

# VX-510 SERIES

## LOWBAND/VHF/UHF PORTABLE RADIO



- **FREQUENCY RANGE:**
  - LOW BAND : 29.7~38 MHz or 38~50 MHz
  - VHF : 146~174 MHz
  - UHF : 450~488 MHz
- 32 CHANNEL CAPACITY (16 + 16)
- 5 WATTS POWER OUTPUT (HI / LOW SELECTABLE)
- MIL-STD 810 C/D/E
- 12.5 / 25 kHz BANDWIDTH (PROGRAMMABLE BY CHANNEL)
- CTCSS / DCS ENCODE + DECODE  
(ALL EIA TONES PLUS 9 ADDITIONAL)
- INVERTIBLE 4 CHARACTER ALPHANUMERIC DISPLAY
- SUPER CAPACITY (1700 mAh) NI-CAD BATTERY
- POSITIVE ACTION CONTROL GUARDS
- BCLO, BTLO, AND TOT
- PROGRAMMABLE / SELECTABLE SCAN FORMATS
- PC PROGRAMMABLE
- RADIO TO RADIO CLONING
- VOICE INVERSION ENCRYPTION AVAILABLE
- RUGGED CAST METAL HOUSING
- INTRINSICALLY SAFE VERSIONS AVAILABLE



Designed For Public Safety, By Public Safety, the VX-510 series portables are designed for the most demanding applications. Whether it's Public Safety, Business or Industrial, the VX-510 will meet the most rugged demands and provide reliable communications day in and day out. From it's rugged cast metal frame, to it's super high capacity, long life 1700 mAh battery pack, the VX-510 sets the standard for rugged environment applications now.

### Specifications

General Specifications	VX-510L VHF Lowband	VX-510V VHF Highband	VX-510U UHF Band
Number of Channels	32 Channels (16+16)		
Frequency Range	29.7-38 MHz (A) 38-50 MHz (B)	146-174 MHz (C)	450-488 MHz (D)
Maximum Channel Spread	8.3 MHz (A) 12 MHz (B)	28MHz	20 MHz
Channel Spacing	20 kHz	12.5 / 25 kHz	
Power Supply Voltage	7.2 VDC		
Current Consumption			
Standby (Saver On)	19 mA		
Standby (Saver Off)	50 mA		
Receive	200 mA		
Transmit (Lo)	1000 mA		
Transmit (Hi)	2000 mA		
Battery Life w/ FNB-29A (5-5-90 duty)	11 hrs. (13.3 hrs. w / saver)		
Ambient Temperature Range	-22YF to + 140YF (-30Y C to + 60Y C)		
Frequency Stability	±10 ppm	±2.5 ppm	± 2.5 ppm
RF Input-Output Impedance	50 ohms		
Audio Output Impedance	16 ohms		
Dimensions	5.9"X2.3"X1.5" (149X59X39 mm)		
Weight	20.1 oz. (570 g) w/FNB-29A		
<b>Receiver Specifications</b> Measurements made per EIA standard TIA / EIA-603			
Circuit Type	Double Conversion Superheterodyne		
Sensitivity			
EIA 12 dB SINAD	0.20 µV	0.25 µV	0.25 µV
20 dB Quieting	0.30 µV	0.35 µV	0.35 µV
Threshold Squelch	0.18 µV	0.20 µV	0.20 µV
Adjacent Channel Selectivity	75 dB	65 / 75 dB	65 / 75 dB
Intermodulation	70 dB	72 dB	72 dB
Spurious and Image Rejection	80 dB	75 dB	75 dB
Conducted Spurious Emissions	-57 dBm		
Audio Response	+3 / -8 dB from the 6 dB / oct. De-emphasis curve		
Audio Output	0.5 W into 16 ohms w/ < 5 % THD		
Hum and Noise	50 dB	44 / 50 dB	40 / 45 dB
<b>Transmitter Specifications</b> Measurement made per EIA standard TIA / EIA-603			
Power Output	5 W / 1W (Hi / Lo)		
Modulation	16K0F3E	16K0F3E / 11K0F3E	
Maximum Deviation	±5 kHz	±5 kHz / ±2.5 kHz	
Conducted Spurious Emissions	60 dBc		
Fm Hum and Noise	50 dB	45 / 50 dB	
Audio Response	+1 / 3 dB from the 6 dB / oct Pre-emphasis curve		
Audio Distortion	< 2.5 %		

Measurements per EIA standards unless noted above.

Military Standards 810 C / D / E		
Method 500.2, Procedure 1	Method 506.1, Procedure 2	Method 510.2, Procedure 1
Method 500.3, Procedure 1	Method 506.2, Procedure 2	Method 510.3, Procedure 1
Method 501.1, Procedure 1,2	Method 506.3, Procedure 2	Method 514.2, Procedure 1,8
Method 501.2, Procedure 1,2	Method 507.1, Procedure 2	Method 514.3, Procedure 1,8
Method 501.3, Procedure 1,2	Method 507.2, Procedure 2	Method 514.4, Procedure 1,8
Method 502.2, Procedure 1	Method 507.3, Procedure 2	Method 516.2, Procedure 1,4
Method 502.3, Procedure 1	Method 509.2, Procedure 1	Method 516.3, Procedure 1,4
Method 505.2, Procedure 1	Method 509.3, Procedure 1	Method 516.4, Procedure 1,4
Method 505.3, Procedure 1	Method 510.1, Procedure 1	

#### Intrinsically Safe Approvals

The VX-510 Low Band, VHF and UHF models have been given an intrinsically safe rating for use in ANSI/UL-913-88 I, II, and III, Division 1, Groups A, B, C, D, E, F, and G hazardous locations; on Low Band, VHF and UHF models ordered with the Intrinsically Safe option.

Specifications subject to change without notice or obligation. Various accessories listed may not be available in some countries.

### Accessories & Options

- CD-8B □ Rapid Desktop Charger (120 VAC)
- CD-8C □ Rapid Desktop Charger (240 VAC)
- CD-10 □ Rapid Vehicular Charger
- CN-1 □ Antenna Jack Test Connector (Stud to BNC)
- CLIP-4 □ Belt Clip
- CS-500B □ Overnight Desktop Charger (120 VAC)
- CS-500C □ Overnight Desktop Charger (240 VAC)
- CSC-500 □ Cordura Soft Case
- FBA-19 □ 6 AA Size Battery Case
- FNB-29A □ 7.2 V 1700 mAh Ni-Cd Battery Pack
- FNB-29AIS □ 7.2 V 1700 mAh Ni-Cd Intrinsically Safe Battery  
□ (for use with VX-510IS models only)
- FTT-7 □ DTMF Keypad
- FTT-7D □ DTMF keypad w/Decode Function
- F2D-5A □ Two-Tone Inversion Decoder  
□ (Tone Groups 1, 2, 3)
- F2D-5B □ Two-Tone Sequential Decoder  
□ (Tone Groups 4, 5, 6)
- FVP-22 □ Voice Inversion Encryption
- LCC-500 □ Leather Case
- LCS-2 □ Belt Swivel Attachment for LCC-500
- MH-30A2B □ Speaker Microphone
- NC-58 □ Rapid 6-Unit Multi Charger
- SBC-1 □ Swivel Belt Adapter (Requires LCS-2)
- VPL-1D □ Radio to Computer Programming Cable  
□ w/Software
- VTP-20 □ VX-Trunk II Trunking Portable Logic Board
- S6000362 □ Dual Knob Set for Volume and Squelch

