the solution sparingly with a stiff, non-metallic, short-bristled brush, making sure excess detergent does not get entrapped near the connectors, controls or crevices. Dry the radio thoroughly with a soft, lint-free cloth.

3　Clean battery contacts with a lint-free cloth to remove dirt or grease.

C a u t i o n

Do not use solvents to clean your radio. Spirits may permanently damage the radio housing.

Do not submerge the radio in the detergent solution.

Handling

- Do not pound, drop, or throw the radio unnecessarily. Never carry the radio by the antenna.

- Avoid subjecting the radio to an excess of liquids. Do not submerge the radio.

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

- Do not disassemble the radio.

- Keep the accessory-connector cover in place until ready to use the connector. Close the cover immediately once the accessory has been disconnected.

Service

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

Express Service Plus (ESP) is an optional extended service coverage plan, which provides for the repair of this product for an additional period of either one or two years beyond the normal expiration date of the standard warranty. For more information about ESP, contact the Motorola Radio Support Center at 3761 South Central Avenue, Rockford, IL 61102 (800) 227-6772 / (847)725-4200.

Battery

Battery Life

Battery life is determined by several factors. Among the more critical is the average depth of discharge with each cycle. Typically, the deeper the average discharge, the fewer cycles a battery will last. Top up your battery frequently, if possible.

Charging the Battery

Motorola batteries are designed specifically to be used with a Motorola charger. Charging in non-Motorola equipment may lead to battery damage and void the battery warranty. Motorola-authorized battery chargers may not charge batteries other than the ones listed on page 94.

The battery should be at about 25°C (77°F) (room temperature), whenever possible, for charging. The acceptable charge temperature range is 0°C to 45°C. Motorola rapid-rate battery chargers contain a temperature-sensing circuit to ensure that batteries are charged within the temperature limits stated above.

Battery Charge Status

Your radio can indicate your battery's charge status through:

- vibrations and sounds
- fuel gauge symbol on the display

LED and Sounds

When your battery is low, and the radio is in standby mode or transmit mode:

- if vibration is turned on, your radio will vibrate
- you hear a low-battery "chirp" (short, high-pitched tone)

But these would not happen during receive mode.

Fuel Gauge Symbol

The radio indicates the current battery charge level through a fuel gauge symbol. Refer to the table below for more information.

Fuel Gauge		Charge Level
External Indicator	**Internal Indicator**	
		60% - 100%
		40% - 59%
		20% - 39%
		6% - 19%
		0% - 5%

Battery Recycling and Disposal

Lithium Ion (Li-Ion) rechargeable batteries can be recycled. However, recycling facilities may not be available in all areas. Under various U.S. state laws and the laws of several other countries, Li-Ion batteries must be recycled and cannot be disposed of in landfills or incinerators. Contact your local waste management agency for specific requirements and information in your area.
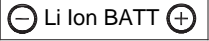
Motorola fully endorses and encourages the recycling of Li-Ion batteries. In the U.S. and Canada, Motorola participates in the nationwide Rechargeable Battery Recycling Corporation (RBRC) program for Li-Ion battery collection and recycling. Many retailers and dealers participate in this program.

For the location of the drop-off facility closest to you, access RBRC's Internet web site at www.rbrc.com or call 1-800-8-BATTERY. This internet site and telephone number also provide other useful

information concerning recycling options for consumers, businesses, and governmental agencies.

Symbol	Definition
⚠	Important safety important follows.
🔥⊘	Do not dispose of your battery or mobile device in a fire.
♻	Your battery or mobile device may require recycling in accordance with local laws. Contact your local regulatory authorities for more information.
🗑⊘	Do not throw your battery or mobile device in the trash.
⊖ Li Ion BATT ⊕	Your mobile device contains an internal lithium ion battery.

Accessories

Motorola provides the following approved accessories to improve the productivity of your XTS 4000 portable two-way radio. Motorola do not certify the use of other Nextel type accessories with this radio.

Antennas

Antennas for different frequencies are indicated by the color of the straw. Please refer to the following picture to identify the straw on the antenna.
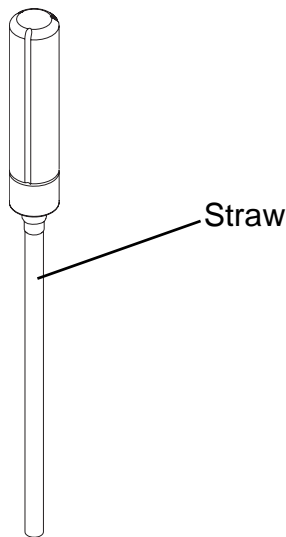
Straw

The straw color for each antenna is given in the following table.

NAD6582_	Antenna 136 – 151 MHz	Yellow
NAD6581_	Antenna 145 – 166 MHz	Black
NAD6583_	Antenna 162 – 174 MHz	Blue
NAE6552_	Antenna 380 – 470MHz	Red

Batteries and Battery Accessories

NNTN6944_	630 mAh Standard Li-Ion Battery
PMNN4083_	1260 mAh Standard Li-Ion Battery

Carry Accessories

Belt Clips

NNTN6945_	Plastic Belt Clip
NNTN6946_	Leather Belt Clip

Chargers

NNTN6938_	XTS 4000 Charger US 110V AC
NNTN6937_	XTS 4000 Charging Cradle
NNTN6939_	XTS 4000 Charger 12V Vehicular

Headsets and Earpieces

NNTN5006BP	Headset Earbud with PTT
NNTN5211_	2-Wire Surveillance Kit