

# RTX Series

RTX-050 30-50 MHz  
RTX-150 136-151 MHz  
RTX-450 450-512 MHz  
400-430 MHz

**PATRIOT**<sup>®</sup>  
BY RITRON

**RUGGED SCREW MOUNT MOLDED ANTENNA.**  
Provides superior durability under adverse conditions.

**PROTECTIVE COVER FOR AUDIO ACCESSORY JACKS.**  
Seals accessory jacks from dust and dirt when not in use.

**VERSATILE AUDIO ACCESSORY JACKS.**  
Allows use of optional audio accessories like the remote speaker/microphone and earphone.

**TOP MOUNTED CONTROLS.**  
Easy-to-locate volume and channel controls allow fast, simple operation of the radio.

**CHANNEL MONITOR BUTTON.**  
Disables coded signalling on the selected channel and allows the unit to operate in carrier squelch.

**DUAL FUNCTION LED.**  
The LED will glow red continuously, indicating that the transmitter is activated. A flashing green LED indicates that the channel is busy.

**HIGH-EFFICIENCY SPEAKER.**  
Delivers excellent received audio quality in low and high noise environments.

**SYNTHESIZED, FIELD PROGRAMMABLE.**  
Enables quick reprogramming of channel frequencies, coded signaling and other characteristics of the radio.

**LOW DISTORTION CONDENSER MICROPHONE.**  
Provides high-quality transmitted audio.

**RUGGED CONSTRUCTION**  
Extremely strong "Uni-Body" housing is made of Lexan, a tough, impact resistant polycarbonate material.

**ERGONOMIC CONTEMPORARY STYLING.**  
Sleek lines and generously rounded edges make the radio more comfortable to hold and operate.

**THE PATRIOT PORTABLE 2-WAY RADIO.  
AFFORDABLE PROGRAMMABLE  
PERFORMANCE.**

**NEW SOFTWARE FEATURES  
AND  
ENHANCED  
AUDIO**

## FEATURES

**11 CHANNEL CAPABILITY.** Up to 11 channels, in any combination, can be programmed into the radio for simplex, half duplex or receive only operation. This gives you greater flexibility by enabling operation within several different radio systems.

**WIDE BAND OPERATION.** Enables operation anywhere in a particular FM band. (UHF:20 MHz, VHF:15 MHz, VHF Low Band:2 MHz)

**DESIGNED TO MEET MIL-STD 810 C&D SHOCK AND VIBRATION.** To receive certification, radios must remain operational *during* and *after* rigorous, controlled tests.

**COMPACT AND LIGHTWEIGHT.** At only 25.89 cubic inches in size and 18 ounces in weight, the radio doesn't compromise movement or mobility of the user.

**CLONING CAPABILITY.** Cloning cable connected between microphone jacks allows easy programming of additional Patriot radios.

**EASY FIELD PROGRAMMING.** Programming is easy with either a PC compatible computer and appropriate software or the radio's PTT button.

**PROGRAMMABLE FEATURES.** TX/RX Frequencies. Transmit Power Output (2 or 5 Watts). Coded Signalling (CTCSS & Digital Coded Squelch). Transmit Time-Out Timer. Busy Channel Lock-Out. Channel Monitor Lock-Out. Squelch Sensitivity.

**BUSINESS APPLICATION SCAN.** Normal and/or Priority scan capability allows monitoring of several channels automatically and eliminates missed calls.

**PAGING QUIET CALL PLUS.** One programmable two-tone sequential decode frequency pair (see specification) or any of the 63 Paging Quiet Call codes. The programmable Paging Quiet Call feature enables selective paging of the radio in two-tone sequential radio systems.

**BATTERY SAVER FEATURE.** Microcontroller temporarily turns off certain circuits of the radio when they are not in use, to extend the time between charges.

**LOW BATTERY ALERT.** Radio automatically alerts user with a short beep if battery requires charging.

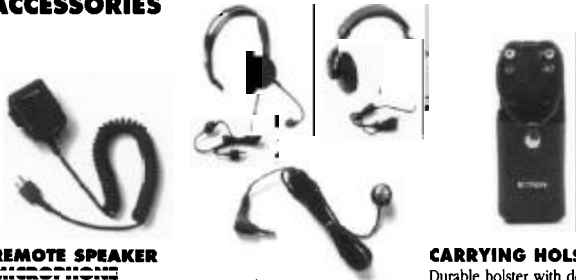
**STAINLESS STEEL BELT CLIP.** Sturdy 4" clip keeps radio on your belt for easy access.

**VARIETY OF BATTERIES.** Patriot radios come with an easy-to-change 650 mA rechargeable battery. Optional 850 mA and 1100 mA batteries are available for extended battery life.

**VARIETY OF CHARGERS.** For fast/standard charging of Patriot radios, dual rate desktop chargers are available in one or two unit configurations. All desktop chargers accept a battery with or without the radio attached. For standard rate charging only, a wall charger is available which plugs directly into a radio or a desktop adapter.

**TWO YEAR PARTS AND LABOR WARRANTY.** See warranty statement for details.

## ACCESSORIES



### REMOTE SPEAKER MICROPHONE

Speaker/microphone attaches to clothing close to your mouth and ears allowing easy communication without removing the radio from your belt.

### EARPHONE

Enables private or high noise area listening.

### HEADSETS

Single or dual ear headset with boom microphone allows communication in high noise area environments without removing the radio from your belt.

### CARRYING HOLSTERS.

Durable holster with detachable swivel belt loop protects the radio and provides carrying convenience. Available in leather and Cordura nylon.

### SINGLE UNIT DESKTOP CHARGER

Standard rate charger or dual rate, fast charger. Charges one battery at a time. (With or without radio).

### TWO UNIT DESKTOP CHARGER.

A dual rate, fast charger. Charges two batteries at a time. (With or without radios).

### TOUCH TONE KEYPAD

Enables the unit to be used as a radio, a telephone, or for remote control applications.

## SPECIFICATIONS

GENERAL	LOW BAND	VHF	UHF
FCC ID:	AIERTX-050	AIERTX-150	AIERTX-450
FCC Rule Parts:	22.90	22.74.90	22.74.90.95
Frequency Range:	29.7 to 36 MHz 36 to 42 MHz 42 to 50 MHz	150 to 165 MHz std. 136 to 153 MHz opt. 160 to 174 MHz opt.	450 to 470 MHz std. 400 to 430 MHz opt. 470 to 490 MHz opt. 490 to 512 MHz opt.
Max. Frequency	2 MHz	15 MHz	20 MHz
Separation:		SAME	SAME
RF Channels:	10 TX/RX channels/ 1 scan channel		
Channel Spacing:	5 KHz	5 KHz (12.5KHz optional)	12.5 KHz
Frequency Stability:	+/-5 ppm(-30 to +60C)	SAME	SAME
Code Signalling:	Programmable CTCSS (Quiet Call), Digital (Digital Quiet Call) or Two Tone Sequential Decode (Paging Quiet Call Plus)	SAME	SAME
Two-Tone Decode:		One Two-Tone Sequential Pair (with 5% min. separation between 1st and 2nd tone). Frequency 300 Hz to 1500 Hz Duration: 2 sec., 2 sec. or any one of the 63 Paging Quiet Call Codes.	
Power Supply:	9.6 VDC, rechargeable NICAD Battery Pack	SAME	SAME
Battery Drain:			
Standby:	75 mA	63 mA	70 mA
Avg. Standby w/pwr.saver:	9 mA	7.5 mA	8.4 mA
Receive:	100 mA	SAME	SAME
Transmit:	1400 mA @ 5W	1300 mA @ 5W 800 mA @ 2W	1400 mA @ 5W 850 mA @ 2W
Battery Life:(w/standard battery)	8hr@5W(with/BatterySaver)	8.5hr@5W(with/BatterySaver) 12.5hr@2W(with/BatterySaver)	8hr@5W(with/BatterySaver) 12hr@2W(with/BatterySaver)
Dimensions:	6.75" x 2.5"Wx1.5"D	SAME	SAME
Volume:	25.89 cu. in.	SAME	SAME
Weight:	18 ounces(with/Battery Pack)	SAME	SAME
External RF Test Jack:	50 Ohms, 2.5mm jack beneath antenna fitting	SAME	SAME
Earphone Jack:	3.5mm, disconnects internal speaker, for external earphone/Spk/Mic		
Mic/PTT/Chg Jack:	2.5mm, external Spk/Mic or wall charger	SAME	SAME
Indicators:	Transmit Activated/Channel Busy, Dual Color LED	SAME	SAME
Enclosure Materials:	Lexan Polycarbonate	SAME	SAME
<b>TRANSMITTER</b>			
RF Power Output:	6 Watts max., 5 Watts min. @ 9.6 VDC	5 Watts min. @9.6 VDC, programmable to 2 Watts, on a per channel basis	
Modulation:	Type 16KOF3E;+/-5 KHz deviation	SAME	SAME
Spurious and Harmonics:	<-50 dB	SAME	SAME
Audio Response:	Meets FCC and EIA requirements	SAME	SAME
FM Hum and Noise:	<-50 dB	<-43 dB	<-40 dB
Audio Distortion:	<3%	SAME	SAME
<b>RECEIVER</b>			
Receiving System:	Fixed Tuned Dual Conversion Superheterodyne	Track-tuned, Dual Conversion Superheterodyne	SAME
I.F. System:	10.7MHz/455KHz	10.7MHz/455KHz	21.4MHz/455KHz
L.O. Injection:	High side	Low side	Low side
Sensitivity (12 dB Sinad):	.25uVmax.	.30uVmax.	.30uVmax.
Selectivity (EIA):	-67dB @ 20KHz	-70dB @ 30KHz	-65dB @ 25KHz
Spurious Rejection(EIA):	-65dB	-70dB	-65dB
Image Rejection (EIA):	-90dB	-50dB	-50dB
Intermodulation (EIA):	-65dB	-70dB	-65dB
Modulation Acceptance:	+/-7.5KHz maximum	SAME	SAME
Audio Output:	1 W Into 8 Ohms with less than 3% THD at the earphone jack		

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