

# VX-520U

## UHF Portable Radios



### Rugged, Durable Portables with Unmatched Operating

- LIGHT WEIGHT AND COMPACT SIZE
- 16 CHANNEL CAPACITY
- 5 WATTS POWER OUTPUT  
(Selectable to 1 Watt)
- 8-CHARACTER ALPHANUMERIC DISPLAY
- MIL-STD 810 C/D/E
- RUGGED CONSTRUCTION
- LOUD, CLEAR AUDIO OUTPUT
- 12.5/25 kHz BANDWIDTH  
PROGRAMMABLE BY CHANNEL
- 3 PROGRAMMABLE FRONT-PANEL  
FUNCTION KEYS
- CTCSS/DCS ENCODE + DECODE
- DTMF ANI DECODE
- DUAL 2-TONE DECODE
- MULTI-MODE SCAN  
(incl. Dual Watch, Priority, Follow-Me)
- ARTS™ (Auto-Range Transponder System)
- BCLO, BTLO, AND TOT FUNCTIONS
- TX/RX BATTERY SAVER CIRCUIT
- PC PROGRAMMING
- RADIO-TO-RADIO CLONING



\* Simulated LCD display

 **Vertex Standard**

## Specifications

General Specifications	VX-520U	
Number of Channels	32 Channels	
Frequency Range	450-488 MHz (D)	
Channel Spacing	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	2.0/1.0 A	□
Battery Life	11 hrs. (13.3 hrs. w/saver)	
Ambient Temperature Range	□ -30°C to +60°C (-22°F to +140°F)	
Frequency Stability	±2.5 ppm	
Dimensions	2.3"(W) × 5.9"(H) × 1.5"(D) (59 × 149 × 39 mm)w/FNB-29A 2.3"(W) × 6.7"(H) × 1.5"(D) (59 × 171 × 39 mm)w/FNB-29AL	
Weight	1.21 lbs (547 g) w/o ANT w/FNB-29A 1.24 lbs (564 g) w/o ANT w/FNB-29AL	

Receiver Specifications	Measurements made per EIA standard TIA/EIA-603	
Circuit Type	Double-conversion Super-heterodyne	
Sensitivity		
EIA 12 dB SINAD	0.25 $\mu$ V	
20 dB Quieting	0.35 $\mu$ V	
Adjacent Channel Selectivity	75 dB / 65 dB	
25 kHz / 12.5 kHz channel spacing		
Intermodulation	72 dB	
Spurious and Image Rejection	75 dB	
Conducted Spurious Emissions	-57 dBm	
Hum & Noise	40 dB / 45 dB	
Audio Output	0.5 W @16 Ohms ,5 % THD	

Transmitter Specifications	Measurements made per EIA standard TIA/EIA-603	
Power Output	5.0 / 1.0 W	
Modulation	16K0F3E ,11K0F3E	
Conducted Spurious Emissions	60 dB Below Carrier	
FM Hum & Noise	45 dB / 50 dB	
Audio Distortion (@1 kHz)	<2.5 %	

Military Standards 810 C/D/E	
MIL-STD 810C, Method 501.1, Procedure 1, High Temperature (storage)	MIL-STD 810D/E, Method 502.2/3, Procedure 1, Low Temperature (storage)
MIL-STD 810C, Method 501.1, Procedure 2, High Temperature (operational)	MIL-STD 810D/E, Method 502.2/3, Procedure 2, Low Temperature (operational)
MIL-STD 810C, Method 502.1, Procedure 1, Low Temperature	
MIL-STD 810C, Method 503.1, Procedure 1, Temperature Shock	MIL-STD 810D/E, Method 503.2/3, Procedure 1, Temperature Shock
MIL-STD 810C, Method 505.1, Procedure 1, Solar Radiation (Steady)	MIL-STD 810D/E, Method 505.2/3, Procedure 1, Solar Radiation (cycling)
MIL-STD 810C, Method 507.1, Procedure 2, Humidity	MIL-STD 810D/E, Method 506.2/3, Procedure 1, Rain (Blowing)
MIL-STD 810C, Method 514.2, Procedure 8, Vibration	MIL-STD 810D/E, Method 506.2/3, Procedure 2, Rain (drip)
MIL-STD 810C, Method 514.2, Procedure 10, Vibration	MIL-STD 810D/E, Method 507.2/3, Procedure 2, Humidity (induced)
MIL-STD 810C, Method 516.2, Procedure 1, Shock (basic design)	MIL-STD 810D/E, Method 509.2/3, Procedure 1, Salt Fog
MIL-STD 810C, Method 516.2, Procedure 5, Shock (bench handling)	MIL-STD 810D/E, Method 510.2/3, Procedure 1, Dust (blowing dust)
MIL-STD 810D/E, Method 500.2/3, Procedure 1, Low Pressure (storage)	MIL-STD 810D/E, Method 514.3/4, Procedure 1, Category 10, Vibration (minimum integrity)
MIL-STD 810D/E, Method 500.2/3, Procedure 2, Low Pressure (Operational)	
MIL-STD 810D/E, Method 501.2/3, Procedure 1, High Temperature (storage)	MIL-STD 810D/E, Method 516.3/4, Procedure 1, Shock (functional shock)
MIL-STD 810D/E, Method 501.2/3, Procedure 1, High Temperature (operational)	MIL-STD 810D/E, Method 516.3/4, Procedure 4, Shock (transit drop)
	MIL-STD 810D/E, Method 500.2/3, Procedure 6, Shock (bench handling)

### Intrinsically Safe Approvals

The VX-520 UHF model has been given an intrinsically safe rating for use in ANSI/UL-913-88 Class I, II, and III, Division 1, Groups A, B, C, D, E, F, and G hazardous environments on models equipped with the Intrinsically Safe option.

### The Vertex Standard Warranty\*

Vertex Standard equipment includes an industry-leading 3-Year Limited Warranty on all transceivers and 1-Year Limited Warranty on all accessory items.

\*U.S. and Canada

## Accessories & Options

<b>CLIP-4</b>	Belt Clip
<b>CN-1A</b>	Antenna Jack Test Connector (Stud to BNC)
<b>CS-500B</b>	Overnight Desktop Charger (120 V)
<b>CS-500C</b>	Overnight Desktop Charger (240 V)
<b>FBA-19</b>	6 AA size Battery Case
<b>FNB-29A</b>	7.2 V 1700 mAh Ni-Cd Battery Pack (2.5 x 2.3 x 1.5 inch/63 x 59 x 39 mm)
<b>FNB-29AIS</b>	7.2 V 1700 mAh Ni-Cd Battery Pack Intrinsically Safe Battery (2.5 x 2.3 x 1.5 inch/63 x 59 x 39 mm)
<b>FNB-29AL</b>	7.2 V 1700 mAh Ni-Cd Battery Pack (3.3 x 2.3 x 1.5 inch/85 x 59 x 39 mm)
<b>FNB-29ALIS</b>	7.2 V 1700 mAh Ni-Cd Battery Pack Intrinsically Safe Battery (3.3 x 2.3 x 1.5 inch/85 x 59 x 39 mm)
<b>FTT-7D</b>	DTMF Keypad w/Decode Function
<b>FVP-22</b>	Voice Inversion Encryption
<b>LCC-500</b>	Leather Case (for VX-520 with FNB-29A)
<b>LCC-520</b>	Leather Case (for VX-520 with FNB-29AL)
<b>LCS-2</b>	Belt Swivel Attachment for LCC-500
<b>MH-45E2B</b>	Speaker Microphone
<b>SBC-1</b>	Swivel Belt Adapter (requires LCS-2)
<b>VAC-520B</b>	Rapid Desktop Charger (120 V)
<b>VAC-520C</b>	Rapid Desktop Charger (240 V)
<b>VAC-6520</b>	Rapid 6-unit Multi charger
<b>VCM-1</b>	Mobile Mounting Bracket for VAC-520
<b>VPL-1D</b>	Radio to Computer Programming Cable w/Software
<b>VTP-20</b>	VX-Trunk II Trunking Portable Logic Board

