APX™ Two-Way Radios

Motorola P25
APX 6000

Chan Scan Cnts

APX™ 6000, Model 3

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)

Responsible Party

Name: Motorola Solutions, Inc.

Address: Motorola Solutions, Inc., 1303 East Algonquin Road Schaumburg, IL60196, U.S.A.

Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **APX 7000**

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.

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

Caution

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 6881095C99) to ensure compliance with RF energy exposure limits.

For a list of Motorola-approved antennas and other accessories, visit the following website: http://www.motorola.com/APX

All the features described in the following sections are supported by the radio's software version **R07.00.00** or later.
See **Accessing Radio Information** to determine your radio's software version.
Check with your dealer or system administrator for more details of all the features supported.

Notice to Users (FCC and Industry Canada)

This device complies with Part 15 of the FCC rules and RSS 210 of the Industry Canada rules per the conditions listed below:
1 This device may not cause harmful interference.
2 This device must accept any interference received, including interference that may cause undesired operation.
3 Changes or modifications made to this device, not expressly approved by Motorola, could void the user's authority to operate this equipment.

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This Interactive End User Toolkit (IEUTK) covers the basic operation of the APX 7000 Dual Display.

However, your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

Adobe Flash player is required to run the demos included with this kit.
Please refer to the Adobe website (http://get.adobe.com/flashplayer/) to update/download/install the Adobe Flash Player.

<u>Notations Used in This Tutorial</u>

Throughout the text in this toolkit, 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
Home button or ⌂	Buttons and keys are shown in bold print or as an icon.
Phone	Menu entries are shown similar to the way they appear on the radio's display.
▶	This means "Press the right side of the 4-way Navigation button."
Model 3	Feature/Procedure applies to **Model 3** only

Model 3

Antenna

On/Off/Volume Control Knob

2-Position Concentric Switch*

Microphone

Main Display

Zone A
Chan 1

Chan | Scan | Dir

Menu Select Buttons

Home Button

Data Feature Button

4-Way Navigation Button

Keypad

* These radio controls/buttons are programmable.

Microphone

Main Speaker

**Top Side (Select) Button
Scan On/Off**

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

**Side Button 1
Zone Up**

**Side Button 2
Zone Down**

**Accessory
Connector**

Battery

Battery Latch

* These radio controls/buttons are programmable.

16-Position Select Knob

2-Position Concentric Switch Keypad Lock

LED Indicator

3-Position A/B/C Switch (Not programmed)

Top Orange Button Emergency

On/Off/Volume Control Knob

Top Display

* These radio controls/buttons are programmable.

❑ Charging the Battery

> ⚠️ **WARNING**
>
> To avoid a possible explosion: until side latches click into place.
> • DO NOT replace the battery in any area
> labeled "hazardous atmosphere".
> • DO NOT discard batteries in a fire.

The Motorola-approved battery shipped with your radio is uncharged. Prior to using a new battery, charge it for a minimum of 16 hours to ensure optimum capacity and performance.

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; see your charger's user guide.

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.

Single Unit Charger

Multi Unit Charger

IMPRES Adaptive Charger

• Monitors the usage pattern of the ___IMPRES___ battery and,

• Stores that information in the ___IMPRES___ battery, then

• Performs a recondition cycle only when needed.

• Will not overheat the battery regardless of how long it is left in the charger.

• Charger monitors the battery and automatically "tops off" the battery, as required.

NOTE:

• The battery must be charged before use.

• Memory effect is a phenomenon that causes a loss in battery capacity or voltage due to repetitive shallow discharging or long-term overcharging.

• This memory effect has been greatly reduced in your batteries through the use of new cell technology.

• It is still recommended that you discharge your battery as much as possible before recharging it.

• Recharging after each shift is good standard practice.

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

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Charge Indicator   **Description**

Single Flash Green   (1x)   Charger has successfully powered up.

Steady Red   🔴   Battery is in rapid charge mode.

Flashing Green   🟢   Battery has completed rapid charge (>90% available capacity).
                                    Battery is in Top-Off charge (Trickle Charge) and requires approximately 1 hour.

Steady Green   🟢   **Battery has completed charging and is fully charged.**

Flashing Yellow   🟡   Battery is recognized by charger but is waiting to charge.
                                    (Either the battery voltage is too low or the battery temperature is too low or too high to allow charging. When this condition is corrected, the battery will begin charging).

Flashing Red   🔴   **Battery is un-chargeable or not making proper contact.**

Steady Yellow   🟡   Battery is in recondition mode. The length of time the charger remains in this mode is dependent upon the state of charge remaining in the battery when inserted. (Fully charged batteries require more time to recondition–8 hours or more–than fully discharged batteries.)
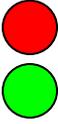
Flashing Red & Green 🔴 🟢   Battery may be approaching the end of its rated service life. This is <u>not</u> a fault indication, merely a notification to the user that the battery may soon no longer be able to yield expected service and may need to be replaced.

Automatic Reconditioning of the Battery*:*

When the _IMPRES_ battery is properly inserted into the charger, the charger determines if it is appropriate to recondition the battery.

If the battery needs reconditioning, the charger automatically indicates a *STEADY YELLOW*. This process may take **8 hours or more** to complete, depending upon the state of charge and capacity rating of the battery when inserted.

NOTE: It important that the battery be allowed to complete the recondition/recharge process for it to be effective. Leave the battery in the charger until the charger indicates a STEADY GREEN.

NOTE:
*Toward the end of the rapid charge cycle (**STEADY RED** indication), the battery voltage exceeds the normal operating voltage of the radio. Voltage returns to a normal level following the rapid charge mode or when the battery is removed from the charger.*

If the radio is turned on while the charger is in rapid charge mode, the radio becomes temporarily inoperable. This condition can be cleared by removing the radio from the charger and turning the radio off and on again.

During the reconditioning process, the battery becomes fully discharged. As a result, the radio may not function during reconditioning mode.

Manually Terminating Reconditioning:

At any time during the reconditioning process (***STEADY YELLOW*** indication), remove and reinsert the battery within **5 seconds**. This causes the charger to terminate the reconditioning process and begin the charging process. The charger indicator changes to a ***STEADY RED***.

Manual Reconditioning of the Battery*:*

Within **2 ½ minutes** of the initial insertion of an IMPRES battery (***STEADY RED*** indication), remove and reinsert the battery within **5 seconds** to manually force reconditioning to occur. The charger indicator changes from a ***STEADY RED*** to a ***STEADY YELLOW***. This forces the charger to recondition and automatically recharge the battery.

NOTE: Excessive use of this feature reduces the cycle life of the battery.

Initial Battery Charge*:*

1. Must be in an **_IMPRES_** Adaptive Charger to properly calibrate the **_IMPRES_** battery and enable the Smart Energy features. This process is indicated by a **STEADY YELLOW** indicator light.

2. The process is automatic and includes an initial reconditioning and then begins charging upon completion of this process.

3. To ensure optimum performance prior to the initial use, all new batteries should be left in the charger until the light turns solid green.

    If this process is interrupted, the charger will calibrate the battery upon the next insertion.

    NOTE:
    IMPRES batteries may be charged in conventional chargers. However, the Smart Energy features will not be enabled.

    New batteries (never used before) may prematurely indicate a full charge (STEADY GREEN indication).

❑ Attaching the Battery

With the radio turned off, slide the battery into the radio's frame until side latches click into place.

To remove the battery, turn the radio off. Squeeze the release latches on the bottom of the battery until the battery releases from the radio. Remove the battery from the radio.

Note: *If your radio is preprogrammed with volatile-key retention, the encryption keys are retained for approximately 30 seconds after battery removal.*

Check with your dealer or system administrator for more information.

You can view the status of your IMPRES battery.
See **Accessing the Radio Information** for more information.

Battery

❑ **Attaching the Antenna**

With the radio turned off, set the antenna in its receptacle
and turn clockwise to attach it to the radio.

*To remove the antenna, turn the antenna
counterclockwise.*
Make sure you turn off the radio first.

Antenna

❑ **Attaching the Accessory Connector Cover**

The accessory connector is located on the antenna side of the radio. It is used to connect accessories to the radio.

Note: *To prevent damage to the connector, shield it with the connector cover when not in use.*

Insert the hooked end of the cover into the slot above the connector.

Press downward on the cover's top to seat it in the slot.

Once in place, rotate the thumbscrew clockwise by hand until tight.

To remove the accessory connector cover, rotate the thumbscrew counterclockwise until it disengages from the radio.

If the thumbscrew is too tight, use an Allen wrench to loosen it first.

Rotate and lift the connector cover to disengage it from the radio.

Accessory

Accessory Connector

❑ **Using the Carry Holder**

Position the radio within the carry holder with the main speaker facing outward.
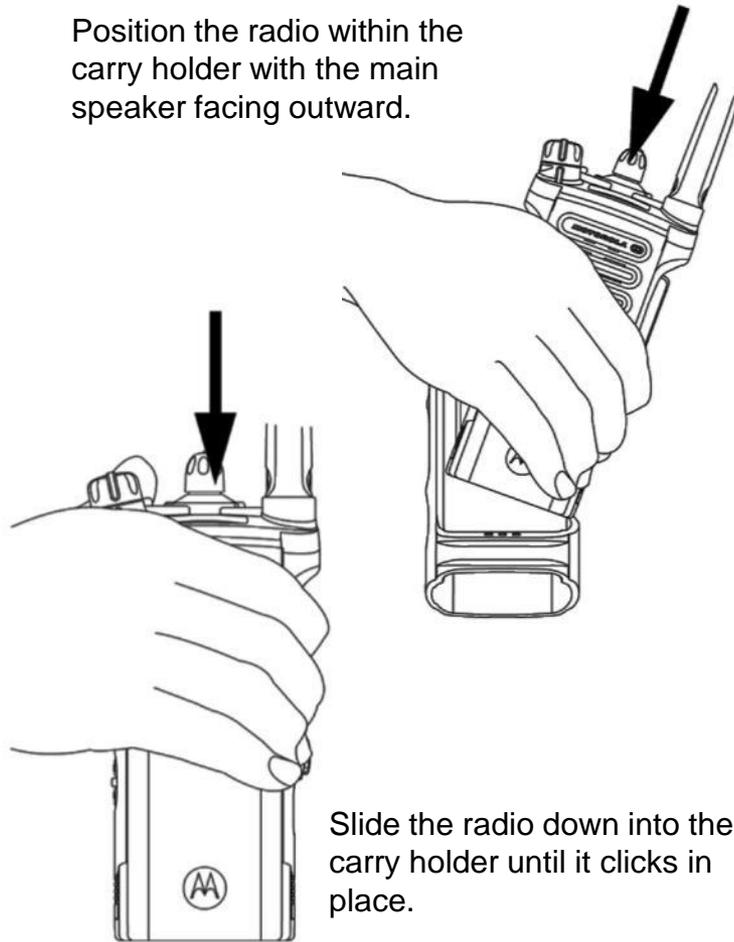
Slide the radio down into the carry holder until it clicks in place.

To remove the radio from the carry holder, place the tip of your fingers on the ledge of the carry holder and push at the bottom of the radio until the radio is released from it.
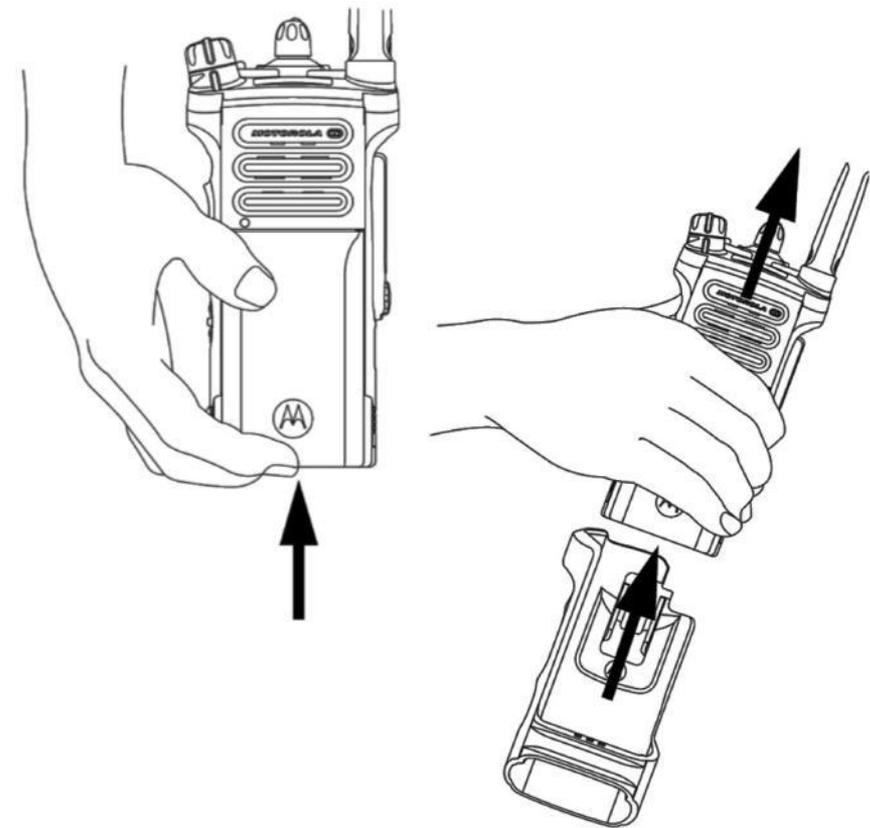
❑ Turning On the Radio

Rotate the **On/Off/Volume Control Knob** clockwise until you hear a click.

If the power-up test is successful, you see **SELFTEST** on the radio's display momentarily, followed by the Home screen.

*Note: If the power-up test is unsuccessful, you see **Error XX/YY** (**XX/YY** is an alphanumeric code).*

*Turn off the radio, check the battery, and turn the radio back on. If the radio fails the power-up test again, record the **Error XX/YY** code and contact your dealer.*

*To turn off the radio, rotate the **On/Off/Volume Control Knob** counterclockwise until you hear a click.*

On/Off/Volume Control Knob
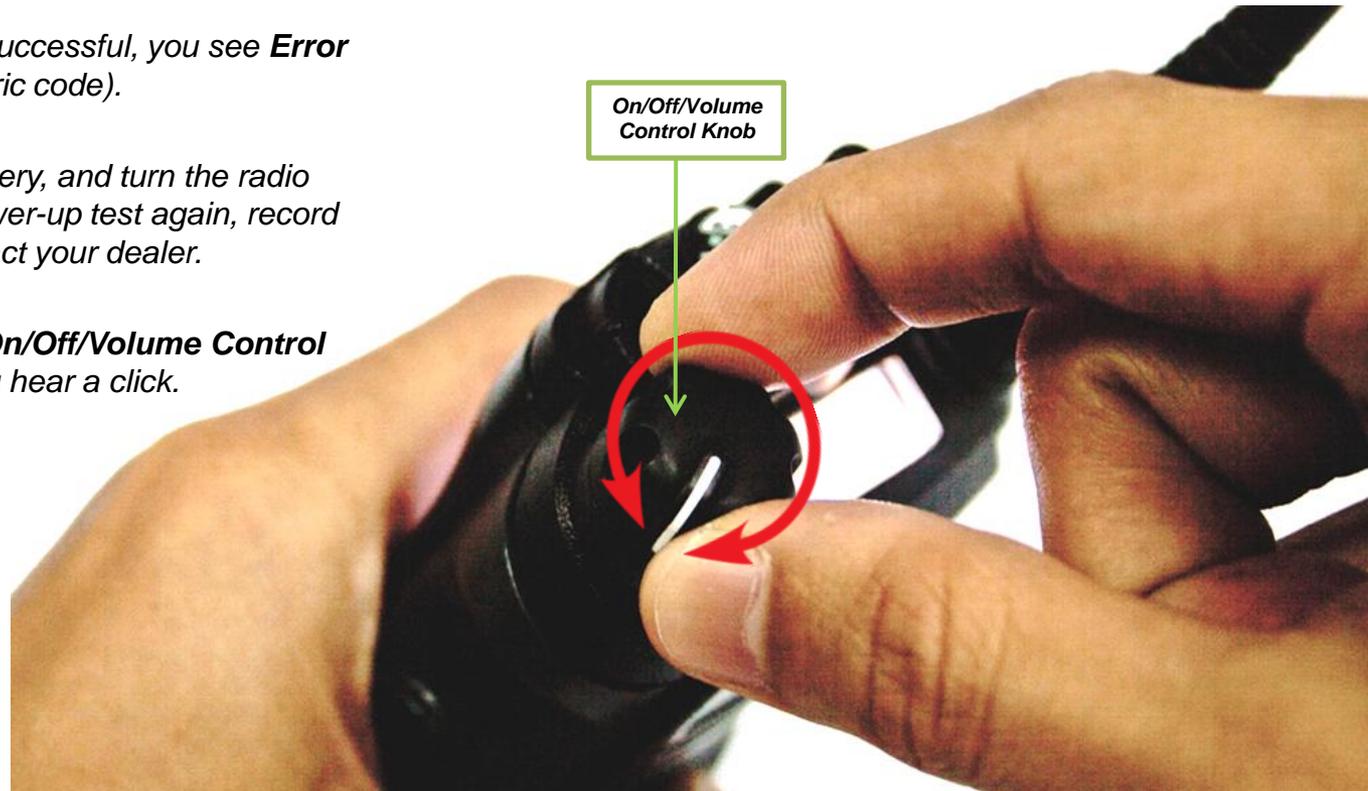
❑ Adjusting the Volume

To increase the volume, turn the **On/Off/Volume Control Knob** clockwise.

To decrease the volume, turn this knob counterclockwise.

Note: *Ensure that the main speaker is pointed towards you for increased loudness and intelligibility, especially in areas with loud background noises.*

On/Off/Volume Control Knob
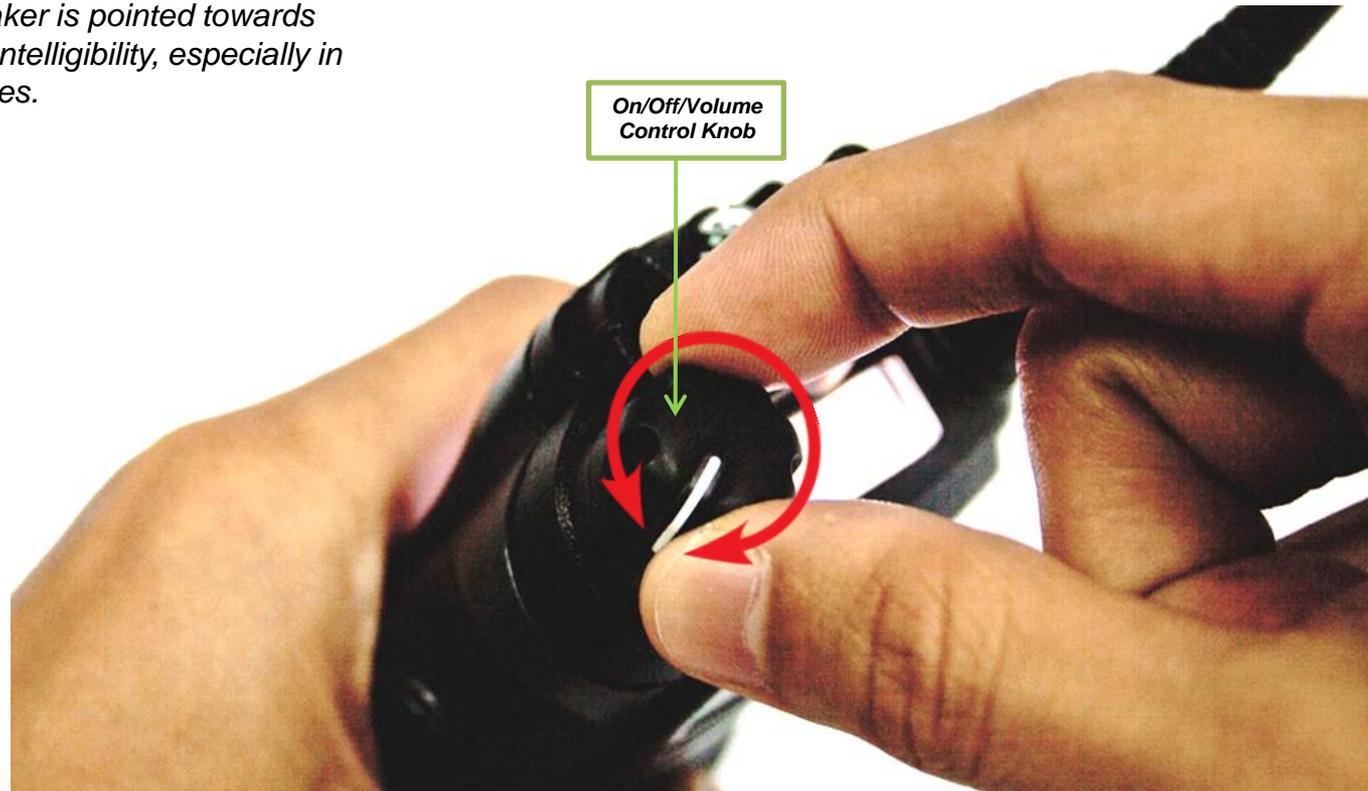
❑ Programmable Features

Any reference in this manual to a control that is "preprogrammed" means that the control must be programmed by a dealer or qualified radio technician using the radio's programming software, in order to assign a feature to that control.

The programmable buttons can be programmed as shortcuts to radio functions or preset channels/groups depending on the duration of a button press:

• **Press** – *Pressing and releasing rapidly.*

• **Long press** – *Pressing and holding for the preprogrammed* duration (between 0.25 seconds and 3.75 seconds).

• **Hold down** – *Keeping the button pressed.*

❑ Accessing the Preprogrammed Functions

You can access various radio functions through one of the following ways:
• A short or long press of the relevant programmable buttons.
  OR
• Use the **Menu Select Buttons** (⬛ , ⬛ , and ⬛).

Using the Menu Select Buttons

The **Menu Select Buttons** allow to access the menu entries of features.

Note: Check with your dealer or system administrator for the list of features activated in your radio.

Your radio may be preprogrammed differently from the following example, but the steps for selecting a channel may appear as shown below:

• Press the **Menu Select** button (⬛) directly below **Chan**.

Menu Select Buttons

Data Feature Button

Home Button

4-Way Navigation Button

Keypad

Using the Navigation Buttons

Home Button

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

For selected radio features, the 🏠 button is also used to save user-edited radio settings or information before returning you to the Home screen.

Note: Some features do not require you to press 🏠 to go to the Home screen. Refer to the individual feature sections in this manual for further details on saving user-edited radio settings or information.

Data Feature Button

Use this button to access data-related features, such as the Text Messaging Service (TMS) feature screen.

4-Way Navigation Button

Use this button to scroll up, down, left or right.

Press and release one of the button to scroll from one entry to the next one. Press and hold one of the button to have the radio toggles through the list automatically (release the button to stop).

4-Way Navigation Button

Home Button

Data Feature Button

❏ **Using the Keypad** Model 3

You can use the 3 x 4 alphanumeric keypad to access 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. The tables below show the number of times a key needs to be pressed to generate the required character.

Keypad Characters – Uppercase Mode

Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 .,?	1	.	,	?	!	;	@	_	-	*	#	&	$	/	+	=	\	"	(	)
2 ABC	A	B	C																	
3 DEF	D	E	F																	
4 GHI	G	H	I																	
5 JKL	J	K	L																	
6 MNO	M	N	O																	
7 PQRS	P	Q	R	S																
8 TUV	T	U	V																	
9 WXYZ	W	X	Y	Z																
0	Toggle between mixed case mode, uppercase mode, and lowercase mode.																			
*	Space																			
# DEL	Toggle between numeric and letter mode.																			

 Number of Times Key is Pressed

Keypad Characters – Lowercase Mode

Key	Number of Times Key is Pressed																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 .,?	1	.	,	?	!	;	@	_	-	*	#	&	$	/	+	=	\	"	(	)
2 ABC	a	b	c																	
3 DEF	d	e	f																	
4 GHI	g	h	i																	
5 JKL	j	k	l																	
6 MNO	m	n	o																	
7 PQRS	p	q	r	s																
8 TUV	t	u	v																	
9 WXYZ	w	x	y	z																
0 ⇧	Toggle between mixed case mode, uppercase mode, and lowercase mode.																			
* ⎵	Space																			
# DEL	Toggle between numeric and letter mode.																			

Keypad Characters – Numeric Mode

Key	Number of Times Key is Pressed																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 .,?	1	.	,	?	!	;	@	_	-	*	#	&	$	/	+	=	\	"	(	)
2 ABC	2																			
3 DEF	3																			
4 GHI	4																			
5 JKL	5																			
6 MNO	6																			
7 PQRS	7																			
8 TUV	8																			
9 WXYZ	9																			
0 ⇧	0																			
* ␣	Space																			
# DEL	Toggle between numeric and letter mode.																			

Keypad Characters – Hexadecimal Mode

Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 .,?	1																			
2 ABC	2	A	B	C																
3 DEF	3	D	E	F																
4 GHI	4																			
5 JKL	5																			
6 MNO	6																			
7 PQRS	7																			
8 TUV	8																			
9 WXYZ	9																			
0 ⇧	0																			
*	Not applicable																			
# DEL	Not applicable																			

Number of Times Key is Pressed

❑ Push-To-Talk (PTT) Button

The **PTT button on the side** of the radio serves two basic purposes:

• While a call is in progress, the **PTT button** allows the radio to transmit to other radios in the call.

  Press and hold down **PTT** button to talk. Release the **PTT button to listen.**

  The microphone is activated when the **PTT** button is pressed.

• While a call is not in progress, the **PTT button** is used to make a new call.

PTT Button

❑ Status Icons

The 240 x 320 pixel front liquid crystal display (LCD) of your radio shows radio status, text entries, and menu entries. The top two display rows contain color icons that indicate radio operating conditions.

The following are the icons that appear on the radio's display.

Receiving	Radio is receiving a call or data.
Transmitting	Radio is transmitting a call or data.
Battery	For IMPRES battery operation only – the icon shown indicates the charge remaining in the battery. For all battery operation – the icon blinks when the battery is low.
Received Signal Strength Indicator (RSSI)	The number of bars displayed represents the received signal strength for the current site, for trunking only. The more stripes in the icon, the stronger the signal.

Direct
• **On** = Radio is currently configured for direct radio-to-radio communication (during conventional operation only).
• **Off** = Radio is connected with other radios through a repeater.

Power Level
• L = Radio is set at Low power.
• H = Radio is set at High power.

Scan
Radio is scanning a scan list.

Priority Channel Scan
• **Blinking dot** = Radio detects activity on channel designated as Priority-One.
• **Steady dot** = Radio detects activity on channel designated as Priority-Two.

Top Display

View/Program Mode
Radio is in the view or program mode.
• **On steady** = View mode.
• **Blinking** = Program mode.

Top Display

Secure Operation
• **On** = Secure operation.
• **Off** = Clear operation.
• **Blinking** = Receiving an encrypted voice call.

Data Activity
Data activity is present.

Hexadecimal
Indicates that the text entry is currently in hexadecimal mode.

❑ Text Messaging Service (TMS) Icons
Status Icons (Receiving)

The following icons appear on the radio's display for TMS features:

Inbox Full
The Inbox is full.

Unread Message
• User receives a new message.
• The selected text message in the Inbox has not been read.

Read Message
The selected text message in the Inbox has been read.

Message Index
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.
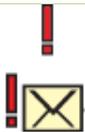
Priority Status
• The "Priority" feature is toggled on before the message is sent.
• Messages in the Inbox folder are flagged with "Priority".

Request Reply
• The "Request Reply" feature is toggled on before the message is sent.
• Messages in the Inbox folder are flagged with "Request Reply".

Priority Status and Request Reply
• User is composing a message with a priority status and a request for a reply.
• Messages in the Inbox folder are flagged with "Priority" and "Request Reply".

.

TMS Menu Options

Menu Option	Description/Function
Back	Brings you back to the previous screen.
Clr	Deletes all messages.
Del	Deletes a message or text.
Edit	Brings you to the edit screen.
Exit	Exits to the Home screen.
No	Returns to the previous screen.
Optn	Brings you to the Options main screen.
Rply	Replies to a message.
Sel	Selects the highlighted command.
Send	Sends the message.
Yes	Updates or saves a command.

❑ **LED Indicator**

The LED indicator shows
the operational status
of your radio.

LED

Solid red – Radio is transmitting.

Blinking red – Radio is transmitting at low battery condition.

Rapidly blinking red – Radio has failed the self test upon powering up or encountered a fatal error.

Solid yellow (Conventional Only) – Channel is busy.

Blinking yellow – Radio is receiving a secured transmission.

Solid green – Radio is powering up, or is on a non-priority channel while in the Scan List Programming mode.

Blinking green – Radio is receiving an individual or telephone call, or is on a Priority-Two channel while in the Scan List Programming mode.

Rapidly blinking green – Radio is on a Priority-One channel while in the Scan List Programming mode.

Note: No LED indication when the radio receives a clear (non-secured) transmission in trunking Mode.

❑ **Intelligent Lighting Indicators**

This feature temporary changes the backlight of the display screen and the keypad, and adds a color bar to the main display screen to help signal that a radio event has occurred.

Note: This feature must be preprogrammed by a qualified radio technician.

Backlight and Bar Color	Notification	When
Orange	Emergency Alerts	The radio initiates an emergency alarm or call.
		The radio receives an emergency alarm or call.
Red	Critical Alerts	The radio is out of range.
		The radio enters failsoft mode.
		The radio is unable to establish a full connection with the system.
Green	Call Alerts	The radio receives a private call.
		The radio receives a phone call.
		The radio receives a call alert.
		The radio receives a selective call.

Orange

Emergency Alerts

Red

Critical Alerts

Green

Call Alerts

You Hear	Tone Name	Heard
Short, High-Pitched Tone (Chirp) 🔊 **Play**	Low-Battery Chirp	When battery is below preset threshold value.
Gurgle 🔊 **Play**	Dynamic Regrouping	(When the **PTT** button is pressed) a dynamic ID has been received.
	Talk Permit	(When **PTT** button is pressed) verifying system accepting transmissions.
Unique, Low-Pitched Chirp	New Message	When a new message is received.
Unique, High-Pitched Chirp	Priority Status	When a priority message is received.

❑ 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.

You Hear	Tone Name	Heard
Short, Low-Pitched Tone 🔊 **Play**	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.
	No ACK Received	When radio fails to receive an acknowledgment.
	Individual Call Warning Tone	When radio is in an individual call for greater than 6 seconds without any activity.
	Talk Prohibit/**PTT** Inhibit	(When **PTT** button is pressed) transmissions are not allowed.
Long, Low-Pitched Tone 🔊 **Play**	Time-Out Timer Timed Out	After time out.
	Out of Range	(When **PTT** button is pressed) the radio is out of range of the system.
	Invalid Mode	When radio is on an unpreprogrammed channel.
A Group of Low-Pitched Tones 🔊 **Play**	Busy	When system is busy.

IDENTIFYING STATUS INDICATORS

You Hear	Tone Name	Heard
Short, Medium-Pitched Tone 🔊 **Play**	Valid Key-Press	When correct key is pressed.
	Radio Self Test Pass	When radio passes its power-up self test.
	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 🔊 **Play**	Emergency Exit	When exiting the emergency state.
A Group of Medium-Pitched Tones 🔊 **Play**	Fail-soft	When the trunking system fails.
	Automatic Call Back	When voice channel is available from previous request.
	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.
	Site Trunking	When a SmartZone trunking system fails.

General Radio Operation

❑ **Selecting a Zone**

❑ **Selecting a Radio Channel**

❑ **Receiving and Responding to a Radio Call**
▪**Receiving and Responding to a Talkgroup Call**
▪**Receiving and Responding to a Private Call (Trunking Only)**

❑ **Making a Radio Call**
▪**Making a Talkgroup Call**

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Prev Home Next

Fleet Map (Sample)

Zones and Channels

Channels	Zone1	Zone2	Zone3	Zone4	Zone5	Zone6
1	BrksEMS	BrksALSHail	Fire Pol CW	BrksFTCTrg1	BrksFTCTrg1	BrksPW R 1
2	BrksEMSOps 1	BrksALSPtch1	FP Ops N1	BrksFTCTrg2	BrksFTCTrg2	BrksPW R 2
3	BrksEMSOps 2	BrksALSPtch2	FP Ops N2	BrksFTCAdmin	BrksFirTrgN1	BrksPW R 3
4	BrksEMSAdm1	BrksALSPtch3	FP Ops S1	BrksFirTrgN1	BrksFirTrgN2	BrksPW R 4
5	BrksEMSAdm2	RHTCBLSPtch1	FP Ops S2	BrksFirTrgN2	BrksFirTrgS1	BrksPW R 5
6	Rdg EMSDisp	RHTCBLSPtch2	BrksFireA	BrksFirTrgS1	BrksFirTrgS2	BrksPW R 6
7	Rdg EMSOps1	SJMCBLSPtch1	BrksFireB	BrksFirTrgS2	BrksExerCW	BrksPW R 7
8	Rdg EMSOps2	SJMCBLSPtch2	BrksFirOps 1	BrksExerCW	BLANK	BrksPW R 8
9	BrksFireA	PotsBLSPtch1	BrksFirOps 2	BLANK	BLANK	BrksPW R 9
10	BrksFireB	FlightOps 1	BrksFirOps 3	BLANK	BLANK	BrksPW R 10
11	BrksFirOps 1	FlightOps 2	BrksFirOps 4	BLANK	BLANK	BrksPW R 11
12	BrksFirOps 2	BLANK	BrksFirOps 5	Rdg EMSDisp	Rdg EMSDisp	BrksPW R 12
13	BrksFirOps 3	BLANK	BrksFirOps 6	Rdg FireDisp	Rdg FireDisp	BksPWInrtaOp
14	Fire/EMSDisp	Fire/EMSDisp	Fire/EMSDisp	Fire/EMSDisp	Fire/EMSDisp	Fire/EMSDisp
15	CWIntraOp	CWIntraOp	CWIntraOp	CWIntraOp	CWIntraOp	CWIntraOp
16	County EMERG	County EMERG	County EMERG	County EMERG	County EMERG	County EMERG

❑ **Selecting a Zone (Side Buttons)**

A zone is a group of channels.

Procedure:

1 Press the preprogrammed **Zone Up (Side Middle Button) or Zone Down (Side Bottom Button) buttons** to the required zone.

ZONE UP

ZONE DOWN

❑ Selecting a Zone (Menu)

A zone is a group of channels.

Use the following procedure to select a zone.

Procedure:

1 ◀ or ▶ to **Zone.**

2 Press the Menu Select button directly below **Zone.**

3 ▲ or ▼ to the required zone.

4 Press the Menu Select button directly below **Sel** to confirm the displayed zone.

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

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid

Menu Select Buttons

❑ Selecting a Radio Channel

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

Use the following procedure to select a channel.

.

Procedure:

1. Turn the preprogrammed **16-Position Select** knob to the desired channel.

2. Press the PTT button to transmit on the channel.

   *If the channel number entered is unprogrammed, the display shows **Invalid entry**.*

16-Position Select Knob

❑ Using Mode Select Feature

Saving a Zone and Channel to a Button

Mode Select allows a long press to save your radio's current zone and channel to a keypad button; then once programmed, the short-press of that button or soft key jumps the transmission to the saved zone and channel.

All the programmable buttons and keypad digit 0 to 9 buttons allow you to save the frequent used zone and channel.

Procedure:

1 Toggle your zone and channel to the required zone and channel.

2 Press and hold the digit button you desire to program. You hear a short, medium-pitched tone when the zone and channel is saved.

Note: Repeat this procedure to change the zone and channel of the programmed button.

Short press of the programmed button changes your current transmission to the zone and channel programmed in this button.

❑ **Receiving and Responding to a Radio Call**

Once you have selected the required channel and/or zone, you can proceed to receive and respond to calls.

The LED lights up solid red while the radio is transmitting. In conventional mode, the LED lights up solid yellow when the radio is receiving a transmission. In trunking mode, there is no LED indication when the radio receives a transmission.

If the radio is receiving a secure transmission, the LED blinks yellow.

LED

❑ **Receiving and Responding to a Radio Call**

Receiving and Responding to a Talkgroup Call

To receive a call from a group of users, your radio must be configured as part of that talkgroup.

Procedure:

When you receive a talkgroup call (while on the Home screen), depending on how your radio is preprogrammed:

1 ASTRO Conventional Only:

The LED lights up solid yellow.

The display shows the talkgroup alias or ID, and the

caller alias or ID.

OR

Trunking Only:

The display shows the caller alias or ID.

2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm)

from your mouth.

Press the **PTT** button to respond to the call.

The LED lights up solid red.

Release the **PTT** button to listen**.**

PTT
Button

❑ **Receiving and Responding to a Private Call**

A Private Call is a call from an individual radio to another individual radio.

These one-to-one calls between two radios are not heard by others in the current talkgroup. The calling radio automatically verifies that the receiving radio is active on the system and can display the caller ID.

Procedure:

When you receive a Private Call:

1 You hear two alert tones and the LED blinks green.

The display shows **Call received** and the caller alias or ID.

Press the **Menu Select** button directly below **Resp** within 20 seconds after the call indicators begin.

During the call, the display shows the caller alias (name), if it is in the call list.

OR

During the call, the display shows the caller ID (number), if the caller's name is not in the call list.

❑   **Making a Radio Call**

You can select a zone, channel, subscriber ID, or talkgroup by using:

• *The preprogrammed Zone switch*

• *The Channel Selector Knob*

• *A preprogrammed* **One Touch Call button**

• *The Contacts list (see* **Viewing Details of a Contact***)*

BEST PRACTICES:
HIGH NOISE ENVIRONMENTS AND THE DIGITAL DIFFERENCE

**To minimize or eliminate the impact of background noise
when using digital radios:**

1. Place the microphone 1-2 " from your mouth.
2. Place the microphone <u>facing</u> your mouth.

   (Microphone performance is maximized when the
   audio is coming directly into the microphone and not
   entering the microphone from the side or back.)

   *This also allows the APX noise cancellation microphone
   on the back to reduce background sounds.*

3. Speak in a clear and controlled voice to maximize audio intelligibility.
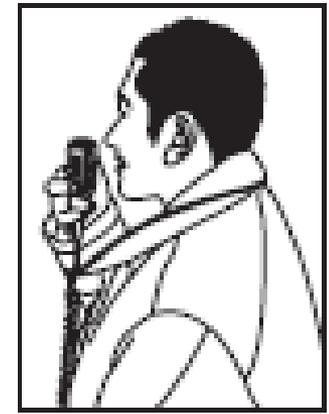
Digital Trunking Differences

• Wait for the talk permit tone (chirp) before speaking
• Audio delay – you will notice a delay between what you said and what others hear if another radio is nearby
• Proximity - you may hear and echo when two radios are too close together
• Hang-time – your radio continues to transmit for a second after PTT button is released
• Radio mics are sensitive and can pick up back-ground conversations

❑ **Making a Radio Call**

Making a Talkgroup Call

To make a call to a group of users:

Procedure:

1 Turn the **16-Position Select Channel Knob** to select the channel with the desired talkgroup.

2 Press the **PTT** button to make the call.

   ASTRO Conventional Only:
   The LED lights up solid red.
   The display shows the talkgroup alias or ID.
   OR
   Trunking Only:
   The LED lights up solid red.
   Speak clearly into the microphone.
   Release the **PTT** button to listen.

Talkgroup/Channel Select

On/Off/Volume Control Knob

Scan On or Off

Push-to-Talk (PTT) Button

Zone Up

Zone Down

❑ Repeater or Direct Operation

The **REPEATER** operation increases the radio's range by connecting with other radios through a repeater.
The transmit and receive frequencies are different.

The **DIRECT** or "talkaround operation" allows you to bypass the repeater and connect directly to another radio.
The transmit and receive frequencies are the same.

Procedure:

Move the 16-Position Channel/Talkgroup Select to a preprogrammed **Direct** channel in the radio to talk in a direct/talkaround mode.

The display shows the Talkaround icon �I→I if the radio is currently in Direct mode (during conventional operation only).

16-Position Select Knob

Menu Select Buttons

4-Way Navigation Button

60

Advanced Features

❑ **Advanced Call Features**
 ▪**Using the Talkgroup Call Feature (Conventional Operation Only)**
 ▪**Selecting a Talkgroup**
 ▪**Using the Dynamic Regrouping Feature (Trunking Only)**

❑ **Contacts**
 ▪**Adding a New Contact Entry**
 ▪**Deleting a Contact Entry**
 ▪**Adding a Contact to a Call List**
 ▪**Removing a Contact from a Call List**
 ▪**Editing a Contact in a Call List**
   Editing an Entry Alias
   Editing as Entry ID
   Editing a Call Type
 ▪**Viewing Details of a Contact**

❑ **Scan Lists**
 ▪**Viewing a Scan List**
 ▪**Editing the Scan List**
   Changing the Scan List Status

❑ **Scan**
 ▪**Turning Scan On or Off**
 ▪**Deleting a Nuisance Channel**
 ▪**Restoring a Nuisance Channel**

❑ **Call Alert Paging**
 ▪**Receiving a Call Alert Page**

❑ **Emergency Operation**
 ▪**Sending an Emergency Call (Trunking Only)**

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❑ Advanced Call Features

Using the Dynamic Regrouping Feature (Trunking Only)

This feature allows the dispatcher to temporarily reassign selected radios to a single special channel so they can communicate with each other. This feature is typically used during special operations and is enabled by a qualified radio technician.

You will not notice whether your radio has this feature enabled until a dynamic regrouping command is sent by the dispatcher.

Note: If you try to access a zone or channel that has been reserved by the dispatcher as a dynamically regrouped mode for other users, an invalid tone sounds.

Procedure:

1 *When your radio is dynamically regrouped, it automatically switches to the dynamically regrouped channel.*
A "gurgle" tone sounds and the display shows the dynamically regrouped channel's name.

2 Press the **PTT** button to talk.
Release **PTT** button to listen.

When the dispatcher cancels dynamic regrouping, the radio automatically returns to the zone and channel that you were using before the radio was dynamically regrouped.

❑ Advanced Call Features

Using the Dynamic Regrouping Feature (Trunking Only)

Classifying Regrouped Radios

The dispatcher can classify regrouped radios into either of two categories: **Select Enabled or Select Disabled.**

• Select-enabled radios are free to change to any available channel, including the dynamic-regrouping channel, once the user has selected the dynamic-regrouping position.

• Select-disabled radios cannot change channels while dynamically regrouped. The dispatcher has forced the radio to remain on the dynamic-regrouping channel.

The Scan or Private Call feature cannot be selected while your radio is Select Disabled.

Model 3

Zone A
Chan 1

ChanScan   Dir

❑ **Contacts**

This feature provides "address-book" capabilities on your radio. Each entry corresponds to an alias (name) or ID (number) that you use to initiate a call.

Contacts entries are alphabetically sorted according to entry alias. Each alias can have up to 5 IDs of different call types associated with it.

Additionally, each entry, depending on context (conventional, trunking, or phone), associates with one or more of the four types of calls: Phone Call, Selective Call, Private Call, or Call Alert.

Each entry within Contacts displays the following information:
• *Call Alias (Name)*
• *Call ID (Number)*
• *Call Type (Icon)*
• *WACN ID (Astro 25 Trunking IDs only)*
• *System ID*

Note. For Berks County, the contact list is set up only to help display the calling radio Alias. A total of 500 default records are added to the "Unified Call List" for this purpose. No Hot Lists are set up in the radios.

The systems include the Trunking system, ASTRO conventional and MDC conventional.

The radio automatically exits the feature, if the feature inactivity timer is enabled, when the radio is left idle and the timer expires. You will hear the Menu Inactive Exit Tone upon feature exit.

❑ Contacts

Viewing Details of a Contact

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
The entries are alphabetically sorted.

3 ▲ or ▼ to the entry you want to view.

4 Press the **Menu Select** button directly below **Optn.**

5 ▲ or ▼ to **View**.

6 Press the **Menu Select** button directly below **Sel**.
The display shows all the numbers associated with the entry.

Contact 01
Page
Edit
New Contact
Delete

Sel   Back

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid

Menu Select Buttons

❑ **Contacts**

Adding a New Contact Entry

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
   The entries are alphabetically sorted.

3 ▲ or ▼ to **[New Contact].**

4 Press the **Menu Select** button directly below **Sel.**

5 ▲ or ▼ to **Name.**

6 Press the **Menu Select** button directly below **Edit**.
   The display shows **Edit name** and a blinking cursor
   appears.
   Use the keypad to enter the name.
   Press ◀ to move one space to the left.
   Press ▶ to move one space to the right.
   Press the **Menu Select** button directly below **Del** to delete
   any unwanted characters.
   Press 🔲 to add a space.
   Press 🔲 to toggle between mixed case mode,
   uppercase mode, and lowercase mode.
   Press 🔲 to toggle between numeric and letter mode.

Press the **Menu Select** button directly below **Ok** once you
have entered the name.
OR
Press the **Menu Select** button directly below **Cncl** to return
to the previous screen.

7 ▲ or ▼ to **[Add Number]**.

8 Press the **Menu Select** button directly below **Sel.**

9 ▲ or ▼ to **Number 1**.

10 Press the **Menu Select** button directly below **Edit.**
   The display shows **Edit Number 1** and a blinking cursor
   appears.
   Use the keypad to enter the number.
   Press the **Menu Select** button directly below **Del** to delete
   any unwanted characters.
   Press the **Menu Select** button directly below **Ok** once you
   have entered the number.
   OR
   Press the **Menu Select** button directly below **Cncl** to return
   to the previous screen.

11 ▲ or ▼ to **Type 1**.

12 Press the **Menu Select** button directly below **Edit**.
▲ or ▼ to the required mode.
Press the **Menu Select** button directly below **Ok**.
OR
Use keypad to enter or edit the existing system IDs.
OR
▲ or ▼ to **[Add Number]**.
Press the **Menu Select** button directly below **Sel** to add a new number.

13 Press the **Menu Select** button directly below **Done** once you have finished.
The display shows **<Entry> Stored,** confirming that the contact entry has been added.
The radio returns to the main Contacts screen.

Menu Select Buttons

❑ **Contacts**

Deleting a Contact Entry

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
  The entries are alphabetically sorted.

3 ▲ or ▼ to the entry you want to delete and press
  the **Menu Select** button directly below **Optn.**

4 ▲ or ▼ to **Delete** and press the **Menu Select** button
  directly below **Sel**.
  *The display shows **Delete <Entry> confirm?.***

5 Select **Yes** to delete the entry.
  *The display shows **<Entry> deleted** and the radio*
  returns to the main screen for Contacts.
  OR
  Select **No** to return to the main screen for Contacts.

Menu Select
Buttons

Prev Home Next

❑ **Contacts**

Adding a Contact to a Call List

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
The entries are alphabetically sorted.

3 ▲ or ▼ to the entry you want to add to call list and press the **Menu Select** button directly below **Optn.**

4 ▲ or ▼ to **Add to CallLst** and press the **Menu Select** button directly below **Sel**.

5 ▲ or ▼ to the required Call List and press the **Menu Select** button directly below **Add**.
OR

▲ or ▼ to **Cncl** to return to the main display for Contacts.
The display momentarily shows ***Please wait*** *before showing* ***<Entry> added to Call List****, confirming the addition of the contact to the list.*
The radio returns to the main display for Contacts.

Menu Select Buttons

❏ **Contacts**

Removing a Contact from a Call List

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
   The entries are alphabetically sorted.

3 ▲ or ▼ to the entry you want to delete and press
   the **Menu Select** button directly below **Optn.**

4 ▲ or ▼ to **Rm frm CallLst** and press the **Menu
   Select** button directly below **Sel**.
   *The display shows **Remove <Entry> frm Call List?.***

5 Press the **Menu Select** button directly below **Yes** to
   remove the entry from the Call List.
   OR
   Press the **Menu Select** button directly below **No** to
   return to the main display for Contacts.
   The display momentarily shows **Please wait** before
   showing **<Entry> removed from Call List**, confirming
   the removal of the contact from the list.
   The radio returns to the main display for Contacts.

Menu Select Buttons

❑ **Contacts**

Editing a Contact (Entry Alias and Entry ID)

Entry Alias and Entry ID can be edited.

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.**
The entries are alphabetically sorted.

3 ▲ or ▼ to entry you want to edit.

4 Press the **Menu Select** button directly below **Optn.**

5 ▲ or ▼ to **Edit**.

6 Press the **Menu Select** button directly below **Sel**.

7 ▲ or ▼ to entry alias or entry ID you want to edit.

8 Press the **Menu Select** button directly below **Edit**.
The display shows **Edit name** and a blinking cursor appears.
Use the keypad to enter the name.
Press ◀ to move one space to the left.
Press ▶ to move one space to the right.
Press the **Menu Select** button directly below **Del** to delete any unwanted characters.
Press 🔲 to add a space.
Press 🔲 to toggle between mixed case mode, uppercase mode, and lowercase mode.
Press 🔲 to toggle between numeric and letter mode.
Press the **Menu Select** button directly below **Ok** once you have entered the name.
OR
Press the **Menu Select** button directly below **Cncl** to return to the previous screen.

The display returns to the Edit Contact screen.

9 Press the **Menu Select** button directly below **Done** to save your changes and return to the main screen for Contacts.

❑ **Contacts**

Editing a Contact (Call Type)

Procedure:

1 ◀ or ▶ to **Cnts.**

2 Press the **Menu Select** button directly below **Cnts.** The entries are alphabetically sorted.

3 ▲ or ▼ to entry you want to edit.

4 Press the **Menu Select** button directly below **Optn.**

5 ▲ or ▼ to **Edit**.

6 Press the **Menu Select** button directly below **Sel**.

7 ▲ or ▼ to Call Type you want to edit.

8 Press the **Menu Select** button directly below **Edit**.

9 ▲ or ▼ to choose from the list of call types given.

10 Press the **Menu Select** button directly below **Ok** to select. The display returns to the Edit Contact screen.

11 Press the **Menu Select** button directly below **Done** to save your changes and return to the main screen for Contacts.

❏ Scan Lists

Scan lists are created and assigned to individual channels/groups.

Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.

Your radio supports different types of Scan Lists:
• Trunking Priority Monitor Scan List
• Conventional Scan List

Please note that for most parts the scan list members are user programmable.

❑ Scan Lists

Viewing a Scan List

Procedure:

1 ◀ or ▶ to **ScnL**.

2 Press the **Menu Select** button directly below **ScnL**.

3 ▲ or ▼ to view the members on the list.

4 Press 🏠 to exit the current display and return to the Home screen.

Menu Select Items
Nuis	**Prfl**	**Zone**
ScnL	**Mute**	**Batt**
Info	**Rcnt**	**Cnts**
Myid		

Menu Select Buttons

❑ **Scan Lists**

Editing the Scan List (Side Button)

This feature lets you change scan list members and priorities.

Procedure:

[Preprogrammed Button]
1 Long press the preprogrammed **Scan** button (side button).

2 ▲ or ▼ to the entry you want to edit.

3 Press the **Menu Select** button directly below **Sel** to add and/ or change the priority of the currently displayed channel in the scan list.
OR
Press the **Menu Select** button directly below **Del** to delete the currently displayed channel from the scan list.
OR
Press the **Menu Select** button directly below **Rcl** to view the next member of the scan list.

4 ▲ or ▼ to select more channels to be added or deleted.
OR
Use the **16-Position Select knob** to select additional channels to be added or deleted.
5 Press 🏠 to exit scan list programming and return to the Home screen.

SCAN

❑ Scan Lists

Editing the Scan List (Menu)

Procedure:

1 ◀ or ▶ to **ScnL**.

2 Press the **Menu Select** button directly below **ScnL**.
The display shows the lists that can be changed.

3 ▲ or ▼ to the entry you want to edit.

4 Press the **Menu Select** button directly below **Sel** to add and/ or change the priority of the currently displayed channel in the scan list.

   OR

   Press the **Menu Select** button directly below **Del** to delete the currently displayed channel from the scan list.
   OR

   Press the **Menu Select** button directly below **Rcl** to view the next member of the scan list.

5 ▲ or ▼ to select more channels to be added or deleted.

OR

  Use the 16-Position Select knob to select additional channels to be added or deleted.

6 Press 🏠 to exit scan list programming and return to the Home screen.

Menu Select Items
Nuis Prfl   Zone
ScnL Mute Batt
Info   Rcnt Cnts
Myid

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

Priority Status

Below the **Sel**, **Del**, and **Rcl** screen, press the **Menu Select**
button directly below **Sel** to view and/or change the priority
status of the currently displayed channel.
OR
Below the **Sel**, **Del**, and **Rcl** screen, press the **Sel** button
one or more times to view and/or change the scan list status
icon of the currently displayed channel.

A Scan icon indicates that the current channel is in the scan list as a non-priority channel.
The LED lights up solid green.
OR
A Priority-Two Channel Scan icon indicates that the current channel is in the scan list as the Priority-Two channel.
The LED blinks green.
OR
A Priority-One Channel Scan icon indicates that the current channel is in the scan list as the Priority-One channel.
The LED rapidly blinks green.
You hear all traffic on the Priority- One channel, regardless of traffic on non-priority channels.
OR
No icon indicates that the current channel is deleted from the scan list.

❑ **Scan**

Turning Scan On or Off

This feature allows you to monitor traffic on different channels by scanning a preprogrammed list of channels.

Procedure:

[Preprogrammed Button]

To Turn Scan On:

1 Press and release the preprogrammed **Scan** button (Top Side Button) to turn scan on.
*The display shows **Scan On**. The scan status symbol (⚡) is displayed, indicating scan is active.*

To Turn Scan Off:

2 Press and release the preprogrammed Scan button (Top Side Button) to turn scan Off.

*The display shows **Scan OFF** and the scan status icon goes away if scan is disabled. The scan status symbol (⚡) will no longer be displayed, indicating scan has been deactivated.*

SCAN On/Off

❑ **Scan**

Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a "nuisance" channel), you can temporarily remove the unwanted channel from the scan list.

This capability does not apply to priority channels or the designated transmit channel.

Procedure:

[Preprogrammed Button]
1 When the radio is locked onto the channel to be deleted, press the preprogrammed **Nuisance Delete** button.
   The radio continues scanning the remaining channels in the list.

OR
[Menu]
1 ◀ or ▶ to **Nuis**.

2 Press the **Menu Select** button directly below **Nuis**.
   The radio continues scanning the remaining channels in the list.

Menu Select Items
Nuis Prfl   Zone
ScnL Mute Batt
Info   Rcnt Cnts
Myid

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ Scan

Restoring a Nuisance Channel

Procedure:

To restore the deleted nuisance channel, do one of the following:

• Turn the radio off and then turning it on again.
  OR
• Stop and restart a scan via the preprogrammed **Scan** button or menu.
  OR
• Change the channel via the **16-Position Select knob.**

SCAN On/Off

❑ Call Alert Paging

Receiving a Call Alert Page

This feature allows your radio to work like a pager.

Even if other users are away from their radios, or if they are unable to hear their radios, you can send them an individual Call Alert page. You can also verify if a radio is active on the system.

Procedure:

1 *When you receive a Call Alert page, you hear four repeating alert tones and the LED blinks green. The call received icons blinks and the display shows **Page received**.*
Press any button to clear the Call Alert page.

Push-To-Talk

Index

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❑ Emergency Operation

The Emergency feature is used to indicate a critical situation. If the **Top (Orange)** button is preprogrammed to send an emergency signal, this signal overrides any other communication over the selected channel.

Your radio supports the following Emergency modes:
• *Emergency Alarm with Emergency Call*

Only one of the Emergency modes above can be assigned to the preprogrammed Emergency button.

Note: *To exit emergency at any time, press and hold the preprogrammed Emergency button for about a second. You may also turn the radio off and back on.*

❑ Emergency Operation

Sending an Emergency Call (Trunking Only)

This feature gives your radio priority access on a channel. Your radio supports the following Emergency modes:

• Emergency Alarm with Emergency Call

• Non-Tactical/Revert — You talk on a preprogrammed emergency channel. The emergency alarm is sent on this same channel.

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

Procedure:

1 Press the preprogrammed **Emergency** button.
*The display shows **Emergency** and the current zone or channel.*
A short, medium-pitched tone sounds and the LED rapidly blinks red.
OR
The display shows **No emergency**, if the selected channel does not support emergency.

2 Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
Press and hold the **PTT button.**
Speak clearly into the microphone.
Release the **PTT** button to end the transmission and wait for a response from the dispatcher.

3 Press and hold the preprogrammed **Emergency** button for about a second to exit the **Emergency Call** mode or turn the radio off and back on again.

Emergency

❑ Text Messaging Service (TMS)
Receiving Text Messages

This feature allows you to receive text messages

Procedure:

[Preprogrammed Button]
1 Press the **Data Feature Button**

2 ▲ or ▼ to **Inbox** to view messages.
   The Inbox can hold up to thirty (30) messages.

   While on the view message screen, press the **Menu Select** button directly below **Optn**, **Del**, or **Back** to access the option.

• Select **Del** to delete the message.
• Select **Back** to return to the previous screen.

Menu Select Buttons

Data Feature Button

Text Messaging Service (TMS)

Deleting Text Messages

Deleting a Text Message

Procedure:

From the Inbox, Draft, or Sent screen:
1   ▲ or ▼ to scroll through the messages.

2 Press the **Menu Select** button directly below **Del** to delete the current message.

Deleting All Text Messages

Procedure:

1 From the TMS feature screen,
   ▲ or ▼ to **Inbox** or **Sent**.

2 Press the **Menu Select** button directly below **Clr** to select all messages in the selected folder.
   The display shows **Del All?**.

3 Press the **Menu Select** button directly below **Yes** to delete all the messages in the selected folder.
   OR
   Press the **Menu Select** button directly below **No** to return to the main TMS screen.

❑ **Secure Operations**

Selecting Secure/Clear Transmissions

Secure radio operation provides the highest commercially available level of voice security on both trunked and conventional channels.

Unlike other forms of security, Motorola digital encryption provides signaling that makes it virtually impossible for others to decode any part of an encrypted message.

Berks County's talkgroup are strapped to clear, or Encrypted. The Secure/Clear switch is not programmed. In the case of Encrypted, the talkgroups can be either strapped to an AES or ADP key. If needed a list of these Talkgroups can be found in the master fleetmap document provided earlier.

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Menu Select Buttons

❑ Trunking System Controls

Using the Failsoft System

The failsoft system ensures continuous radio communications during a trunked system failure. If a trunking system fails completely, the radio goes into failsoft operation and automatically switches to its failsoft channel.

Procedure:

1 During failsoft operation, your radio transmits and receives in conventional operation on a predetermined frequency.

2 A medium-pitched tone sounds every 10 seconds and the display shows **Failsoft**.

When the trunking system returns to normal operation, your radio automatically leaves failsoft operation and returns to trunked operation.

❑ **Trunking System Controls**
Going Out of Range

When your radio goes out of the range of the system, it can no longer lock onto a control channel.

Procedure:

1 *A low-pitched tone sounds.*
   AND/OR
   The display shows the currently selected zone/channel
   *combination and **Out of range**.*
2 Your radio remains in this out-of-range condition until:
   It locks onto a control channel.
   OR
   It locks onto a failsoft channel.
   OR
   It is turned off.

❑ Trunking System Controls

Using the Site Trunking Feature

If the zone controller loses communication with any site, that site reverts to site trunking.

The display shows the currently selected zone/channel combination and **Site trunking**.

Note: When this occurs, you can communicate only with other radios within your trunking site.

MOTOROLA

Zone A
Chan 1
Site Trunking

Chan | Scan | Dir

Menu Select Buttons

4-Way Navigation Button

❑ Programming Over Project 25 (POP 25)

This feature enables configuration data to be upgraded to your radio over-the-air. This feature retains full use of the radio during the configuration data transfer without interrupting communication. The upgrade pauses to give priorities to voice call, and continues after the voice call ended.

Once a configuration upgrade is downloaded to your radio, you can install new changes immediately or delay changes to be installed on the radio when it is being powered up. Your radio can also be configured to allow you to accept or reject an upgrade.

❑ Programming Over Project 25 (POP 25)

Responding to the notification of Upgrade

Procedure:

1 The display shows **Upgrade?**.

Press the **Menu Select** button below **Acpt** to accept the request to upgrade immediately.
The display shows **Upg Rx In Prog** to indicate the upgrade received is in progress.
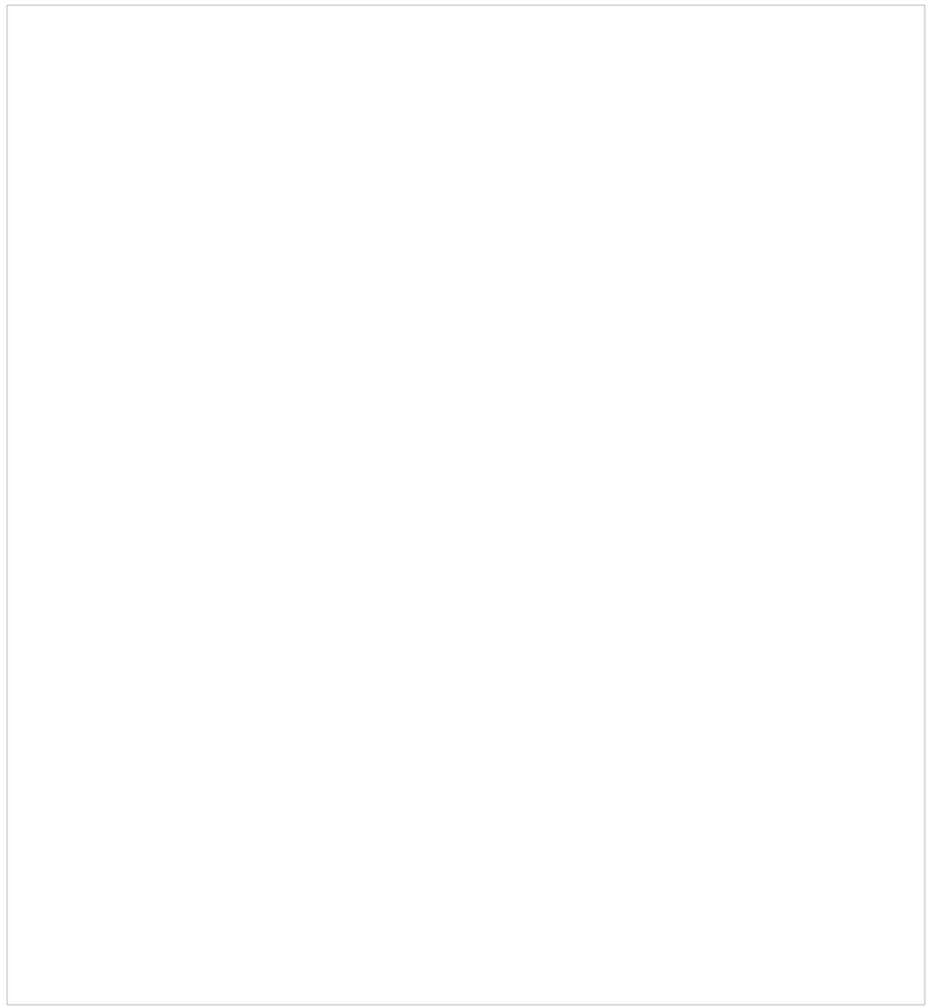
❑   **Viewing the Recent Calls**

This feature allows you to view the recent incoming and outgoing call information of the following call types:
• Call Alert
• Private Call
• Emergency Call (Incoming Only)

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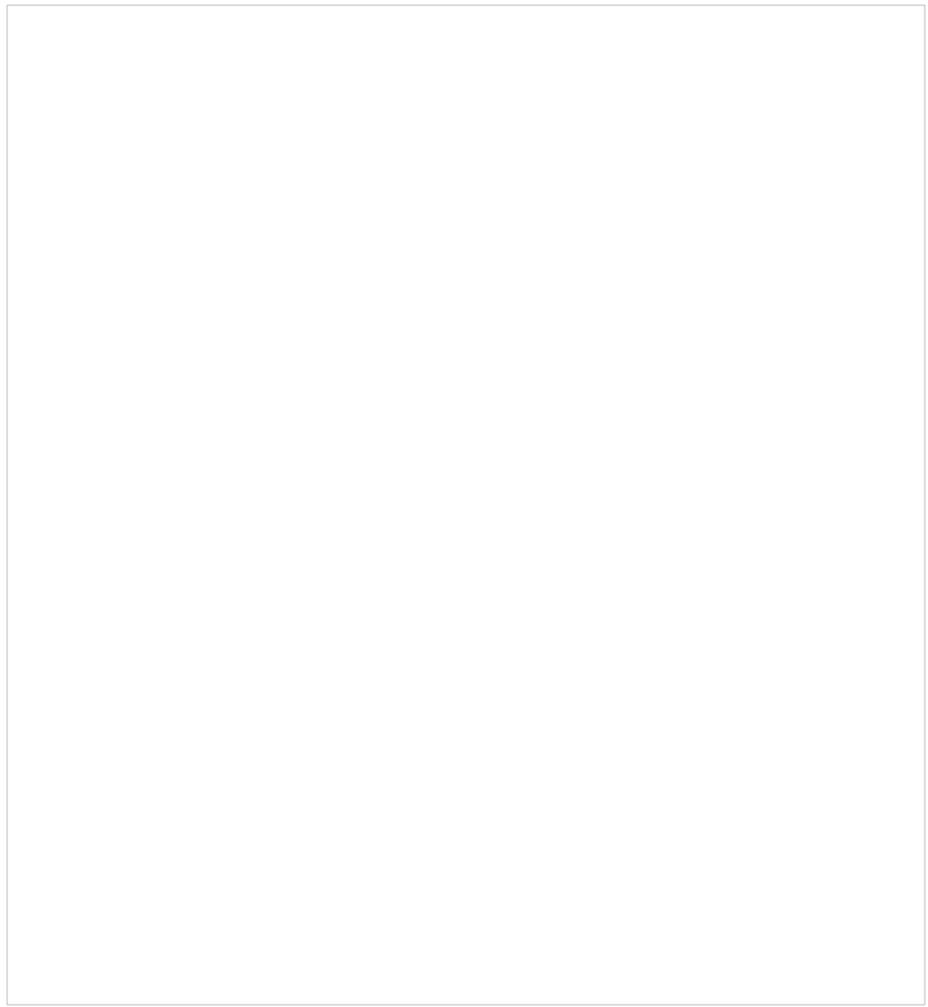
❑ **Viewing the Recent Calls**

Procedure:.

[Menu]
1 ◀ or ▶ to **Rcnt**.

2 Press the **Menu Select** button directly below **Rcnt** to access the Recent Calls feature screen.

3 ▲ or ▼ to scroll through the list.

4 Press the **Menu Select** button directly below **Exit** to return to the Home screen.
OR
Press 🏠 or the **PTT** button to return to the Home screen.

The radio automatically exits the feature, if the feature inactivity timer is enabled, when the radio is left idle and the timer expires. You will hear the Menu Inactive Exit Tone upon feature exit.

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ **Selecting a Radio Profile**

his feature allows you to manually switch the visual and audio settings of the radio.

There are three profiles that the users can check:

Normal Env.
Loud Env.
Search/Surveil

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute Batt
Info   Rcnt   Cnts
Myid

Menu Select Buttons

❑ **Selecting a Radio Profile**

Procedure:

1 ◀ or ▶ to **Prfl**.

2 Press the **Menu Select** button directly below **Prfl** to access the Profiles feature screen.

3 ▲ or ▼ to scroll through the menu selections.

4 Press the **Menu Select** button directly below **Sel** to select the required radio profile.
OR
Press the **Menu Select** button directly below **Exit** to exit the screen without making any changes.

The radio returns to the Home screen.
The profile name on the Home screen indicates the current selected radio profile.

Menu Select Items
Nuis Prfl Zone
ScnL Mute Batt
Info Rcnt Cnts
Myid

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ Enabling and Disabling the Radio Alias

This feature allows you to display or hide the radio alias (name).

Procedure:

1 ◀ or ▶ to **MyID**.

2 Press the **Menu Select** button directly below **MyID**.
   The display momentarily shows **Radio ID off**, and the radio alias disappears from the Home screen.
   OR
   The display momentarily shows **Radio ID on**, and the radio alias appears on the Home screen.

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid

01:45pm

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ **Locking and Unlocking the Keypad and Controls**

You can lock your radio's keypad, programmable buttons and MFK to avoid inadvertent entry.

Check with your dealer or qualified technician for best selection to suite your usage.

Procedure:

1 Toggle the preprogrammed **Keypad Lock** button to on. The display shows **Kypd/Ctrl Lock**.

2 Toggle again to unlock.

Keypad
Lock/Unlock

❑ Turning Keypad Tones On or Off

You can enable and disable keypad tones, if needed.

Procedure:

[Preprogrammed Button]

1 Press the preprogrammed **Keypad Mute** button to turn the tones off or on.

The display momentarily shows **Tones off**, indicating that the keypad tones are disabled.

OR

The display momentarily shows **Tones on**, and you hear a short tone indicating that the keypad tones are enabled.

OR

[Menu]

1 ◀ or ▶ to **Mute**.

2 Press the **Menu Select** button directly below **Mute**.

The display momentarily shows **Tones off**, indicating that the keypad tones are disabled.

OR

The display momentarily shows **Tones on**, and you hear a short tone indicating that the keypad tones are enabled.

Menu Select Items
Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid

01:45pm

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ Using the Time-Out Timer

This feature turns off your radio's transmitter. You cannot transmit longer than the preset timer setting.

If you attempt to do so, the radio automatically stops your transmission, and you hear a talk-prohibit tone.

The timer is defaulted at 60 seconds.

Note: You will hear a brief, low-pitched, warning tone four seconds before the transmission times out.

Procedure:

1 Hold down the **PTT** button longer than the preprogrammed time.
   You hear a short, low-pitched warning tone, the transmission is cut-off, and the LED goes out until you release the **PTT** button.

2 Release the **PTT** button.
   The timer resets.

3 Press the **PTT** button to re-transmit.
   The time-out timer restarts and the LED lights up solid red.

❑ Using the Digital PTT ID Feature

This feature allows you to see the radio ID (number) of the radio from whom you are currently receiving a transmission. This ID, consisting up to a maximum of eight characters, can be viewed by both the receiving radio and the dispatcher.

Your radio's ID number is also automatically sent every time the **PTT** button is pressed. This is a per-channel feature. For digital voice transmissions, your radio's ID is sent continuously during the voice message.

Talkgroup/Channel Select

On/Off/Volume Control Knob

Scan On or Off

Push-to-Talk (PTT) Button

Zone Up

Zone Down

❏ Utilities

Battery Annunciation

This feature displays the current capacity and charges cycles of your battery when a IMPRES Battery is powering your radio.

The information shown are:
- Rated Capacity – Percentage of current battery capacity.
- Remaining Capacity – Remaining power of the battery in mAh.
- Estimated Charges – Number of charges cycles the battery has gone through.To access battery info screen:

Procedure:

1 ◀ or ▶ to **Batt**.

2 Press the **Menu Select** button directly below **Batt**. The display shows the details of the battery.

3 ▲ or ▼ to scroll through the various information.
  OR
  Press the **Menu Select** button directly below **Exit** to return to the previous screen.
  OR
  Press 🏠 to return to the Home screen.

Menu Select Items
**Nuis   Prfl   Zone
ScnL   Mute   Batt
Info   Rcnt   Cnts
Myid**

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ **Accessing the General Radio Information**

Your radio contains information on the following:
- Radio Information
- IP Display
- Control Assignments
- Soft ID (If Enabled)

Accessing the Radio Information

This feature displays the following information of your radio:

• Host Version	• DSP Version
• Secure Version	• KG (Secure Algorithm)
• Model Number	• Serial Number
• ESN	• Flash Size & Type
• Flash Code	• RF Band
• Tuning Version	• Processor Version
• Option Board Type (optional)	• Option Board Serial Number (optional)
• Option Board Bluetooth Address (optional)	• Option Board Software Version (optional)
• Expansion Board Type (optional)	• Language Pack ID and Version (only when the language of the display is set to non-English)

Note: Press 🏠 at any time to return to the Home screen.

Follow the procedure to view the information;

Procedure:

[Menu]

1 ◀ or ▶ to **Info**.

2 Press the **Menu Select** button directly below **Info**.

3 ▲ or ▼ to required information.
4 Press the **Menu Select** button directly below **Sel**.
   The display shows the Information screen.

5 ▲ or ▼ to scroll through the various information.
   OR
   Press the **Menu Select** button directly below **Back** to
   return to the previous screen.
   OR
   Press 🏠 to return to the Home screen.

Menu Select Items
Nuis Prfl   Zone
ScnL Mute Batt
Info   Rcnt   Cnts
MyId

Motorola P25
APX 6000

Chan Scan Cnts

Menu Select Buttons

❑ Voice Announcement

This feature enables the radio to audibly indicate the current feature mode, Zone or Channel the user has just assigned.

This is typically useful when the user is in a difficult condition to read the content shown on the display.

The features which Voice Announcement supports are:
• Zone
• Channel
• Scan