







CP125[™]

Portable Two-Way Radio User Guide Guide de l'utilisateur de radio bidirectionnelle

Radius

COMPUTER SOFTWARE COPYRIGHTS

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

CONTENTS

Computer Software Copyrightsinside cover
Safety
Product Safety and RF Exposure Compliance3
Radio Overview 5
Accessory Information. 6 Attach the Battery. 6 Remove the Battery. 6 Attach the Antenna. 7 Remove the Antenna. 7 Attach the Belt Clip. 8 Battery Information. 9 Charging Your Battery. 9 Wall Charger. 10 LED Indicators. 11 LCD Screen. 11 Programmable Buttons (A, B, C, D) 12 Image: Programmable Buttons (A, B, C, D) 14 Monitor Button. 14
Getting Started
Turn the Radio On or Off

Select a Channel .1 Receive a Call .1 Monitor .1 Transmit a Call .1
Scan1
Start and Stop Scan
Programming Mode
Entering Programming Mode
Warranty2
Limited Warranty2
Accessories2
Antennas
Audio Accessories

Notes:

SAFETY

PRODUCT SAFETY AND RF EXPOSURE COMPLIANCE



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

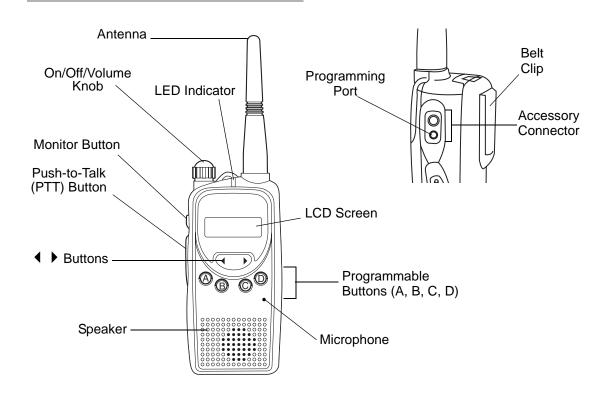
ATTENTION!

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.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following web site which lists approved accessories: http://www.motorola.com/cgiss/index.shtml.

Notes:

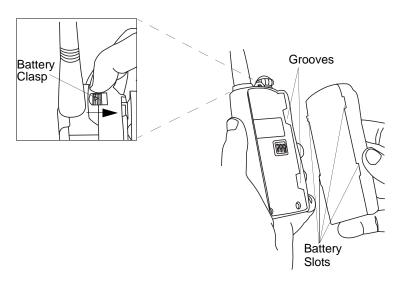
RADIO OVERVIEW



ACCESSORY INFORMATION

Attach the Battery

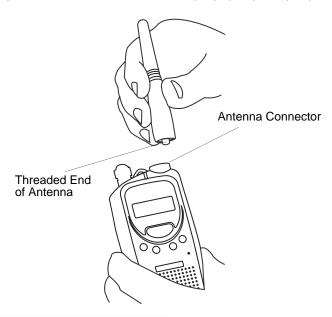
Remove the Battery



- **1** Fit the battery slots with the grooves on the radio.
- 2 Slide the battery upwards until a click is heard.
- 1 Turn off the radio if it is turned on.
- 2 Slide the battery clasp away from the radio.
- 3 Slide the battery downwards.
- 4 Pull the battery away from the radio.

Attach the Antenna

Remove the Antenna

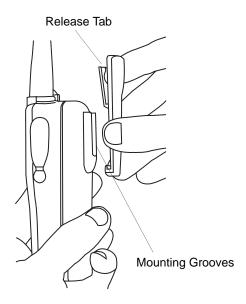


- 1 Fasten the antenna to the radio by placing the threaded end of the antenna into the Antenna Connector.
- 2 Rotate the antenna clockwise until tight.

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

Attach the Belt Clip

Remove the 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.
- 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 upward to remove it.

BATTERY INFORMATION

Charging Your Battery

This radio is powered by a nickel-metal hydride (NiMH) rechargeable battery. Charge the battery before use to ensure optimum capacity and performance. The battery was designed specifically to be used with a Motorola charger. Charging in non-Motorola equipment may lead to battery damage and void the battery warranty.

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

The battery should be at about 77°F (25°C) (room temperature), whenever possible. Charging a cold battery (below 50° F [10°C]) may result in leakage of electrolyte and ultimately in failure of the battery. Charging a hot battery (above 95°F [35°C]) results in reduced discharge capacity, affecting the performance of the radio. Motorola rapid-rate battery chargers contain a temperature-sensing circuit to ensure that batteries are charged within the temperature limits stated above.

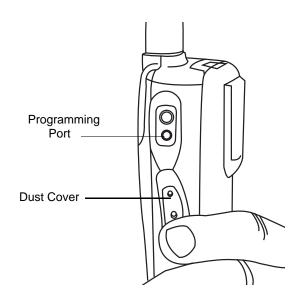
If a battery is new, or its charge level is very low, you will need to charge it before you can use it.

Note: Batteries are shipped uncharged from the factory. Always charge a new battery 14 to 16 hours before initial use.

WALL CHARGER

To Charge the Battery:

- 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 to expose the audio accessory connector.
- 3 Insert the charging connection of the charger into the Programming Port.
- 4 Plug the charging adapter into an electrical outlet.
- 5 The radio should be charged at least 16 hours initially before decreasing charging time to 13 hours.
- 6 Turn on your radio, when charging is complete; you should see all 3 bars of the Battery Level Indicator illuminated.



^{*} Other charging solutions available through Motorola Accessories (1-800-422-4210).

LED INDICATORS

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

LCD SCREEN

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

Symbol	Indication	
X Keypad Lock	The keypad has been locked.	
→ Talkaround	Bypass the repeater and talk directly to another radio.	
Battery Level	Displays remaining charge in battery based on how many bars are displayed.	
LH Power Level	Low Power "L" or High Power "H" is activated.	

Symbol	Indication
□ Monitor	The selected channel is being monitored
Programming Mode	Radio is in Programming Mode.
Z. Scan	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.
Yılll Signal Strength	The more bars, the stronger the signal being received by 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 ◀ ▶ buttons 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				

♦ BUTTONS

Used to:

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

MONITOR BUTTON

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

GETTING STARTED

TURN THE RADIO ON OR OFF



ON	OFF
Rotate the On/Off/	Rotate the On/Off/
Volume Knob	Volume Knob counter-
clockwise.	clockwise until you hear a click and both the display and LED indicator turn off.

ADJUST THE VOLUME

Turn the **On/Off/Volume Knob** clockwise to increase the volume, or counterclockwise to decrease the volume.

SELECT A CHANNEL

Your radio offers 4 conventional channels.

To select a channel, press the ◀ or ▶ buttons until you reach the desired channel.

RECEIVE A CALL

- 1 Turn your radio on.
- 2 Adjust the radio's volume.
- **3** or to select the desired channel.
 - Make sure the PTT button is released.
- 4 Listen for voice activity.
 - The LED indicator lights green while your radio is receiving.
- 5 To respond, hold the radio vertically 1 to 2 inches (2.5 to 5cm) from your mouth. Press the PTT button to talk; release it to listen.

MONITOR

It is important to monitor for traffic before transmitting to ensure that you do not "talk over" someone who is already transmitting.

- Press and hold the **Monitor** button to access channel traffic.
 - If no activity is present, you will hear "white noise."
- Once channel traffic has cleared, proceed with your call by pressing the PTT button.

TRANSMIT A CALL

- 1 Turn your radio on.
- 2 or to select the desired channel.

Note: Monitor for traffic before transmitting to ensure that you do not "talk over" someone who is already transmitting

- Hold the radio vertically 1 to 2 inches (2.5 to 5cm) from your mouth. Press the **PTT** button to talk.
 - The LED indicator lights steady red while the radio is transmitting.
- 4 Release the PTT to listen.

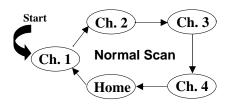
SCAN

Your radio is equipped with the Scan feature, allows you to monitor multiple channels and receive calls that are transmitted on them.

The indicator appears on the LDC screen while in scan mode.

Two types of scan are supported:

 Normal Scan – searches all channels sequentially in the radio's scan list.



 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 indicator and the channel number are 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 the PTT button is pressed during scanning. If the radio has stopped scanning, and has changed to a particular channel, all transmit and receive activity is performed on that channel.

START AND STOP SCAN Z

 Press the preprogrammed Scan button to start scan.

Note: The 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.
- **3** Press the preprogrmmed **Scan** button to stop scanning.

DELETE A NUISANCE CHANNEL/ TALKGROUP

A channel with unwanted activity is called a Nuisance Channel. You can temporarily delete a Nuisance Channel from the scan list.

To Remove a Nuisance Channel

- 1 While the radio is on the nuisance channel, press the preprogrammed Nuisance Channel Delete button until you hear a tone.
- 2 Release the Nuisance Channel Delete button. The nuisance channel is deleted.

Note: You cannot temporarily delete a Prime or Priority channel from the scan list. If attempted, a low-pitched tone is heard, and no action is taken.

To Restore the deleted channel(s)

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

- 1 If your radio is turned on, turn it off.
- 2 Press and hold the preprogrammed **Monitor** button, and turn on your radio.

Note: 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 the **PTT** button or the preprogramed **Monitor** button to scroll through the features available in Programming Mode. Press the buttons 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 (SCANLSTI)	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).

Feature	Range	Remarks
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.

WARRANTY

LIMITED WARRANTY

MOTOROLA COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

MOTOROLA INC. ("MOTOROLA") warrants the MOTOROLA manufactured Communication Products listed below ("Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

CP125 Portable Units One (1) Year

Product Accessories One (1) Year

MOTOROLA, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it (with a new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided it is returned in accordance with the terms of this warranty. Replaced parts or boards are warranted for the balance of the original applicable warranty

period. All replaced parts of Product shall become the property of MOTOROLA.

This express limited warranty is extended by MOTOROLA to the original end user purchaser only and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by MOTOROLA. MOTOROLA assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of MOTOROLA. Unless made in a separate agreement between MOTOROLA and the original end user purchaser, MOTOROLA does not warrant the installation, maintenance or service of the Product.

MOTOROLA cannot be responsible in any way for any ancillary equipment not furnished by MOTOROLA which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, MOTOROLA disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

II. GENERAL PROVISIONS:

This warranty sets forth the full extent of MOTOROLA'S responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at MOTOROLA's option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES, IMPLIED WARRANTIES. INCLUDING WITHOUT LIMITATION. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT. TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

III. STATE LAW RIGHTS:

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL

OR CONSEQUENTIAL DAMAGES OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY.

This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. HOW TO GET WARRANTY SERVICE:

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by MOTOROLA through one of its authorized warranty service locations. If you first contact the company which sold you the Product (e.g., dealer or communication service provider), it can facilitate your obtaining warranty service. You can also call MOTOROLA at 1-800-927-2744 US/Canada.

V. WHAT THIS WARRANTY DOES NOT COVER:

- A) Defects or damage resulting from use of the Product in other than its normal and customary manner.
- Defects or damage from misuse, accident, water, or neglect.
- Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- Breakage or damage to antennas unless caused directly by defects in material workmanship.
- E) A Product subjected to unauthorized Product modifications, disassembles or repairs (including, without limitation, the addition to the Product of non-MOTOROLA supplied equipment) which adversely affect performance of the Product or interfere with MOTOROLA's normal warranty inspection and testing of the Product to verify any warranty claim.
- F) Product which has had the serial number removed or made illegible.
- G) Rechargeable batteries if:
 - any of the seals on the battery enclosure of cells are broken or show evidence of tampering.

- the damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified.
- H) Freight costs to the repair depot.
- A Product which, due to illegal or unauthorized alteration of the software/ firmware in the Product, does not function in accordance with MOTOROLA's published specifications or the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from MOTOROLA.
- Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- K) Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS:

MOTOROLA will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and MOTOROLA will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

- A) that MOTOROLA will be notified promptly in writing by such purchaser of any notice of such claim;
- B) that MOTOROLA will have sole control of the defense of such suit and all negotiations for its settlement or compromise; and
- C) should the Product or parts become, or in MOTOROLA's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit MOTOROLA, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by MOTOROLA.

MOTOROLA will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by MOTOROLA, nor will MOTOROLA have any liability for the use of ancillary equipment or software not furnished by MOTOROLA which is attached to or used in connection with the Product. The foregoing

states the entire liability of MOTOROLA with respect to infringement of patents by the Product or any parts thereof.

Laws in the United States and other countries preserve for MOTOROLA certain exclusive rights for copyrighted MOTOROLA software such as the exclusive rights to reproduce in copies and distribute copies of such MOTOROLA software. MOTOROLA software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including. without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such MOTOROLA software or exercise of rights in such MOTOROLA software is permitted. No license is granted by implication, estoppel or otherwise under MOTOROLA patent rights or copyrights.

VII.GOVERNING LAW:

This Warranty is governed by the laws of the State of Illinois, USA.

ACCESSORIES

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

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

BATTERIES

PMNN4063	NiMH, 1500 mAH
----------	----------------

CARRY ACCESSORIES

4285820Z01	Shoulder Strap
HLN9844	2-inch Belt Clip
RLN4815	Fanny Pack
4280384H01	Radio Pack Replacement Retaining Strap w/Snap
4280384F89	Radio Pack Belt Lengthener for RLN4815
HLN9985	Waterproof Bag
JMZN4020	Hand Strap for Radio

CHARGERS

PMTN4087	Rapid Charger Kit, 120 V
PMTN4086	Rapid Charger Base
EPNN7994	Rapid Transformer, 120 V

RLN4940	Slow Desktop Charger Kit, 120 V		
WPLN4203	Slow Desktop Charger Base		
EPNN7997	Slow Desktop Transformer, 120 V		
PMTN4073	Wall Charger, 120 V US NA		

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



MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office. All other product or service names are the property of their respective owners.

Motorola, Inc. 2005.

MOTOROLA et le logo stylisé M sont homologués au Patent and Trademark Office des Etats-Unis. Tous les autres noms de produits ou services appartiennent à leurs propriétaires respectifs. © Motorola, Inc. 2005.



6881098C60-O