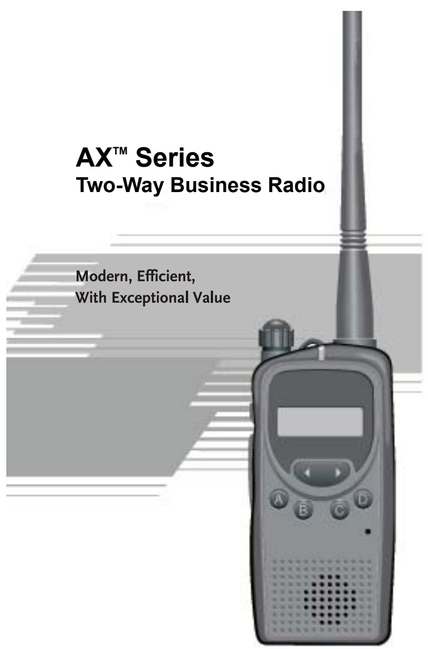
AX™ Series
Two-Way Business Radio

Modern, Efficient,
With Exceptional Value



Battery

PMNN4063	NiMH Rechargeable 7.2V Battery

Carry Accessories

HLN9714	2.5-in. Belt Clip

Chargers

RLN4940	Slow Desktop Charger Kit

* Hands-free VOX-compatible audio accessories

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.

Antennas

PMAE4011	435-480 MHz. Helical Antenna, 10cm
PMAD4028	148-174 MHz. Helical Antenna, 15cm
NAE6483	403-520 MHz. Whip Antenna (ships with UHF model radio)
NAD6502	146-174 MHz. Heliflex Antenna (ships with VHF model radio)

Audio Accessories

53815*	Lightweight Headset with Boom Microphone
53862	Remote Speaker Microphone
53863*	Earpiece with Microphone
53865*	Headset with Swivel Boom Microphone
53866	Earbud with Clip PTT and Microphone
56517	Earpiece with In-Line PTT Microphone
56518*	Earpiece with Boom Microphone

FCC Licensing Information

AX™ Series professional two-way radios operate on radio frequencies that are regulated by the Federal Communications Commission (FCC). In order to transmit on these frequencies, you are required to have a license issued by the FCC.

Application is made available on FCC Forms 601, schedules D and H, and Remittance Form 159.

To obtain these FCC forms, please use the following contact information:

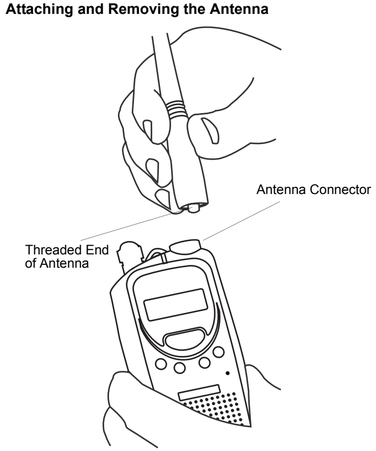
Faxed: Contact the Fax-On-Demand system at:	*Mailed:* Call the FCC forms hotline at:	*Questions regarding FCC license:* Contact the FCC at:
1-202-418-0177	**1-800-418-FORM**	**1-888-CALL-FCC**
Request forms 3000159, 3060001, 3060003, 3060006	**1-800-418-3676** Request form 000601	**1-888-225-5322** **or: http://www.fcc.gov** Request form 000601

Before filling out your application, you must decide which frequency(ies) you can operate on. For questions on determining your radio frequency, please call Motorola Product Services at 1-800-448-6686.

Changes or modifications not expressly approved by Motorola may void the user's authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

Note: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Attaching and Removing the Antenna



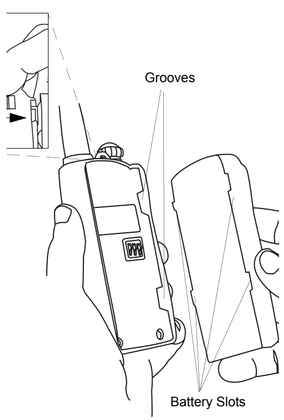
To Attach Antenna

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



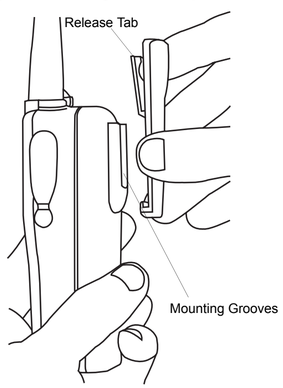
To Attach Battery

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



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

Your AX Series radio comes with a charging base and transformer.

Important Note: For instructions and safety information, please read the Charger Safety Instruction pamphlet (Motorola publication part number 6881098C01) enclosed with your charger.

Note: The charger base accommodates either a stand-alone battery or the radio with battery attached. If you charge the radio with battery attached, make sure that the radio is OFF.

1. Insert the transformer connector into the socket on the back of the charger base.
2. Plug the opposite end of the connector into the AC wall outlet.
3. Insert either a stand-alone battery or a radio with battery into the charging pocket.
   When the battery or the radio with battery is seated properly in the pocket, the LED on the charger lights red.

The battery is fully charged after approximately 13 hours. The LED remains lit until you remove the battery or the radio from the charger.

WARNING

Choking Hazard – Small Parts!
Not for children under three years.
This product is not to be used as a toy or plaything.

MOTOROLA
intelligence everywhere™

Motorola, Inc.
8000 W. Sunrise Boulevard, Plantation FL 33322

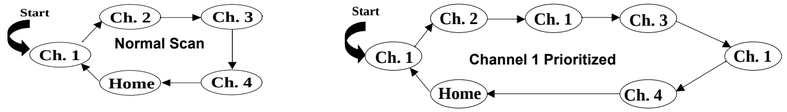
Motorola® AX™ Series

6880309R86-O
Proof of Purchase

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 Z 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 Z 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* to scroll forward or the *Monitor* button to scroll backwards through the features available in the 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.
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.
Time Out Timer (TOT-XXX)	TOT-OFF, TOT-001, …, TOT-010	This determines the maximum duration (in minutes) that you can transmit continuously.
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.

Refer to this table for the frequencies and codes for your radio:

Frequency/Code Table

Channel	Frequency (MHz)		Code (Hz)
	AXU4100–UHF	AXV5100–VHF	
1	464.5000	151.6250	67.0
2	464.5000	151.6250	77.0
3	464.5000	151.6250	88.5
4	464.5000	151.6250	179.9
5	464.5000	151.6250	None
6	464.5500	151.9550	67.0
7	464.5500	151.9550	82.5
8	464.5500	151.9550	94.8
9	464.5500	151.9550	179.9
10	464.5500	151.9550	None

LED Indicators

LED Color	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

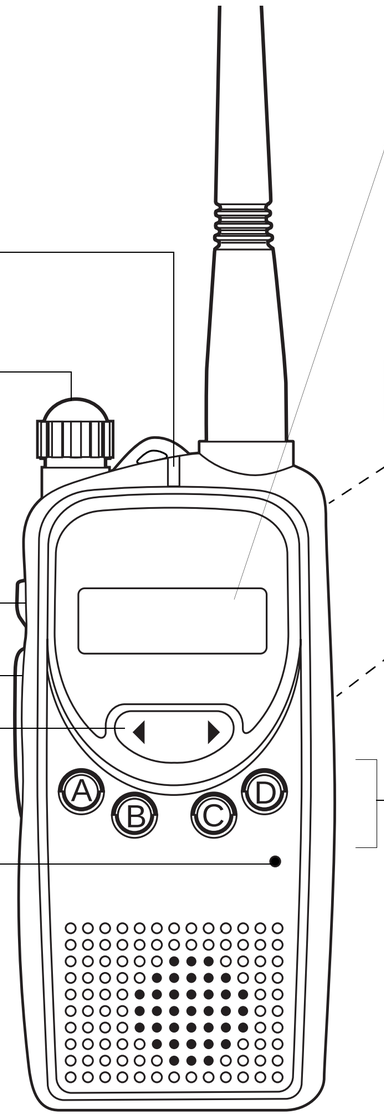
- Used to select a channel in Normal Mode.
- Used to select a parameter in Programming Mode.
- Used to change the scanning direction.

Microphone

- Speak into the microphone when sending message.

Speaker

- You will hear received messages through the speaker.



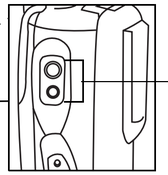
LCD Screen

- 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.
Z.	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.
	Signal Strength Indicator	Shows the signal strength. Six bars indicate the strongest signal.

Programming Port

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



Accessory Connector

- Used to connect compatible accessories to your radio.

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	No operation	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				