

# VX-920 Series

## VHF/UHF Portable Radios

### SPECIFICATION SHEET – NORTH AMERICA

#### Dependable Communications for Long-Term Reliability

The VX-920 Series is ready to respond when you are with state-of-the-art engineering and a wide array of features, providing great value in its class.

#### Withstands Harsh Environments

Rain, snow, fire suppression spray and dust are no problem for these radios manufactured to strict IP ratings. The VX-920 Series meets international waterproofing standard IP 57 where fresh water does not harm the radio when submersed to a depth of 3 feet for up to 30 minutes.

#### Intrinsically Safe

Intrinsically safe models are SGS certified to the requirements of ANSI/UL913 5th Edition for use in Class I, II, III, Division I; Groups C, D, E, F, G; Temp T3C hazardous locations.

#### Never Miss An Important Call

Includes DTMF paging and unmatched flexibility in scanning features that are designed to optimize operation in a wide variety of environments. In addition to basic scan, you also get Priority, Dual Watch, Follow-me, Follow-me Dual Watch and Talk Around scanning with a programmable home channel function built-in.

#### When Safety Counts – Never Be Alone

When help is needed, the VX-920 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 700 mW audio output, be assured of hearing critical information you need in most situations.

#### Exclusive Auto-Range Transpond System – ARTS™

Always know your connection status. Only Vertex Standard radios are designed to inform you when you and another ARTS™-equipped radio are within communication range. If out of range, your radio senses no signal has been received and beeps to alert you. A great solution to keep your workers coordinated.



VX-924

VX-921



#### 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.

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www.vertexstandard.com/lmr

### Additional Features

- ▶ 512 Channel capacity (VX-924)
- ▶ 48 Channel capacity (VX-921)
- ▶ Wide band coverage
- ▶ Eight programmable keys (VX-924)
- ▶ Four programmable keys (VX-921)
- ▶ Programmable 3-position toggle key
- ▶ Direct channel recall
- ▶ 12-Character LCD (VX-924)
- ▶ RX/TX Battery power save
- ▶ DTMF ANI
- ▶ Stun/kill/revive (5-tone)
- ▶ Lone Worker
- ▶ 2-Tone encode and multiple 2-tone decode
- ▶ 5-Tone signaling
- ▶ Auto-Range Transpond System (ARTS™)
- ▶ Compander
- ▶ Whisper
- ▶ Minimum volume control
- ▶ Clear voice and audio pitch control
- ▶ 7-Color LED call alert indicator
- ▶ User selectable tone (VX-924)
- ▶ Radio-to-radio cloning

### Accessories

- ▶ MH-50D7A: Public Safety speaker mic with toggle†
- ▶ MH-66A7A: Submersible noise canceling speaker mic†
- ▶ MH-66B7A: Submersible speaker mic with 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
- ▶ VH-115L: Behind-the-head, lightweight headset
- ▶ FNB-V129LI-UNI: 3000 mAh Li-Ion battery
- ▶ FNB-V92LI: 3000 mAh Li-Ion battery
- ▶ FNB-V92LIIS: 3000 mAh Intrinsically safe Li-Ion battery
- ▶ FNB-V128LI-UNI: 2300 mAh Li-Ion battery
- ▶ FNB-V87LI: 2300 mAh Li-Ion battery
- ▶ FNB-V127LI-UNI: 1380 mAh Li-Ion battery
- ▶ FNB-V86LIA: 1380 mAh Li-Ion battery
- ▶ FBA-34: Alkaline battery case (holds 6 AA batteries)
- ▶ VAC-UNI: Single unit charger for UNI batteries
- ▶ VAC-6058: Multi unit charger for UNI batteries
- ▶ VAC-921: Desktop rapid charger (non-UNI)
- ▶ VAC-6920: 6-Unit rapid charger (non-UNI)
- ▶ VCM-2: Vehicular charger kit for VAC-921
- ▶ LCC-920: Leather case with swivel belt clip

### Option Boards

- ▶ FVP-25: Voice Inversion Encryption and DTMF Paging†
- ▶ FVP-35: Rolling Code Encryption†
- ▶ FVP-36: Voice Inversion Encryption†
- ▶ DVS-5: Digital voice storage
- ▶ VME-100: MDC-1200®/GE-STAR® ANI Encode†
- ▶ VMDE-200: MDC-1200®/GE-STAR® ANI Enc./Dec†
- ▶ SRX-3: Dual Band RX Module (Add UHF RX to VHF radio)
- ▶ SRX-4: Dual Band RX Module (Add VHF RX to UHF radio)

### VX-920 Series Specifications

	VHF	UHF
<b>General Specification</b>		
Frequency Range	134 - 174 MHz	400 - 470 MHz; 450 - 512 MHz
Number of Channels and Groups	512 / 32 Groups (VX-924) 48 / 3 Groups (VX-921)	
Power Supply Voltage	7.4V DC ± 10%	
Channel Spacing	12.5 / 20* / 25* kHz	
PLL Steps	1.25 / 2.5 / 5 / 6.25 kHz	5 / 6.25 kHz
Battery Life (5-5-90 duty)		
3000 mAh FNB-V129LI-UNI	23 hours (w/saver) / 18 hours	21.5 hours (w/saver) / 16.5 hours
3000 mAh FNB-92LI / FNB-V92LIIS	23 hours (w/saver) / 18 hours	21.5 hours (w/saver) / 16.5 hours
2300 mAh FNB-V128LI-UNI	18.4 hours (w/saver) / 14.3 hours	17.2 hours (w/saver) / 13.2 hours
2300 mAh FNB-V87LIA	18.4 hours (w/saver) / 14.3 hours	17.2 hours (w/saver) / 13.2 hours
1380 mAh FNB-V127LI-UNI	11 hours (w/saver) / 8.6 hours	10.3 hours (w/saver) / 7.9 hours
1380 mAh FNB-V86LIA	11 hours (w/saver) / 8.6 hours	10.3 hours (w/saver) / 7.9 hours
IP Rating	IP 57	
Operating Temperature Range	-22°F to +140°F (-30°C to +60°C)	
Frequency Stability	±2.5 ppm	
RF Input-Output Impedance	50 Ohms	
Dimension (H x W x D)		
VX-921 Model	5.3 x 2.3 x 1.6 in (133.0 x 57.5 x 40.5 mm) FNB-V129LI-UNI 5.3 x 2.3 x 1.7 in (133.0 x 57.5 x 43.5 mm) FNB-V92LI (and IS) 5.3 x 2.3 x 1.6 in (133.0 x 57.5 x 40.5 mm) FNB-V128LI-UNI 5.3 x 2.3 x 1.6 in (133.0 x 57.5 x 40.5 mm) FNB-V87LIA 5.3 x 2.3 x 1.4 in (133.0 x 57.5 x 35.0 mm) FNB-V127LI-UNI 5.3 x 2.3 x 1.5 in (133.0 x 57.5 x 37.5 mm) FNB-V86LIA	
Weight (Approx. with Antenna, Belt Clip)		
VX-921, VX-924	14.8 oz (420 g) FNB-V129LI-UNI 16.1 oz (456 g) FNB-V92LI (and IS) 14.7 oz (416 g) FNB-V128LI-UNI 11.4 oz (323 g) FNB-V87LIA 15.3 oz (433 g) FNB-V127LI-UNI 13.1 oz (370 g) FNB-V86LIA	

### Receiver Specification: measured by TIA/EIA-603

Sensitivity 12dB SINAD	0.25 / 0.32 µV
Adjacent Channel Selectivity	75 dB / 70 dB
Intermodulation	75 dB / 70 dB
Spurious and Image Rejection	80 dB / 75 dB
Audio Output	700 mW (internal @ 16 Ohms, 5% THD)

### Transmitter Specification: measured by TIA/EIA-603

Output Power	5 / 2.5 / 1 / 0.25 W
Modulation	16K0F3E, 11K0F3E
Conducted Spurious Emissions	70 dB
FM Hum and Noise	45 dB / 40 dB
Audio Distortion	< 3% @ 1 kHz

### Applicable MIL-STD

Standard	Methods/Procedures			
	MIL 810C	MIL 810D	MIL 810E	MIL 810F
Low Pressure	500.1	500.2	500.3	500.4
High Temperature	501.1 / I, II	501.2 / I, II	501.3 / I, II	501.4 / I, II
Low Temperature	502.1 / I, II	502.2 / I, II	502.3 / I, II	502.4 / I, II
Temperature Shock	—	503.2 / I	503.3 / I	503.4 / I
Solar Radiation	505.1 / I	505.2 / II Cat. AI	505.3 / II Cat. AI	505.4 / I, II Cat. AI
Rain	506.1 / I	506.2 / I	506.3 / I, II	506.4 / I
Humidity	507.1 / I, II	507.2 / II, III	507.3 / II, III	—
Salt Fog	509.1	509.2	509.3	509.4
Dust	510.1 / I	510.2 / I	510.3 / I	510.4 / I, III
Vibration	514.2 / VIII, X	514.3 / I Cat. 10	514.4 / I Cat. 10	514.5 / I Cat. 20, 24
Shock	516.2 / I	516.3 / I	516.4 / I	516.5 / I

Specifications are subject to change without notice or obligation. Vertex Standard is a trademark of Vertex Standard LMR, Inc. All other trademarks are the property of their respective owners. †Intrinsically Safe system approved. Complete list of IS accessories in Owners Manual. \*25 kHz will not be available on new equipment in the U.S.A. after 1/1/2013. © 2014 Vertex Standard LMR, Inc. All rights reserved. NSS920\_03/2014