



6881038B80.book Page i Thursday, August 30, 2001 5:33 PM

Safety and General Information

Important Information on Safe and Efficient Operation Read This Information Before Using Your Radio

The information provided in this document supersedes the general safety information contained in user guides published prior to July 2000. For information regarding radio use in a hazardous atmosphere please refer to the Factory Mutual (FM) Approval Manual Supplement or Instruction Card, which is included with radio models that offer this capability.

RF Operational Characteristics

Your radio contains a transmitter and a receiver. When it is ON, it receives and transmits radio frequency (RF) energy. The XTN Series VHF radios operate in the frequency range of 151-161 MHz, the XTN Series UHF radios operate in the frequency range of 461-469 MHz. When you communicate with XU1100 or XV1100 radios the output power level is 1.0 watt, with other XTN Series radios, the output power level is 2.0 watts

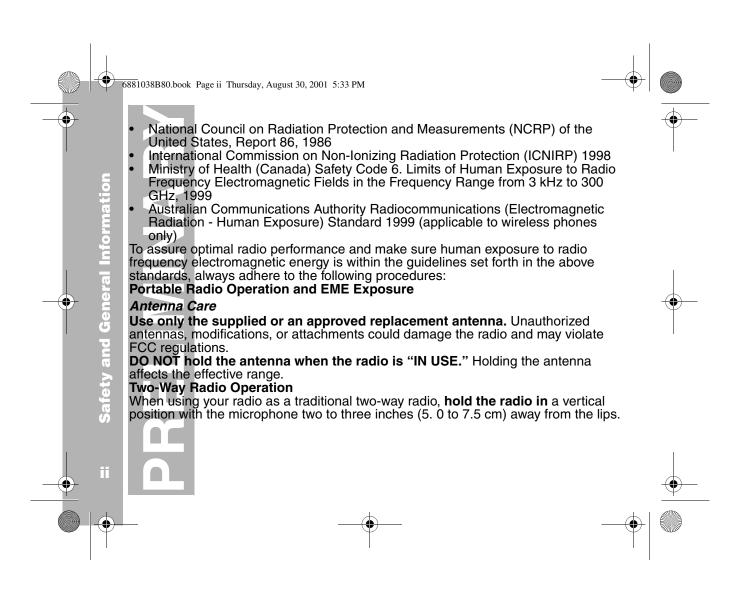
Exposure to Radio Frequency Energy

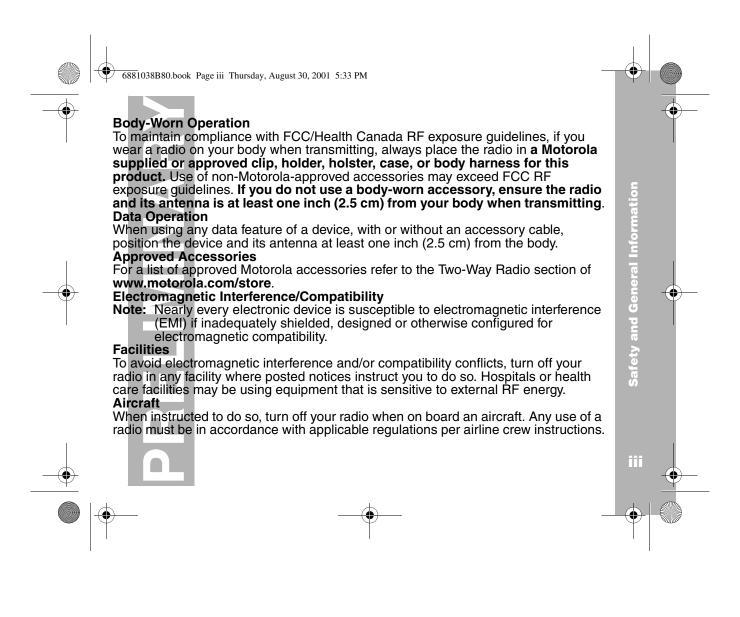
Your Motorola radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:

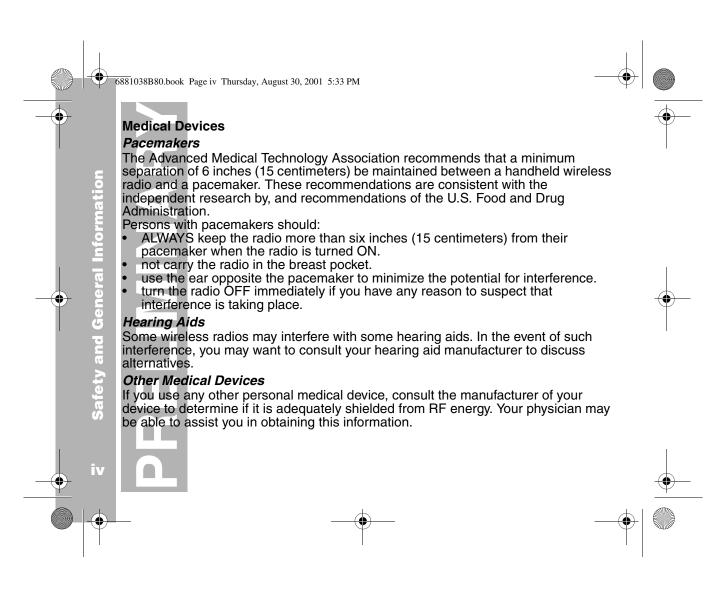
- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition

















Check the laws and regulations on the use of radios in the area where you drive. Always obey them. When using your radio while driving, please:

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.

Operational Warnings

For Vehicles with an Air Bag

Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

Potentially Explosive Atmospheres

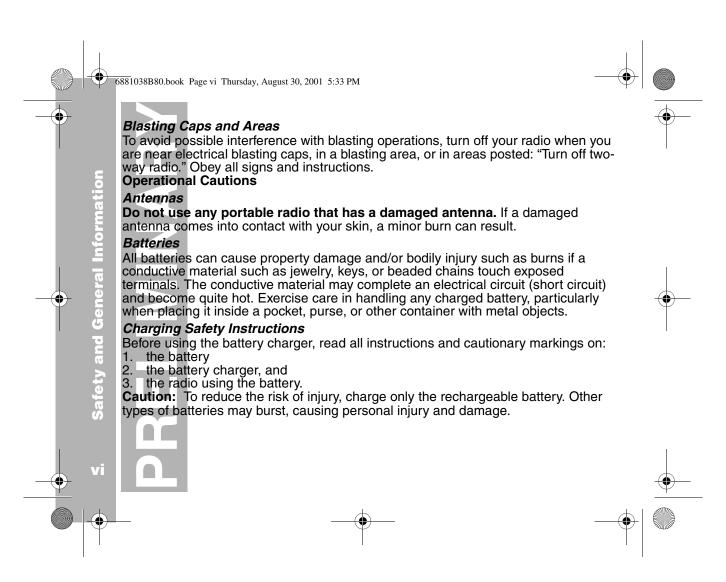
Turn off your radio prior to entering any area with a potentially explosive atmosphere, unless it is a radio type especially qualified for use in such areas as "Intrinsically Safe."

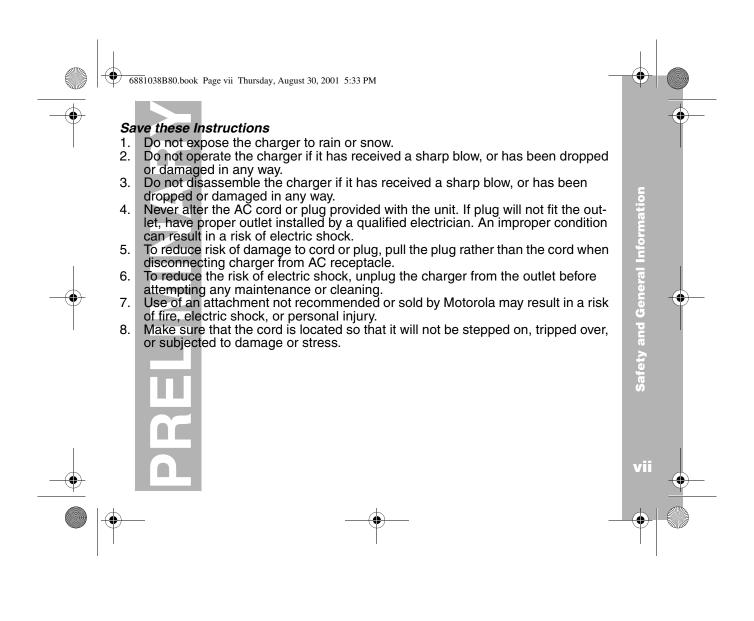
Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

Note: The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.











Introduction Thank you for purchasing a Motorola® XTN Series Radio. Your radio is a product of Motorola's 70 plus years of experience as a world leader in the designing and manufacturing of communications equipment. The revised industrial design reflects the heritage and ruggedness of the XTN Series. The XTN Series radios provide costeffective communications for businesses such as retail stores. restaurants, schools, construction sites and more. Motorola professional two-way radios are the perfect communications solution for all of today's fast-paced industries. Note: Please read this manual

carefully to ensure you know

how to properly operate the

Motorola **Consumer Products Division** 1705 Belle Meade Court Lawrenceville, GA 30043

radio before use.

Package Contents

- Radio
- Swivel Belt Holster
- NiMH Battery NTN8971
- 10-Hour Charger NNTN4021
- User's Guide
- Accessory Brochure
- Warranty Card

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For a copy of a large-print version of this guide, or for product-related questions. blease contact:

1-800-353-2729 U.S.A. 1-800-461-4575 Canada 1-888-390-6456 TTY (Text Telephone)

On the web, please refer to: www.motorola.com/radios/professional







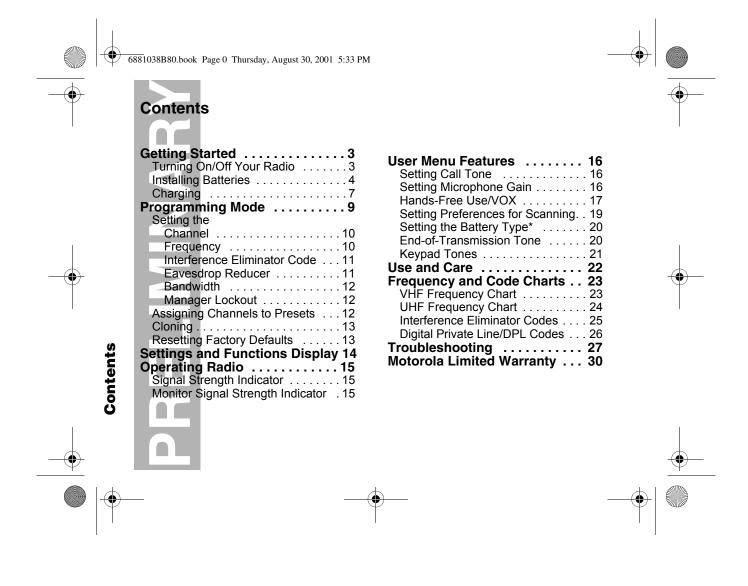


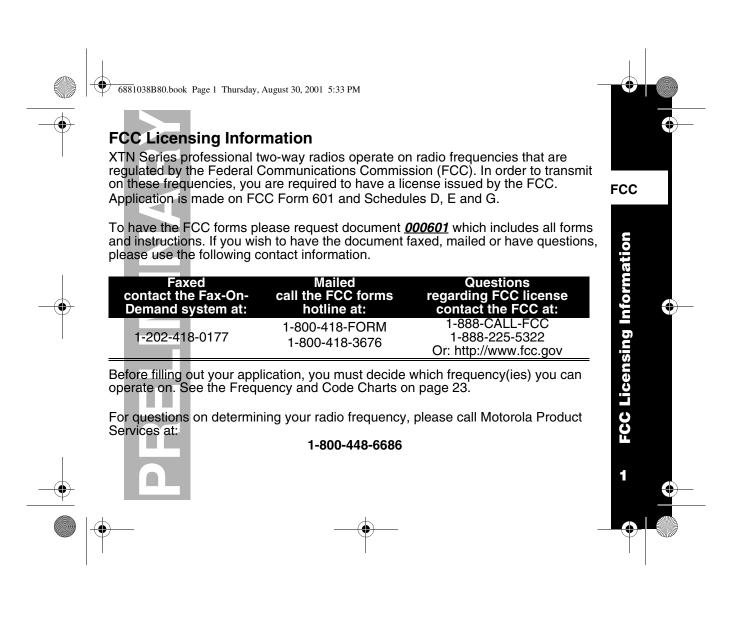










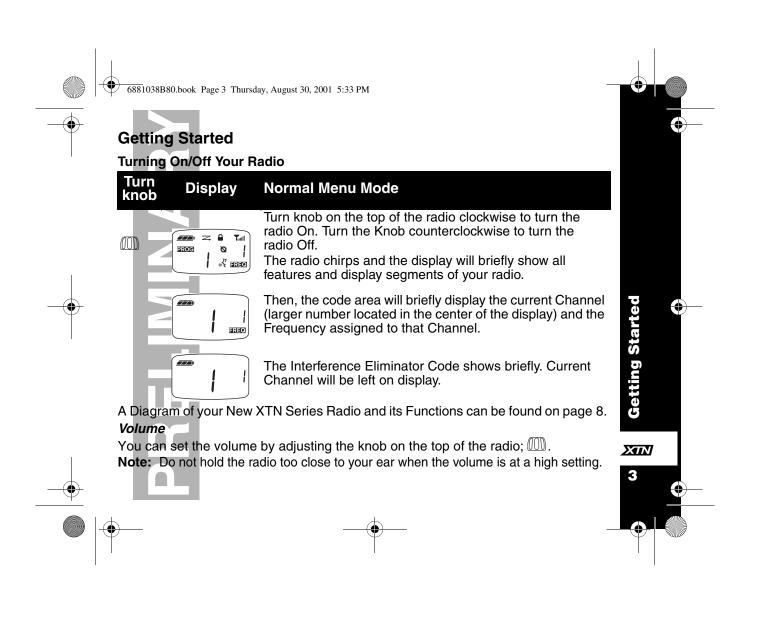


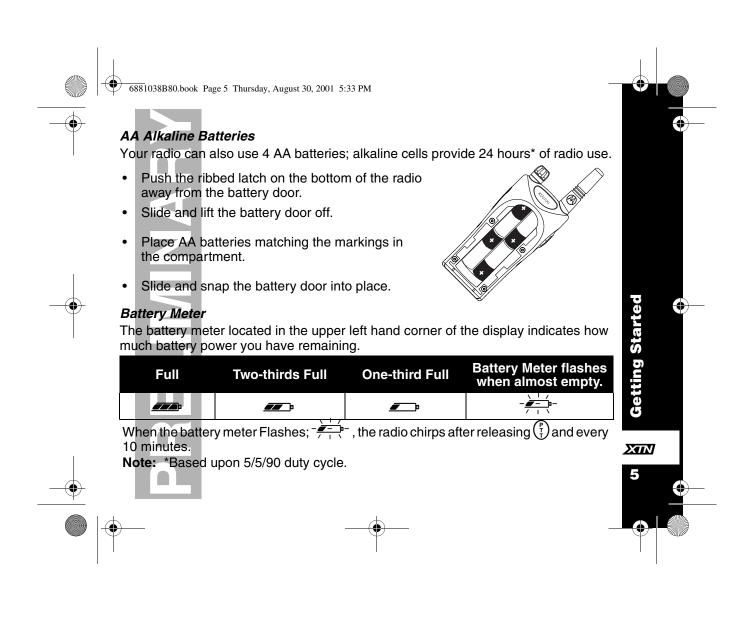
FCC Licensing Information

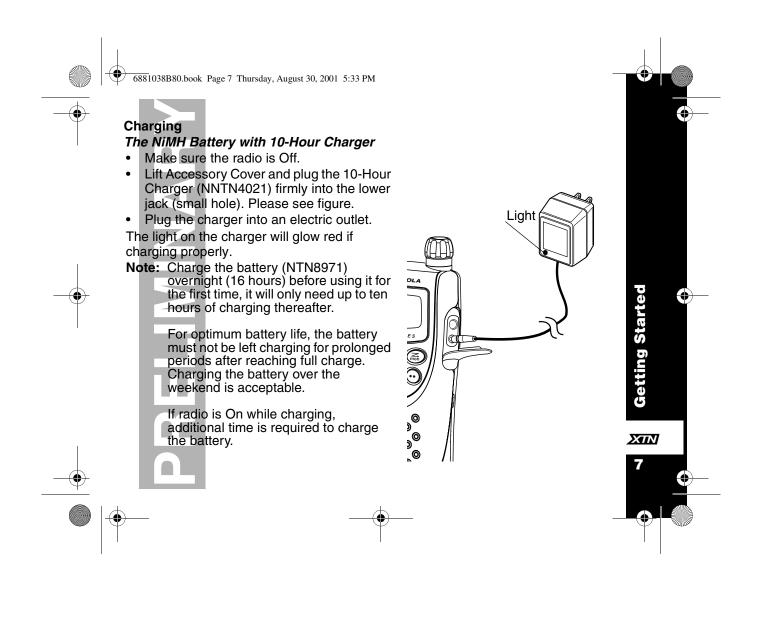
Changes or modifications not expressly approved by Motorola may void the user's authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform FCC 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.









The Drop-in Charging Tray can be placed on any flat surface and provides drop-in charging convenience.

 Connect 10-Hour Charger (NNTN4021) and Drop-in Charging Tray* (NNTN4019) by inserting plug into the rear of Drop-in Charging Tray.

To charge the radio, place into the Drop-in Charging Tray with the radio facing toward you.

Note: The battery can be charged while inside the radio or removed from the radio and placed in Drop-in Charging Tray separately. The battery's contacts must face down and the Motorola Logo must face the front of Charger.

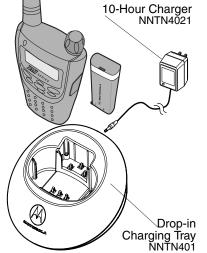
The light on the 10-Hour Charger will glow continuously when radio/battery is inserted.

Note: Allow 10 hours for the battery to reach full charge.

* Accessory Number for Drop-in Charger is 53872.





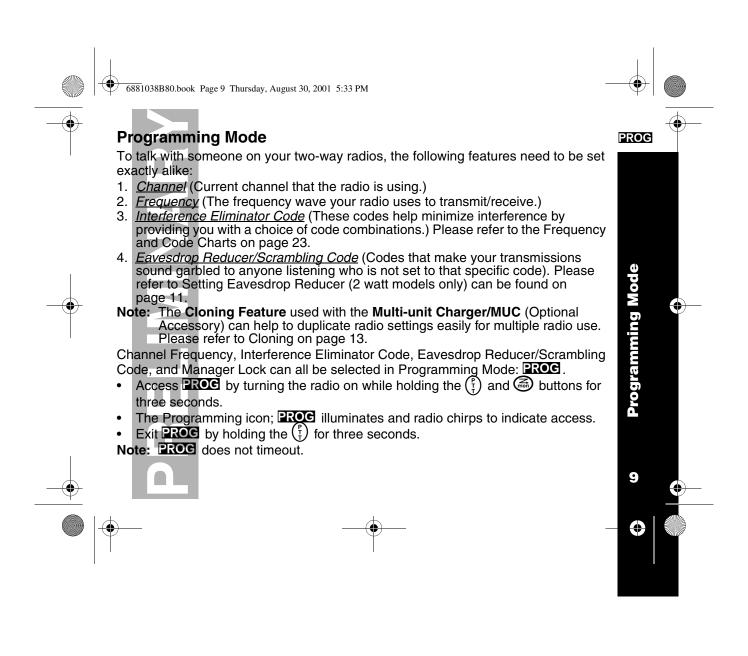


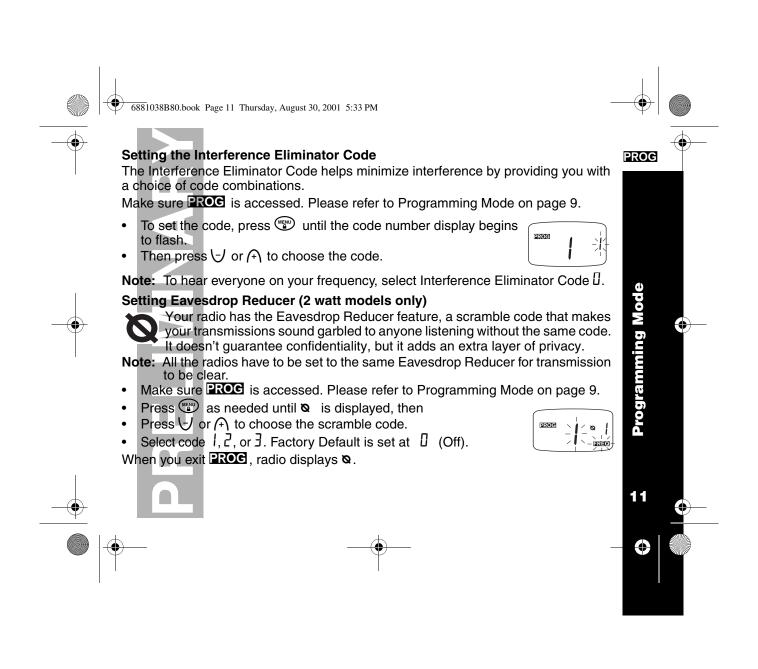


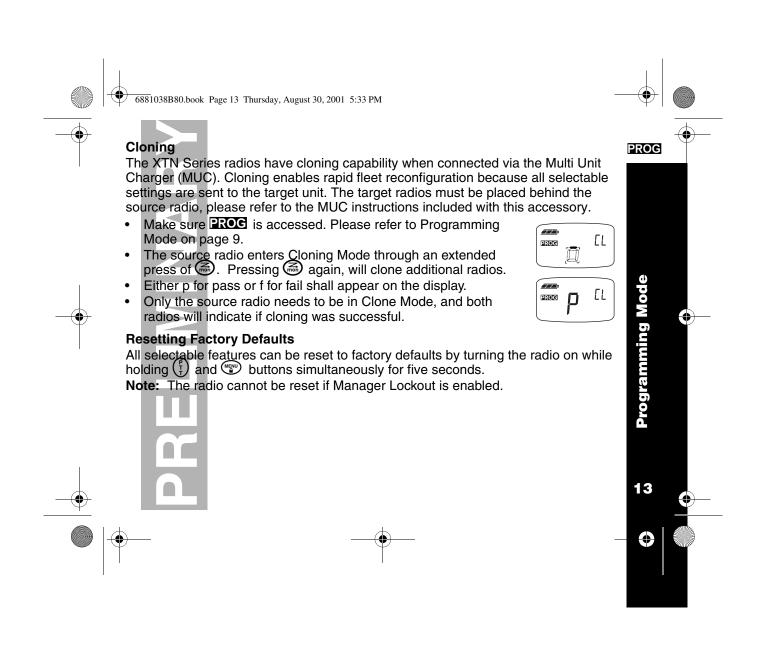
Getting Started

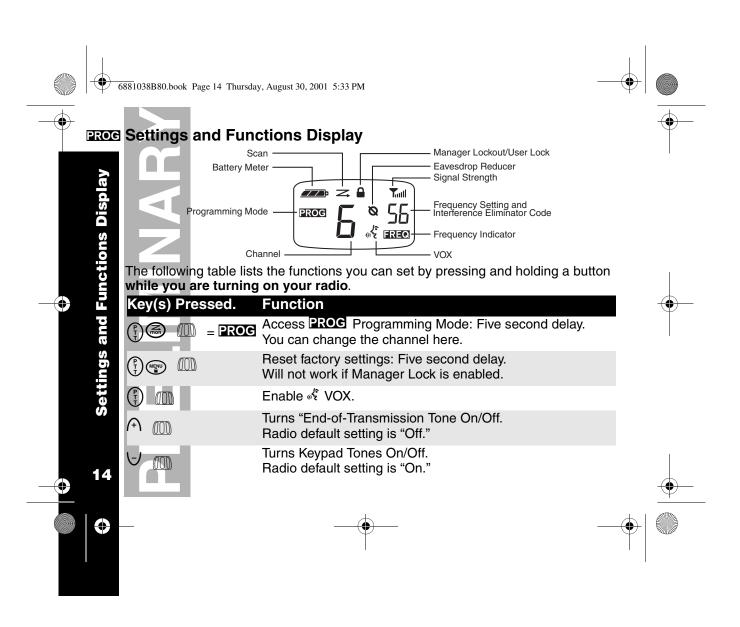


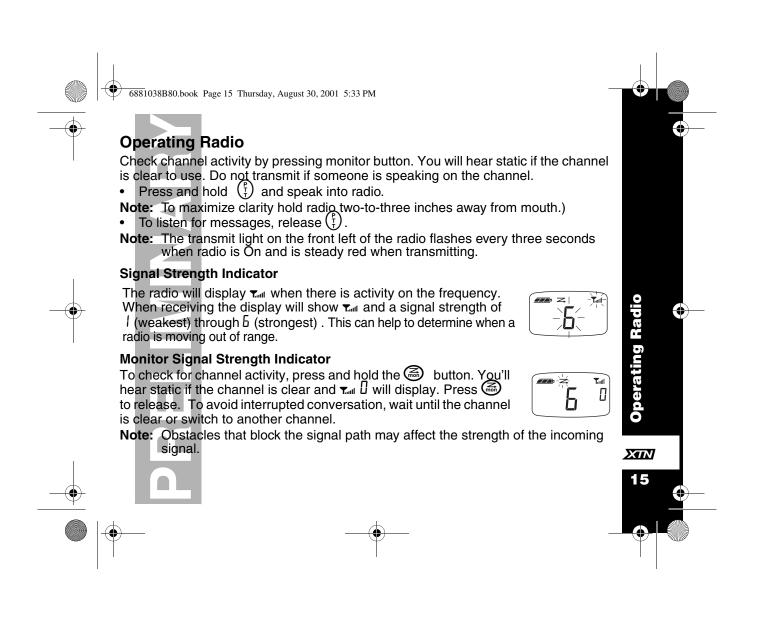


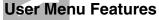












Setting Call Tone

Your radio can transmit call tones to other radios in your group so you can alert the group that you want to talk to them. There are three distinct individual call tones to choose or you can choose to turn Call Tones off: 1. Once selected, just press (4) to transmit the Call Tone to others.

- To set your call tone, press 🜚 as needed to display 🖺.
- You can press \forall or $\widehat{\cap}$ to scroll through the available call tones. The radio plays each individual Call tone as you scroll through.



Note: The default is set on \square , or you may choose 1, 2, or 3.

Setting Microphone Gain Microphone Gain allows compensation for background noise and enhances the ability to pick up quiet voices.

- To set sensitivity level, press as needed, until & and L are visible.
- Select / 2 or 3 by using ⊌ or ♠:
 - 3 = High Sensitivity
 - = Medium Sensitivity
 - = Low Sensitivity



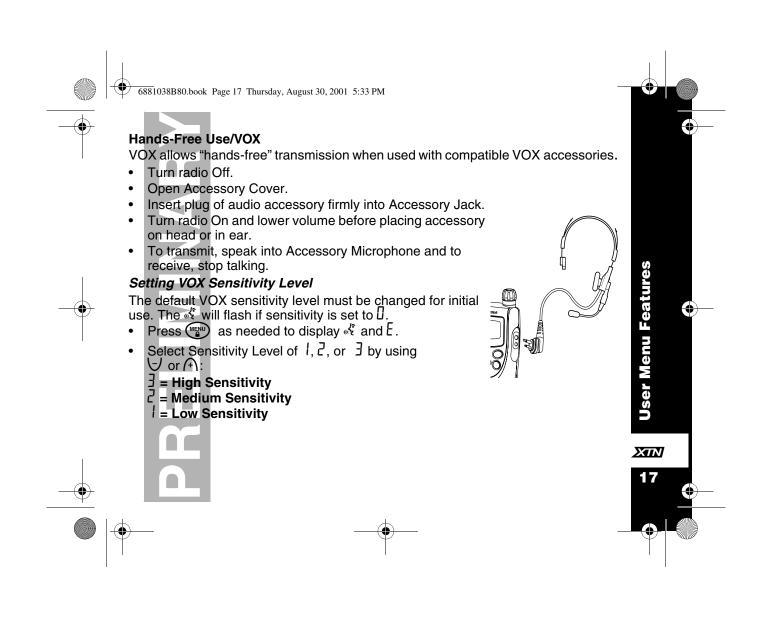


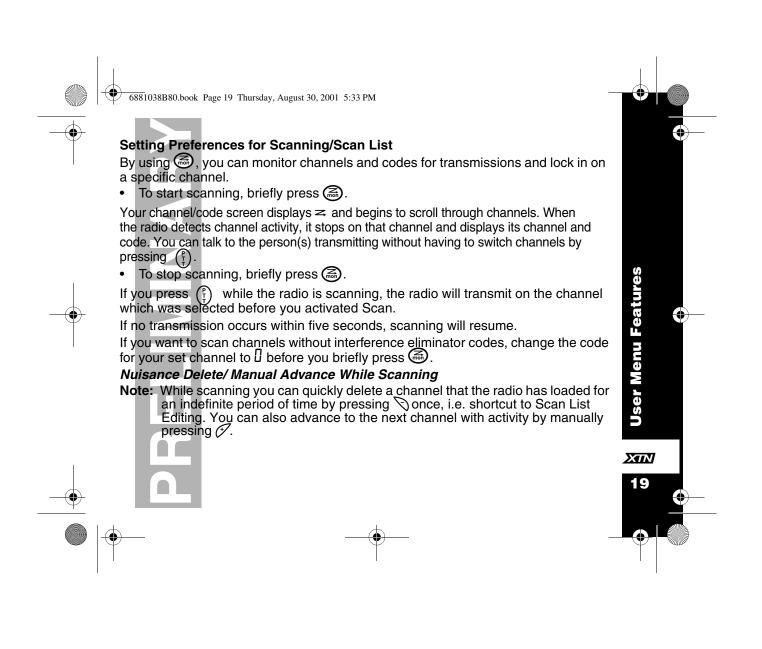


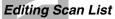




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Scan List Setting is changed by pressing the button three times.

- The flashing channel will appear on the display with a solid $\frac{1}{2}$ or n in the code section.
- Press \forall or \cap button to increase or decrease the channel.
- Pressing the (3) s button toggles between the channel number and Scan List
- The scroll buttons, \forall or \cap will change the Scan List to include \forall or exclude \cap that particular channel.
- Once you have seklected your Scan List options, press (^p) to exit.

Setting the Battery Type*

This feature allows the battery meter to recognize and properly display the power remaining of single cell batteries.

Press until displays. Either (Alkaline) or n (NiCad, NiMH, Li-lon rechargeable AA cells) is flashing.

• Press U or A until your choice of A or a displays.

Note: *This menu will not appear if the NiMH Battery is in use.

End-of-Transmission Tone

When you turn this feature On, your two-way radio transmits a tone when you finish transmitting. It's like saying "Roger" or "Over."













151.7750

15

25.00

Frequency and Code Charts
The charts on these pages provide frequency and code information. These charts are useful when using Motorola XTN Series two-way radios with other business radios.

VHE Frequency Chart

	VHF Frequency Chart								
Position	MHz	Bandwidth	Positi	on MHz	Bandwidth				
	151.6250	25.00	16	151.8650	25.00				
2	151.9550	25.00	17	151.8950	25.00				
3	154.5700	25.00	18	151.9250	25.00				
4	154.6000	25.00	19	152.7000	25.00				
5	151.7000	12.5/25.0	20	154.4900	25.00				
6	151.7600	12.5/25.0	21	154.5150	25.00				
7	151.8200*	12.5/25.0	22	154.5275	25.00				
8	151.8800*	12.5/25.0	23	154.5400	25.00				
9	151.9400*	12.5/25.0	24	154.6000	25.00				
10	151.5125	25.00	25	154.6550	25.00				
11	151.6550	25.00	26	158.4000	25.00				
12	151.6850	25.00	27	158.4075	25.00				
13	151.7150	25.00	Note: Due to FCC regulations,						
14	151.7450	25.00		these frequen					

at 1 watt only.

XIN



Frequency and Code Charts

XTN **24**

UHF Frequency	uency Chart
Bandwidth	Position

Position	MHz	Bandwidth	Position	MHz	Bandwidth
1	464.5000	12.5/25.0	29	462.9125	12.5
2	464.5500	12.5/25.0	30	464.4875	12.5
3	467.7625	12.5	31	464.5125	12.5
4	467.8125	12.5	32	464.5375	12.5
5	467.8500	12.5/25.0	33	464.5625	12.5
6	467.8750	12.5/25.0	34	466.0375	12.5
7	467.9000	12.5/25.0	35	466.0625	12.5
8	467.9250	12.5/25.0	36	466.0875	12.5
9	461.0375	12.5	37	466.1125	12.5
10	461.0625	12.5	38	466.1375	12.5
11	461.0875	12.5	39	466.1625	12.5
12	461.1125	12.5	40	466.1875	12.5
13	461.1375	12.5	41	466.2125	12.5
14	461.1625	12.5	42	466.2375	12.5
15	461.1875	12.5	43	466.2625	12.5
16	461.2125	12.5	44	466.2875	12.5
17	461.2375	12.5	45	466.3125	12.5
18	461.2625	12.5	46	466.3375	12.5
19	461.2875	12.5	47	466.3625	12.5
20	461.3125	12.5	48	467.7875	12.5
21	461.3375	12.5	49	467.8375	12.5
22	461.3625	12.5	50	467.8625	12.5
23	462.7625	12.5	51	467.8875	12.5
24	462.7875	12.5	52	467.9125	12.5
25	462.8125	12.5	53	469.4875	12.5
26	462.8375	12.5	54	469.5125	12.5
27	462.8625	12.5	55	469.5375	12.5
28	462.8875	12.5	56	469.5625	12.5



This allows you to monitor all activity on the channel you are using. Interference Eliminator codes help minimize interference by providing you with a choice of code combinations.

	Code	Hz	Code	Hz	Code	Hz
	1	67.0	14	107.2	 27	167.9
	2	71.9	15	110.9	28	173.8
	3	74.4	16	114.8	29	179.9
	4	77.0	17	118.8	30	186.2
	5	79.7	18	123.0	31	192.8
	6	82.5	19	127.3	32	203.5
	7	85.4	20	131.8	33	210.7
	8	88.5	21	136.5	34	218.1
	9	91.5	22	141.3	35	225.7
	10	94.8	23	146.2	36	233.6
	11	97.4	24	151.4	37	241.8
65	12	100.0	25	156.7	38	250.3
	13	103.5	26	162.2		

XIN

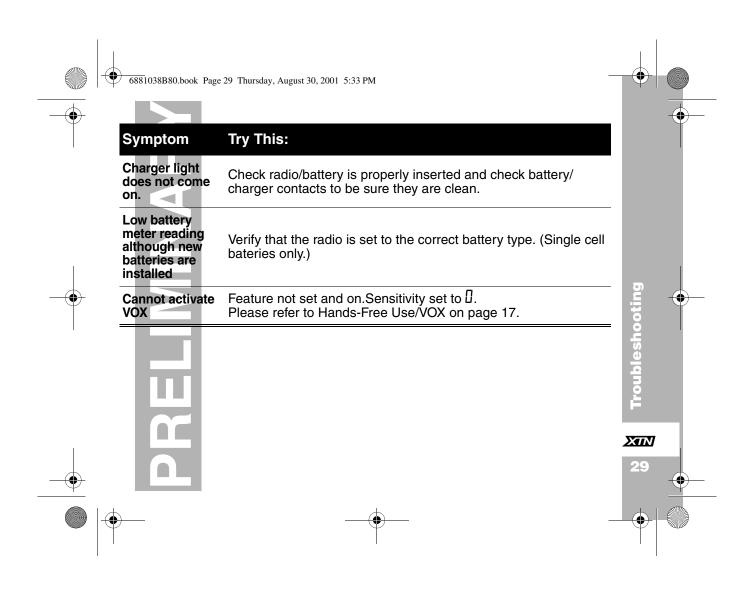
Carrier Squelch (0) disables Interfeence Eliminator Codes.

Symptom	Try This:
No Power	Recharge or replace battery (NTN8971). Reposition or replace AA batteries.
Message not transmitted	Make sure (F) is completely pressed as you transmit. Replace, recharge and/or reposition batteries.
Hearing other noises or conversation on a channel	Confirm Interference Eliminator Code is set. Frequency or Interference Eliminator Code may be in use, change code on all radios if possible.
Message scrambled	Eavesdrop Reducer is on, and/or setting does not match other radios' settings.
Limited talk range	Steel and/or concrete structures, heavy foliage, buildings or vehicles decrease range. Check for clear line of sight to improve transmission. Wearing radio close to body such as in a pocket or on a belt decreases range. Change location of radio.

XIN

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-		Symptom	Try This:	
		Message not received	Confirm radios have the same channel, frequency, interference eliminator code and *eavesdrop reducer code settings. (*XV2600, XU2600) Make sure $\binom{\mathbb{P}}{\mathbb{T}}$ is NOT being pressed while trying to listen. Replace, recharge and/or reposition batteries. Obstructions and operating indoors, or in vehicles, may interfere change location. Verify that the radio is not in Scan mode.	
-	nooting	Heavy static or interference	Radios are too close, they must be at least five feet apart. Radios are too far apart or obstacles are interfering with transmission.	
	Troubleshooting	Keypad locked	Make sure menu is unlocked. Unlock by holding for three seconds. Make sure Manager Lockout is disabled. Please refer to Setting Manager Lockout on page 12.	
	XIN	Low batteries	Recharge or replace NiMH battery. Replace AA batteries. Extreme operating temperatures affect battery life.	
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XIN

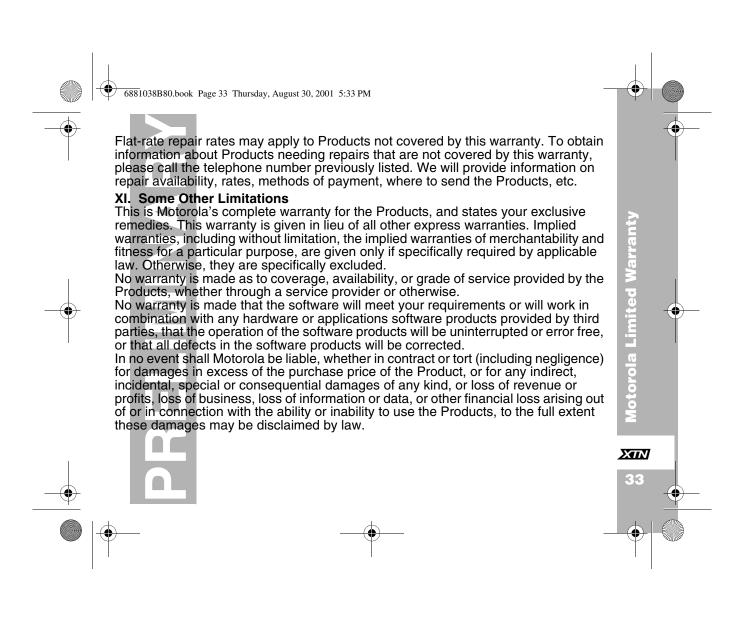


- Products that are operated in combination with ancillary or peripheral equipment or software not furnished by Motorola for use with the Products ("ancillary equipment"), or any damage to the Products or ancillary equipment as a result of such use. Among other things, "ancillary equipment" includes batteries, chargers, adaptors, and power supplies not manufactured or supplied by Motorola. Any of these voids the warranty.
- Someone other than Motorola (or its authorized service centers) tests, adjusts, installs, maintains, alters, modifies or services the Products in any way. Any of these voids the warranty.
- Rechargeable batteries that: (a) are charged by other than the Motorola-approved battery charger specified for charging such batteries; (b) have any broken seals or show evidence of tampering; (c) are used in equipment other than the Product for which they are specified; or (d) are charged and stored at temperatures greater than 60 degrees centigrade. Any of these voids the warranty.
- Products that have: (a) serial numbers or date tags that have been removed, altered or obliterated; (b) board serial numbers that do not match each other, or board serial numbers that do not match the housing; or (c) nonconforming or non-Motorola housings or parts. Any of these voids the warranty.
- Defects or damage that result from: (a) use of the Products in a manner that is not normal or customary; (b) improper operation or misuse; (c) accident or neglect such as dropping the Products onto hard surfaces; (d) contact with water, rain, extreme humidity or heavy perspiration; (e) contact with sand, dirt or the like; or (f) contact with extreme heat, or spills of food or liquid.
- Physical damage to the surface of the Products, including scratches, cracks or other damage to a display screen, lens or other externally exposed parts.
- Failure of Products that is due primarily to any communication service or signal you may subscribe to or use with the Products.
- Coil cords that are stretched or that have any broken modular tabs.
- Products that are leased.









XII. Patent and Software Provisions

At Motorola's expense, we will defend you, and pay costs and damages that may be finally awarded against you, to the extent that a lawsuit is based on a claim that the Products directly infringe a United States patent. Our obligation is conditioned on: (a) you notifying us promptly in writing when you receive notice of the claim; (b) you giving us sole control of the defense of the suit and all negotiations for its settlement or compromise; and (c) should the Products become, or in Motorola's opinion be likely to become, the subject of a claim of infringement of a United States patent, you permit us, at our option and expense, either to: procure for you the right to continue using the Products; replace or modify them so that they become non-infringing; or grant you a credit for such Products, as depreciated, and accept their return. The depreciation will be an equal amount per year over the lifetime of the Products, as established by Motorola.

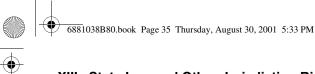
Motorola will have no liability to you with respect to any claim of patent infringement that is based upon the combination of the Products or parts furnished under this limited warranty with ancillary equipment, as defined in VI., above.

This is Motorola's entire liability with respect to infringement of patents by the Products.

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XIII. State Law and Other Jurisdiction Rights

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This warranty gives you specific legal rights, and you may also have other rights, which vary from jurisdiction to jurisdiction.

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USA Canada

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TTY 1-888-390-6456 (Text Telephone) Paging 1-800-548-9954

Two-Wav 1-800-353-2729

TTY 1-888-390-6456 (Text Telephone)

To correspond with Motorola about the Products, please write us at http://www.motorola.com or at:

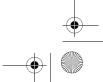
In the USA: In Canada:

Motorola Canada Limited Motorola, Inc.

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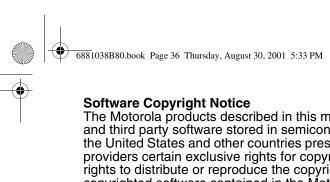












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Patent Notice

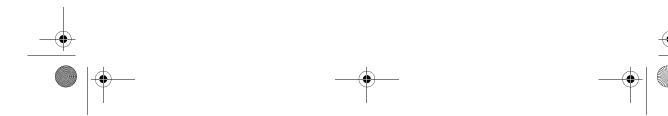
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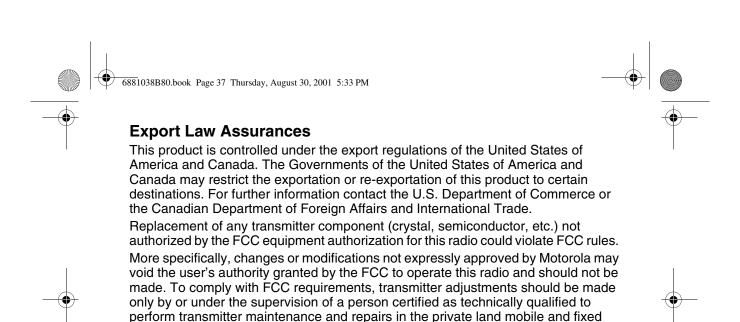
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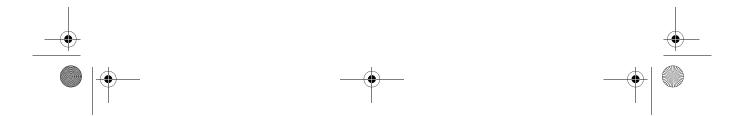
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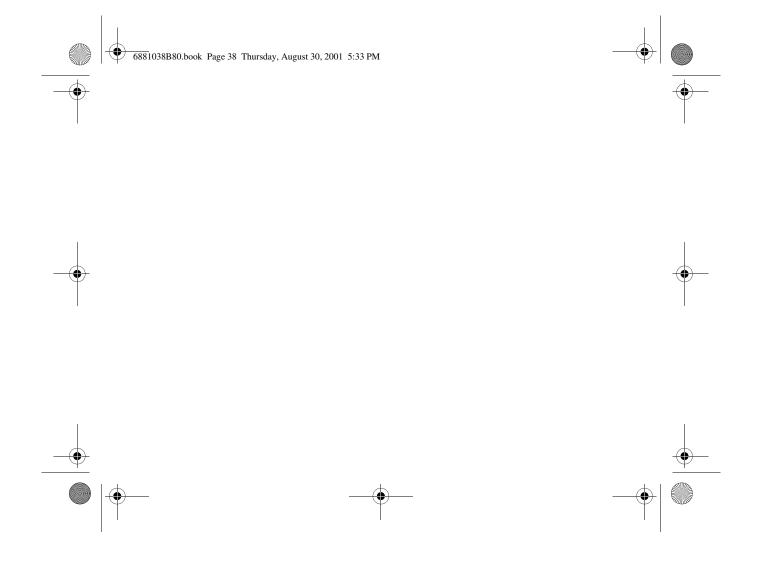




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services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not







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QUESTIONS
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1-888-CALL-FCC1







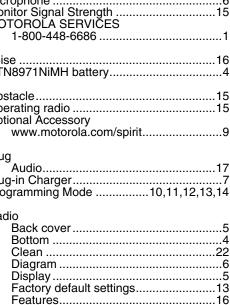






G 16 H 17 H 17 I 19 Icon Programming 9 Indicator Light 6 Install 5 AA Battery 5 NTN8971NIMH Battery 4 Interference Eliminator Code 9,11 Internal VOX 18 L Licensing Information FCC 1 Light 7 Desktop Charger 7 Padio indicator 15 Lock keypad M Meter	UHF Bandwidth	1 3 0
H Hands-Free Use 17 I I Icon Programming 9 Indicator Light 6 Install 5 AA Battery 5 NTN8971NiMH Battery 4 Interference Eliminator Code 9,11 Internal VOX 18 L Licensing Information FCC 1 Light 7 Desktop Charger 7 Desktop Charger 8 Radio indicator 15 Lock keypad M		6
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Light 7 Charger 7 Desktop Charger 8 Radio indicator 15 Lock keypad M 6	FCC	1
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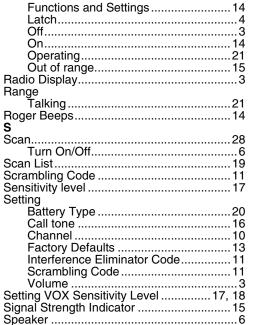












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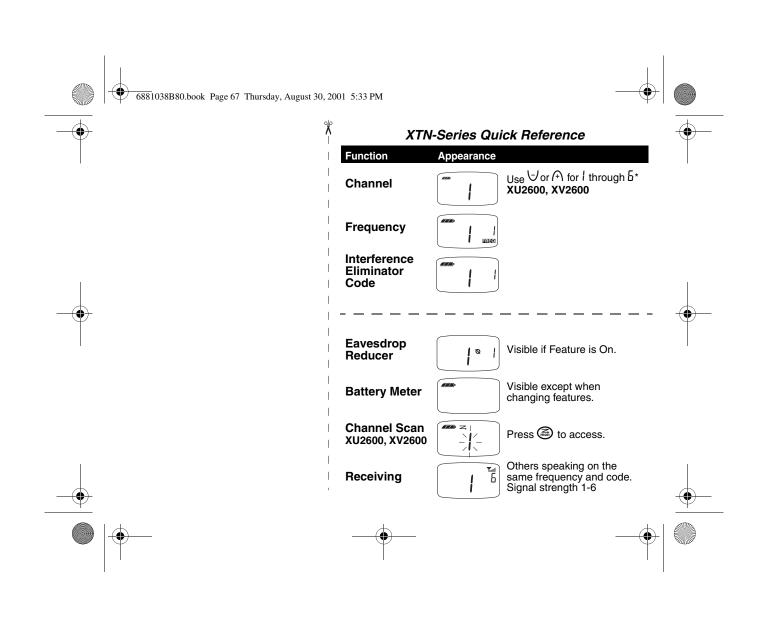


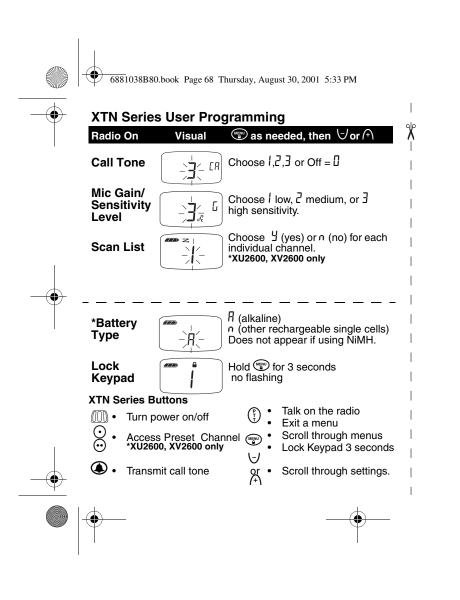


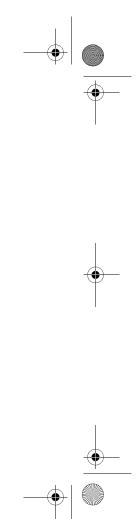


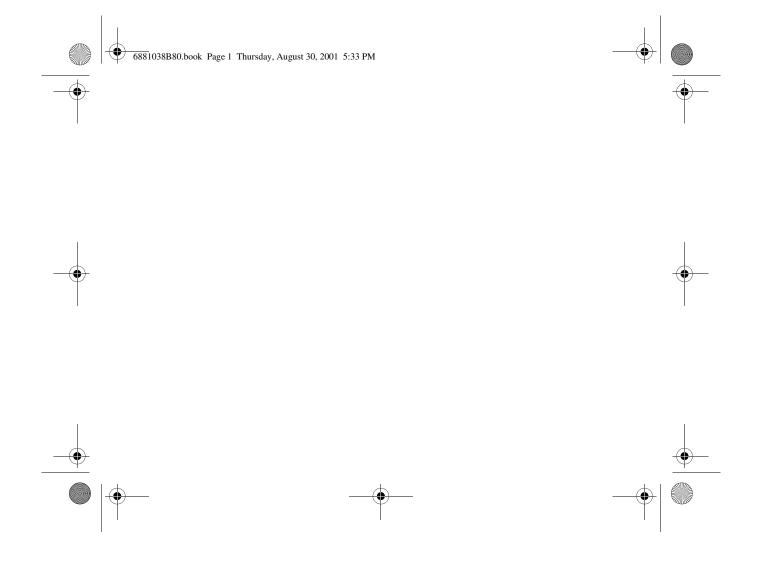














- property management, retail, etc.

 Rugged MOTOROLA QUALITY
 Shock/drop/temperature tested to
 meet Motorola's High standards.
- Weather/Dust Resistant
- IP-54 rating

 Built to Military Specifications
- 810 C, D, E & F

 Dependable Indoor/Outdoor

Coverage
Will provide a communication range* of up to 250,000 sq. ft. or 20 floors indoors and up to 6 miles outdoors. *Range will vary based on terrain and conditions and model selected.

• Simple and Easy to Operate Allows one-to-one or group communication at the push of a button. With no phone numbers to dial, plus the manager lock

feature, there's little to no training needed for your staff to be fully up to speed. Cost Efficient

- No monthly fees to pay and no service contracts. Compatible with older Motorola Spirit. radios and audio accessories.
- User Guide Included

- Business Exclusive Frequencies Frequencies set aside exclusively for business-only use (FCC License
- required).

 38 PL Codes, 83 Digital PL Codes.

 Talk Hands-Free Mode (VOX)
 Advanced voice activation (VOX) let's
- you talk hands-free; XV2600, XU2600 models do not require accessories.
- Voice Compression Technology
 Helps provide better sound even at longer distances.
- Cloning Capability

Radio Specification Chart

Transmit Power Receiver Sensitivity Audio Putput Receiver Technology

1 or 2 Watts -120 dBm for 12 dB SINAD 90 dB SPL **Direct Conversion**

• Accessories for XTN Series - Brochure included Convenient headphones, multi-chargers, drop-in chargers, carry cases, and rechargeable battery packs available from your retailer or www.motorola.com/sradios/professional

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Motorola® XTN Series @xtnseries@

Proof of Purchase

FCC License required. WARNING CHOKING HAZARD SMALL PARTS

Not for children under 3 years. This product is not intended to be used as a toy or plaything.

