

# VX-820 Series

## VHF/UHF Portable Radios

### SPECIFICATION SHEET

### Compact Size with Robust Capabilities

Don't let the size deceive you. The smallest radio offered by Vertex Standard is unobtrusive and easy to wear all day and built with more enhanced features typically not found in other radios of this size. Designed to perform in the most demanding and critical conditions, the VX-820 series gives you maximum radio performance for less in size and less in total cost of ownership.

### Withstands Harsh Environments

Rain, snow, fire suppression spray and dust are no problem for these radios manufactured to strict IP ratings. The VX-820 series meets international waterproofing standard IP57 where water does not harm the radio when submersed to a depth of 1 metre for up to 30 minutes.

### Intrinsically Safe

The VX-820 Series is available in intrinsically safe options that meet the SGS requirements of ANSI/UL913 6th Edition for Class I, Division 1, Groups A-D, Class II, Groups E-G; and Class III for use in hazardous locations.

### Long-Lasting Power for Responsiveness

To give you maximum performance, the VX-820 series offers a choice of Li-Ion battery power up to 3000mAh for over 20 hours of battery life (per specifications).

### Tailored Communications to Meet Your Demands

Get the ultimate signaling performance with a choice of multiple 2-tone encode and decode or 5-tone signaling to support the most advanced communications needs from individual to fleet operations. The front panel also includes a 7-colour LED with a variable flash pattern for custom incoming call alerts.

### When Safety Counts – Never Be Alone

When help is needed, the VX-820 Series has Emergency notification that will switch to a designated channel and send an emergency alert. The radios also include Remote Listen which turns the radio on remotely if needed to check out what is happening near the radio.

### Loud Audio for Noisy Environments

With 700mW audio output, be assured of hearing critical information you need in most situations.

### Model Options

- APCO P25 version available
- ATEX Approved I I 2 G E Ex ib IIC T4 version available
- CE version available



### The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Vertex Standard radios are built to last and are backed by an industry-leading 3 year warranty – another great reason to choose Vertex Standard. Ask your Dealer for more details.



Meets the following standards:  
AS/NZS4295, ISO9001 and  
ISO4001.



Top



VX-829

VX-824

VX-821

96.5mm (H) X 57.5mm (W) X 37.5mm (D)



## Additional Features

- 512 Channel capacity (VX-829/824)
- 16 Channel capacity (VX-821)
- Wide band coverage
- Seven programmable keys (VX-829/824)
- Three programmable keys (VX-821)
- 512 Channel capacity (VX-829/824)
- 16 Channel capacity (VX-821)
- Wide band coverage
- Seven programmable keys (VX-829/824)
- Three programmable keys (VX-821)
- Programmable channel selector
- Direct channel recall
- 12-Character alphanumeric display (VX-829/824)
- RX/TX Battery power save
- DTMF ANI
- Stun / kill / revive (5-tone)
- Lone Worker
- Compander
- Whisper
- Minimum volume control
- Scan options: Priority, Dual Watch, Follow-me, Follow-me Dual Watch, Talk Around
- Programmable home channel function
- Radio-to-radio cloning
- Voting
- MDC-1200®

## Accessories

- MH-50D7A: Public Safety speaker mic w/toggle
- MH-66A7A: Submersible noise cancelling speaker mic
- MH-66B7A: Submersible speaker mic w/PF key & toggle
- VH-121: 3-Wire mini lapel microphone surveillance kit
- VH-131: 2-Wire earpiece, palm mic. with PTT
- VH-111: Over-the-head dual-muff headset
- FNB-V92LI: 3000mAh Li-Ion battery
- FNB-V92LIIS: 3000mAh Intrinsically safe Li-Ion battery
- FNB-V87LI: 2000mAh Li-Ion battery
- VAC-920: Desktop rapid charger
- VAC-6920: 6-Unit rapid charger
- VCM-2: Vehicular charger kit
- LCC-820S: Leather case w/swivel belt clip

## Option Boards

- FVP-25: Voice Inversion Encryption & DTMF Paging
- FVP-35: Rolling Code Encryption
- FVP-36: Voice Inversion Encryption
- DVS-5: Digital voice storage

## VX-820 Series Specifications

	VHF	UHF
<b>General Specification</b>		
Frequency Range	134 – 174MHz	400 – 470MHz; 450 – 520MHz
Number of Channels and Groups	512 and 32 Groups (VX-829/VX-824) 16 and 1 Group (VX-821)	
Power Supply Voltage	7.4V DC ± 20%	
Channel Spacing	12.5 / 20 / 25kHz	
PLL Steps	5 / 6.25kHz	
Battery Life (5-5-90 duty)		
3000 mAh FNB-92LI	23 hours (18hrs w/o saver)	21.5 hours (16.5hrs w/o saver)
2000 mAh FNB-V87LI	16 hours (12.5hrs w/o saver)	15 hours (11.5hrs w/o saver)
IP Rating	IP 57	
Operating Temperature Range	-30°C to +60°C	
Frequency Stability	±2.5ppm	
RF Input-Output Impedance	50 Ohms	
Dimension (H x W x D)	96.5mm x 57.5mm x 37.5mm (w/FNB-86LI)	
Weight (Approx.)	310g (w/FNB-V86LI and Belt Clip)	
<b>Receiver Specification: measured by TIA/EIA-603</b>		
Sensitivity 12dB SINAD	0.25 / 0.32µV	
Adjacent Channel Selectivity	75 / 70dB	
Intermodulation	75 / 70dB	
Spurious and Image Rejection	75dB	
Hum and Noise	48 / 42dB	
Audio Output	700 mW @ 16 Ohms 5% THD	
<b>Transmitter Specification: measured by TIA/EIA-603</b>		
Output Power	5 / 2.5 / 1 / 0.25W	
Modulation	16K0F3E, 11K0F3E	
Spurious Emissions	70dB below carrier	
FM Hum & Noise	45 / 40dB	
Audio Distortion	< 3 % @1kHz	

## Applicable MIL-STD

Standard	MIL 810C Methods/ Procedures	MIL 810D Methods/ Procedures	MIL 810E Methods/ Procedures	MIL 810F Methods/ Procedures
Low Pressure	500.1	500.2	500.3	500.4
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I, II	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	-	-	-	503.4/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I Cat.A1	505.3/Procedure II, Cat.A1	505.4/Procedure I,II Cat.A1
Rain	506.1/Procedure I	506.2/Procedure I	506.3/Procedure I, II	506.4/Procedure I
Humidity	507.1/Procedure I, II	507.2/Procedure I, III	507.3/Procedure I, III	-
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4/Procedure I
Dust	-	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/ Procedure VIII, X	514.3/Procedure I Cat. 10	514.4/Procedure I Cat. 10	514.5/Procedure I Cat. 20, 24
Shock	516.2/Procedure I	516.3/Procedure I	516.4/Procedure I	516.5/Procedure I

Specifications are subject to change without notice or obligation.

VERTEX STANDARD is registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners. © Vertex Standard Co. Ltd. 2009

08/2009\_BT/LM493

**Have a question about Vertex Standard radios?  
Contact your authorised Vertex Standard dealer today!**