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.

Accessories

There are a number of accessories to enhance the productivity of your two-way radio. Many of the available accessories are listed below.

Batteries

PMNN4046	NiMH, 1300 mAH

Chargers

PMTN4048	Rapid Charger, 110 V US NA w/Line Cord
PMLN4139	Transformer for PMTN4048
PMTN4073	10 Hour Charger, 120 V US NA Plug

Antennas

PMAD4012	136-155 MHz, Helical Antenna, 9cm
PMAD4013	155-174 MHz, Helical Antenna, 9cm
PMAE4011	435-480 MHz, Helical Antenna, 10cm
PMAD4014	136-155 MHz, Helical Antenna, 14cm
PMAD4027	136-155 MHz, Helical Antenna, 15cm
PMAD4028	148-174 MHz, Helical Antenna, 15cm
PMAD4015	155-174 MHz, Helical Antenna, 14cm

Antennas

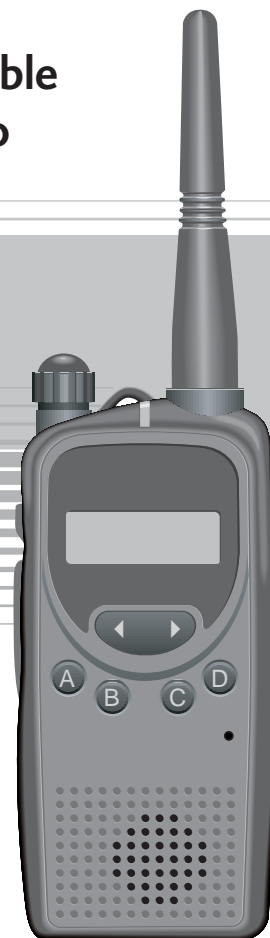|	
PMAE4003	430-470 MHz, Helical Antenna, 9cm
NAE6483	403-520 MHz, Whip Antenna
NAD6502	146-174 MHz, Heliflex Antnna

Carry Accessories

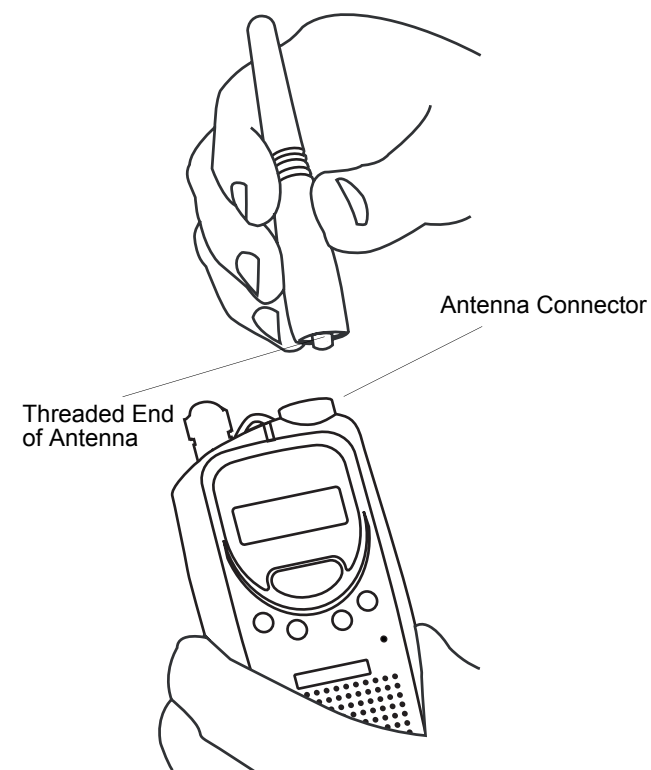|	
PMLN4467	Leather Carrying Case
PMLN4468	Carry Holster Case, Grey
PMLN4469	Carry Holster Case, Blue
4285820Z01	Shoulder Strap
HLN9844	1-1/2 inch Belt Clip
RLN4815	Fanny Pack
4280384H01	Radio Pak Replacement Retaining Strap w/Snap
4280384F89	Radio Pak Belt Lengthener for RLN4815
HLN9985	Waterproof Bag
JMZN4020	Hand Strap for Radio

Audio Accessories

PMLN4294	Ear Set Mic w/PTT
PMLN4425	Ear Set Boom Mic w/Remote Ring PTT
HMN9030	Remote Speaker Mic
HMN9013	Lightweight Handset w/Boom Mic

Business Portable Two-Way Radio

Modern, Efficient, With Exceptional Value

Attaching and Removing the Antenna
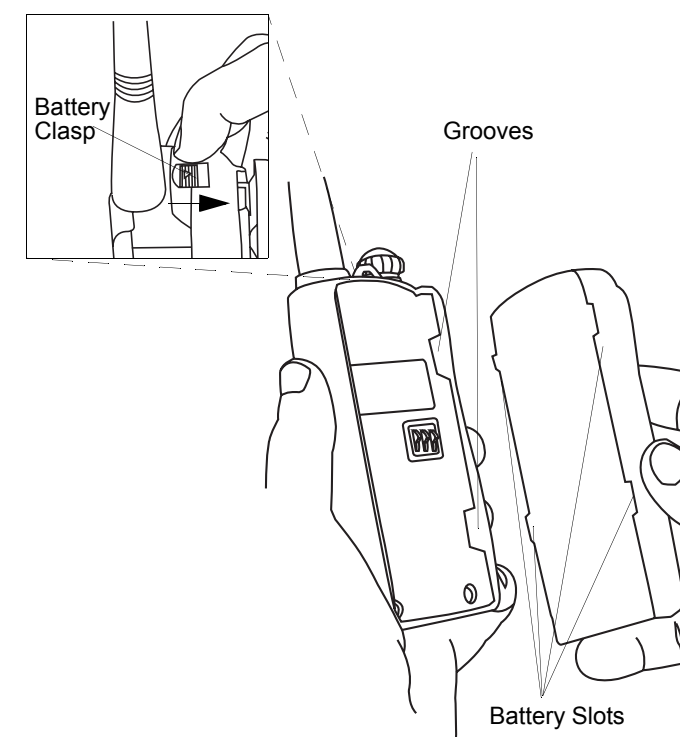

Antenna Connector

Threaded End of Antenna

To Attach Antenna

1. Fasten the antenna to the radio by placing the threaded end of the antenna into the Antenna Connector.
2. Rotate the antenna clockwise until tight.

To Remove Antenna

1. Turn the antenna in a counter-clockwise direction until it disengages from the radio.

Attaching and Removing the Battery

Battery Clasp

Grooves

Battery Slots

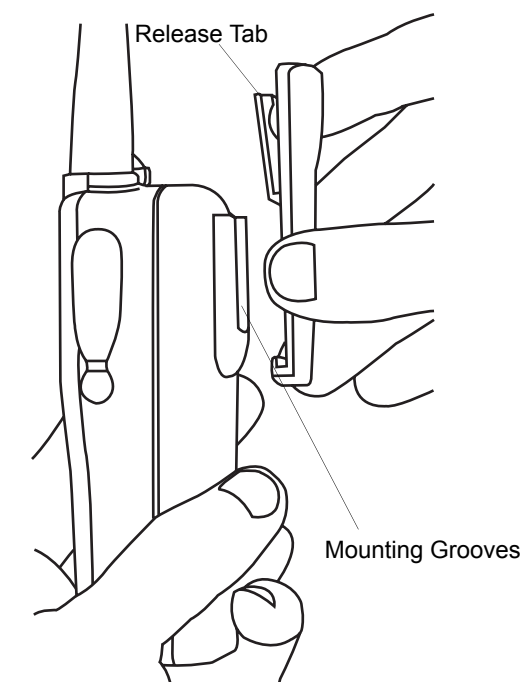### To Attach Battery

1. Fit the battery slots with the grooves on the radio.
2. Slide the battery upwards until a click is heard.

To Remove Battery

1. Slide the battery clasp away from the radio.
2. Slide the battery downwards.
3. Pull the battery away from the radio.

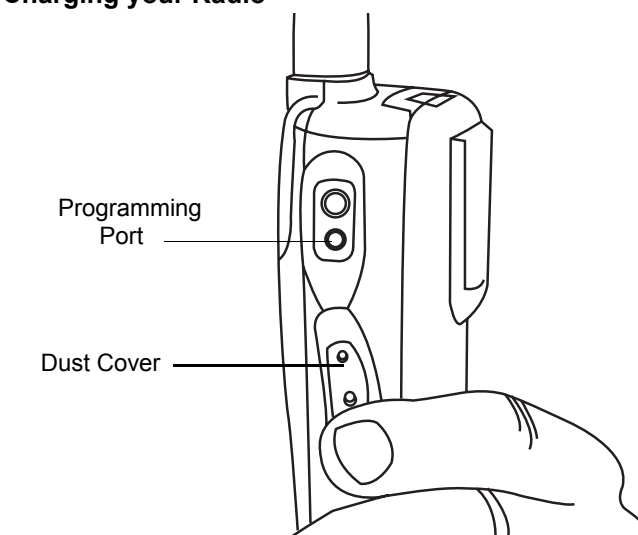## Attaching and Removing the Belt Clip

Release Tab

Mounting Grooves

To Attach Belt Clip

1. Align mounting rails of the radio with the grooves of the belt clip.
2. Slide the belt clip downwards until it clicks into place.

To Remove Belt Clip

1. Insert the end of a key between the release tab and the back surface of the radio.
2. Lift the release tab.
3. Slide the belt clip upwards.

Charging your Radio

Programming Port

Dust Cover

1. Turn off your radio, if it is turned on. It is highly recommended that the radio be turned off while charging.
2. Lift the Dust Cover covering the Accessory Connector.
3. Insert charging connection of the charger into the Programming Port.
4. Plug in charger to wall outlet.
5. Radio should be charged at least 16 hours initially before decreasing charging time to 10 hours.
6. Turn on your radio, when charging is complete; you should see all 3 bars of the Battery Level Indicator illuminated.
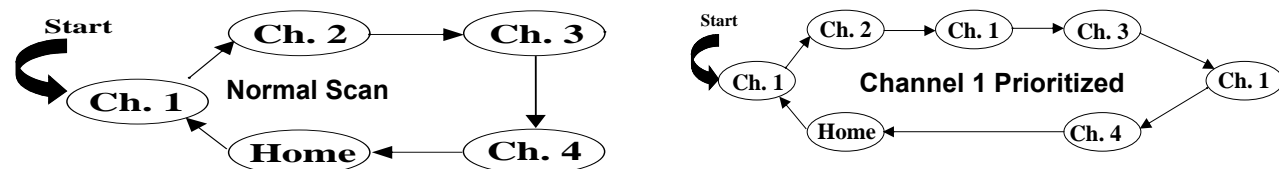
6881096C35-O

Scan

Scan allows you to monitor multiple channels and receive calls that are transmitted on them. Two types of scan are supported: *Normal Scan* and *Priority Scan*.

Normal Scan searches all channels sequentially in the radio's scan list, whereas *Priority Scan* allocates 50% of the scanning time to the Priority Channel (the first channel in the designated scan list).

During scan, when activity is detected that meets the unsquelch condition, the radio stops scanning and switches to that channel; the ⵦ indicator is illuminated, and the channel number is displayed. When no activity is detected for a pre-set time, the radio resumes scanning.

If your radio has switched to a non-priority channel during priority scan, it still checks for activity on the priority channel. If activity is detected there, the radio switches to the priority channel.

The radio transmits on the Prime Channel, if *PTT* is pressed during scanning. If the radio has stopped scanning, and changed to a particular channel, all transmit and receive activity is performed on that channel.

• Press the *Scan* button to begin channel scanning. The ⵦ indicator blinks to indicate that the radio is scanning. The LCD Screen shows the Prime Channel where the scan began.
• Press the ▶ button to scan the channels in incremental order, and the ◀ button to scan in the opposite order.
• Press *Scan* button to stop scanning.

Deleting a Nuisance Scan Channel

A channel with unwanted activity is called a Nuisance Channel. You can remove a Nuisance Channel from the scan list temporarily. To remove a Nuisance Channel
• Press the *Nuisance Channel Delete* button, when your radio stops on a Nuisance Channel. A high-pitched tone is heard.

You cannot remove the *Prime* or *Priority* Channel from the scan list. If attempted, a low-pitched tone is heard, and no action is taken. To reinstate the deleted channel(s) into the scan list, restart scan, or simply turn off your radio and turn it on again.

Programming Mode

This mode allows you to change feature parameters to enhance the use of your radio.

Entering Programming Mode

If your radio is turned on, turn it off. Press and hold the *Monitor* button, and turn on your radio. A ringing tone is heard, indicating that your radio is in Programming Mode. The ▢ indicator illuminates and *RW* is displayed.

Exiting Programming Mode

Turn off the radio, to exit Programming Mode.

Accessing Programming Mode Parameters

Press *PTT* or the *Monitor* button, to scroll through the features available in Programming Mode. Press the ◀ ▶ button to scroll through the parameters for each feature.

Feature	Range	Remarks
Squelch Level (SQL-XX)	SQL-00, …, SQL-15	Select low level when you need to receive very weak signal, and select high level when the communications distance is near.
Time Out Timer (TOT-XXX)	TOT-OFF, TOT-001, …, TOT-010	This determines the maximum duration (in minutes) that you can transmit continuously.
Scan List 1 (SCANLST1)	1-01-XXX, …, 1-16-XXX, XXX denotes channel number.	Up to 16 members per scan list. First member is assigned as Priority Channel, if Priority Scan is started. When scanning is started, only these 16 members will be scanned.
Battery Saver (BS-XXXX)	BS-OFF, BS-NORM, BS-ENH	Battery Saver helps to extend your battery life. When enabled, it turns off radio receiver circuitry periodically when no activity is detected. BS-NORM (Normal) turns off the radio less frequently; select this if you want to save battery, but expect a Selective Call. BS-ENH (Enhanced) turns off the receiver for a longer duration; select this if you want to maximize battery saving and do not expect to receive any Selective Call.
Battery Type (BT-XXXX)	BT-NIMH, BT-NICD, BT-ALK	Selects the type of battery that your radio uses: NIMH (Nickel Metal Hydride), NICD (Nickel Cadmium) or ALK (Alkaline).
Alert Tone Volume (BEEP-X)	BEEP-OFF, BEEP-1, BEEP-2, BEEP-3	Selects the alert tone volume needed. Select BEEP-OFF, if you require quiet operation, or BEEP-3, if working in a noisy environment.
Prime Channel Select (PRM-XXX)	PRM-OFF, PRM-001, …., PRM-XXX, XXX denotes the highest channel number supported by your model.	The Prime Channel is the channel that you wish to spend most of your time monitoring. The radio will always switch back to the Prime Channel if it is idle for more than the pre-programmed hang-time in other channel.
Backlight Select (LGT-XXXX)	LGT-AUTO, LGT-TOGL	Selecting LGT-TOGL makes the *Backlight* button a toggle to control the ON/OFF status of the LCD backlight. Selecting LGT-AUTO causes the backlight to automatically extinguish, if there is no keypress for more than 5 seconds. Pressing the *Backlight* button prolongs illumination time.

LED Indicators

LED Colour	State	Indication
Red	Illuminated	Radio is transmitting.
Red	Blinking	Battery voltage is low.
Green	Illuminated	Radio is receiving.

On/Off and Volume Knob

• If the radio is off, turn this knob clockwise to turn the radio on.
• If the radio is on, turn this knob counter-clockwise to turn the radio off.
• Turn this knob clockwise to increase the volume.
• Turn this knob counter-clockwise to decrease the volume.

Monitor Button

• Used to monitor the channel for any activity; squelch is disabled.

Push-to-Talk (PTT) button

• Press and speak to microphone to send message.
• Release and listen to receive messages.

◀ ▶ Button

• Used to select a channel in Normal Mode.
• Used to select a parameter in Programming Mode.
• Used to change the scanning direction.

Microphone

• Speak into the microphone when sending message.

Speaker

• You will hear received messages through the speaker.

Programming Port

• Lower port of the radio.
• Used to program your radio.

Accessory Connector

• Used to connect compatible accessories to your radio.

LCD Screen

• Displays selected channel, programming parameters, status messages and any error or information messages.

LCD Indicator	Description	Function
⊘	Keypad lock indicator	Illuminates when your keypad is locked.
⤙	Talkaround indicator	Illuminates when you are not transmitting through the repeater. Extinguishes when you are transmitting using the repeater offset/user-defined transmit frequency.
▥	Battery level indicator	Shows remaining charge in battery based on how many bars are displayed.
LH	Power level indicator	"L" illuminates to indicate radio transmits in low power; "H" illuminates to indicate radio transmits in high power.
▷	Monitor indicator	Illuminates when monitoring a selected channel.
▢	Programming Mode indicator	Illuminates when in Programming Mode.
ⵦ.	Scan indicator	Blinks, without the dot, when scan is activated. Illuminates when there is some activity on a non-priority channel. Illuminates, with dot blinking, indicates that there is some activity on the priority channel.
ᵥ℣ℿℿ	Signal Strength Indicator	Shows the signal strength. Six bars indicate the strongest signal.

Programmable Buttons (A, B, C, D)

• Used to select various functions. These functions can be assigned as a short press (press and release) or a long press (press and hold for 1 second).

Button	Function
Channel Alias[1]	Toggles display between *Channel Number* and *Channel Alias*.
Backlight	Toggles backlight display between *On* and *Off*.
Keypad Lock[1]	Locks or unlocks all buttons except *PTT*, *Monitor* and *On/Off/Volume Knob*.
Nuisance Channel Delete	Removes unwanted channel(s) temporarily from scan list during scan.
PL/DPL Enable[2]	Enables or disables radio from requiring matching PL/DPL to unsquelch.
Prime Channel	Quick move to the pre-programmed "Prime" channel
Power Select[1]	Selects required power level: High or Low.
Scan[1]	Starts or stops channel scan.
Squelch Level[1]	Selects desired squelch level. Use the ◀ ▶ button to choose desired level (Level 0 will unsquelch radio unconditionally, whereas Level 15 will set tightest squelch).
Talkaround	Enables or disables radio to transmit in Talkaround mode.
No Operation	No function is programmed to this button.
Alert Tone Volume[1]	Selects the alert tone volume needed for quiet operations or a noisy environment.

1. Parameter values are preserved, even after the radio is turned off.
2. Turning off the radio or changing the channel restores this setting to the default value of the active channel.

• The default functions programmed to your radio are described in the table below.

Press Type	Button A	Button B	Button C	Button D
Short Press	Prime Channel	Scan On/Off	Power Select	Backlight On/Off
Long Press	Channel Alias	Nuisance Channel Delete	Squelch Level	Kepad Lock

• Although your radio is programmed with default functions, you have the ability to re-program the radio's programmable buttons. You may want to write down the new functions in the table below.

Press Type	Button A	Button B	Button C	Button D
Short Press				
Long Press				