

VX-800 SERIES

VHF/UHF Portable Radios

HIGH-PERFORMANCE, RUGGED 200-CHANNEL PORTABLE RADIOS WITH INVERTIBLE LIQUID-CRYSTAL DISPLAYS



- 200 CHANNEL CAPACITY
- WIDE-BAND COVERAGE
- 5 WATTS POWER OUTPUT (Selectable to 2.5, 1.0, 0.25 W)
- MIL-STD 810 C/D/E
- 12.5/25 kHz BANDWIDTH PROGRAMMABLE PER CHANNEL
- 2 TONE DEC OR 5 TONE DEC/ENC AVAILABLE
- CTCSS/DCS ENCODE + DECODE
- USER SELECTABLE TONES / CODES
- ADVANCED 8 CHARACTER INVERTIBLE ALPHANUMERIC DISPLAY
- LONG BATTERY LIFE: 16 HOURS (w/FNB-62LI , VX-800V w/saver)
- PROGRAMMABLE/USER DEFINABLE SCAN MODES
- BCLO, BTLO AND TOT FUNCTIONS
- 2 PROGRAMMABLE SOFT KEYS + 1 MULTI-POSITION PROGRAMMABLE TOGGLE SWITCH
- VOICE INVERSION ENCRYPTION AVAILABLE
- WATER SHIELD MICROPHONE CONNECTION
- MIL-SPEC SPEAKER MIC AVAILABLE
- LOUD 500 mW AUDIO OUTPUT
- EMERGENCY FUNCTIONS
- ENCRYPTION
- EMBEDDED MESSAGE
- PC PROGRAMMABLE
- RADIO-TO-RADIO CLONING
- OPTIONAL ALKALINE BATTERY CASE
- INTRINSICALLY SAFE VERSION AVAILABLE



Specifications

	VX-800V	VX-800U
General Specifications		
Frequency Range	134-160 MHz (A) 148-174 MHz (C)	400-430 MHz (AS1) 440-470 MHz (CS) 450-490 MHz (D) 485-512 MHz (F)
Number of Channels	200 Channels	
Channel Spacing	12.5/15/25/30 kHz	12.5/25 kHz
PLL Steps	1.25/2.5/5/6.25 kHz	5/6.25 kHz
Power Supply Voltage	7.4 VDC ± 20 %	
Battery Life (5-5-90 duty) w/FNB-V62LI (1600 mAh)	12 hrs. (16 hrs. w/saver) @5 W	10 hrs. (13 hrs. w/saver) @5 W
Ambient Temperature Range	-22... F to +140... F (-30... C to +60... C)	
Frequency Stability EIA: ETS:	±2.5 ppm ±1.5 kHz	
Dimensions	2.3" (W)x4.3" (H)x1.1" (D) (58x110x28.9 mm)	
Weight	0.7 lb. (300 g) w/FNB-V62LI, Antenna, Belt clip	
Receiver Specifications Measurements made per EIA standard TIA/EIA-603		
Circuit Type	Double Conversion Superheterodyne	
Sensitivity EIA 12 dB SINAD 20 dB Quieting ETS(20 dB SINAD)	0.25 µV 0.35 µV (emf) 0.5 µV (emf)	
Adjacent Channel Selectivity EIA: ETS:	75 dB (25 kHz) / 70 dB (12.5 kHz) 70 dB (25 kHz) / 60 dB (12.5 kHz)	75 dB (25 kHz) / 68 dB (12.5 kHz) 70 dB (25 kHz) / 60 dB (12.5 kHz)
Intermodulation EIA: ETS:	75 dB (25 kHz) / 68 dB (12.5 kHz) 65 dB (25 kHz/12.5 kHz)	75 dB (25 kHz) / 65 dB (12.5 kHz) 65 dB (25 kHz/12.5 kHz)
Spurious and Image Rejection EIA: ETS:	75 dB 70 dB	
Audio Output	0.5 W @ 16 Ohms, 5 % THD	
Transmitter Specifications Measurements made per EIA standard TIA/EIA-603		
Power Output	5.0/2.5/1.0/0.25 W (Selectable)	
Modulation EIA: ETS:	Direct FM 16K0F3E / Direct FM11K0F3E 16K0G3E, 8K50G3E	
Conducted Spurious Emissions EIA: ETS:	70 dB Below Carrier 73 dB Below Carrier	
Audio Distortion @1 kHz	<3 %	

Measurements per EIA standards unless noted above. Specifications subject to change without notice or obligation.

Applicable MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure		500.2/Procedure 2	500.3/Procedure 2
High Temperature	501.1/Procedure 1, 2	501.2/Procedure 1, 2	501.3/Procedure 1, 2
Low Temperature	502.1/Procedure 1	502.2/Procedure 1, 2	502.3/Procedure 1, 2
Temperature Shock	503.1/Procedure 1	503.2/Procedure 1	503.3/Procedure 1
Solar Radiation	505.1/Procedure 1	505.2/Procedure 1	505.3/Procedure 1
Rain		506.2/Procedure 1, 2	506.3/Procedure 1, 2
Humidity	507.1/Procedure 2	507.2/Procedure 2	507.3/Procedure 2
Salt Fog		509.2/Procedure 1	509.3/Procedure 1
Dust		510.2/Procedure 1	510.3/Procedure 1
Vibration	514.2/Procedure 8, 10	514.3/Procedure 1 Cat. 10	514.3/Procedure 1 Cat. 10
Shock	516.2/Procedure 1, 5	516.3/Procedure 1, 4	516.4/Procedure 1, 4

Intrinsically Safe Approvals

The VX-800 VHF and UHF models have 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.



Accessories & Options

 MH-50A7A Speaker/Microphone (Noise Canceling)	 VH-110 Over the Head, Heavy Duty Headset
 VH-120 3-Wire Earpiece, Mic, Palm PTT Switch	 VH-130 2-Wire Palm Kit
 FVP-25 Encryption/DTMF Pager Unit	 VTP-50 VX-Trunk Unit
 F2D-8 2-Tone Decode Unit	 F5D-14 5-Tone ENC/DEC Unit
 FNB-V62LI 7.4 V 1600 mAh Lithium-Ion Battery	 FNB-V57 7.2 V 1100 mAh Ni-Cd Battery Pack
 FNB-V57IS Intrinsically-Safe 7.2 V 1100 mAh Ni-Cd Battery	 FBA-25 Alkaline Battery Case (6 X AA)
 VAC-6000 + CA-26 6-Unit Multi Charger	 NC-77B/C/U* Overnight Desktop Charger (only for FNB-V57/IS)
 VCM-1 Mobile Mounting Bracket for VAC-800	 VAC-800B/C/U* Desktop Rapid Charger
 CT-70 Radio Programming Cable (Requires VPL-1)	 CT-72 Radio to Radio Programming Cable
 CE31 Programming Software	 LCC-800 Leather Case (S for swivel belt clip)

*B for 120 VAC/C for 240 VAC
Various accessories listed may not be available in some countries.



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VX-800

SERIES

Public safety officers demand and require ruggedness, reliability, and versatility, and the Vertex Standard VX-800 excels in every respect. With its invertible Alphanumeric display, super-long-life battery, and unmatched versatility in programming flexibility, the VX-800 series is a public safety user's ideal communications partner.

VERSATILITY

200 CHANNEL CAPACITY

The huge 200-channel capacity may be partitioned into as many as 10 Memory Groups, with no limit on the number of channels in each Group. A single radio may therefore be programmed with channels sets for a number of different jurisdictions or organizations.

2 PROGRAMMABLE SOFT KEYS + 1 MULTI-POSITION PROGRAMMABLE TOGGLE SWITCH

Customization of feature access is easily accomplished at the time of programming. Flexibility in assignment of features ensures compatibility with existing-system requirements.



CTCSS / DCS ENCODE + DECODE

High-performance Encoder/Decoder circuits for both CTCSS and Digital Code Squelch are provided, for access to tone/code controlled systems. DCS is ideal for crowded RF environments, providing superior immunity from false opening of squelch.

PROGRAMMABLE/USER DEFINABLE SCAN MODES

Scanning of a single Memory Group or multiple Groups is provided, along with Priority Scan, Follow-Me Scan, and Follow-Me Dual Watch. The scan list may be locked in during programming, or the user may be allowed to edit the scan list.

PC PROGRAMMING

The channel and feature configurations are easily programmed in minutes by the dealer, using the optional CT-42A Programming Cable and CE31 Programming Software.

HIGH PERFORMANCE

5 WATTS POWER OUTPUT (Selectable to 2.5, 1.0, 0.25 Watt)

The VX-800 is designed to produce up to five solid Watts of power output, for extended communications range. For more localized applications, the power output may be reduced to 2.5 Watts, 1 Watt, or 1/2 Watt, for enhanced battery life.

12.5/25 kHz BANDWIDTH PROGRAMMABLE BY CHANNEL

When programming radios for use in different jurisdictions, the VX-800 portables may be set up, by channel, for use either in 12.5 kHz or 25 kHz environments, with deviation and bandwidth automatically set when this selection is made.

LONG LIFE LITHIUM-ION BATTERY (1600 mAh)

The FNB-V62LI Lithium-Ion Battery Pack, holding 1600 mAh of capacity, is capable of providing up to 16 hours of operation (VX-800V, Battery Saver on), even when using 5 Watts of transmitter power (5-5-90 duty cycle). The FNB-V62LI is ideal for long public-safety or surveillance operations.

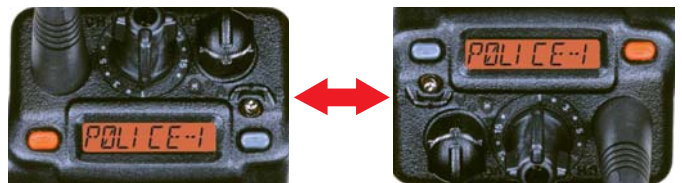
LOUD 500 mW AUDIO OUTPUT

Ideal for reception in noisy environments, the VX-800's high-powered audio is coupled to a large internal speaker, assuring solid copy throughout difficult crowd control, fire, or sporting-event operations.

EASY USER INTERFACE

ADVANCED 8 CHARACTER INVERTIBLE ALPHANUMERIC DISPLAY

Providing indication of either the channel number or an Alphanumeric Channel Label of up to 8 characters, the LCD display also provides convenient operation function icons to provide instant recognition of radio status.



KEY LOCK

A soft key may be assigned as a "Key Lock" control, to prevent inadvertent frequency change or unwanted activation/de-activation of functions. This is especially valuable in surveillance operations, where the radio may be concealed and subject to accidental pressure on its keys.

ERGONOMIC CONSTRUCTION

The carefully-engineered case construction features a gently rounded shape for a solid grip, whether the radio is wet or dry. Its over-sized front panel keys are easy to activate, even for users with large fingers.

RADIO TO RADIO CLONE FEATURE

For quick programming of VX-800 radios for an emergency task force, the Clone feature allows copying of all channel and configuration data from one VX-800 to another, using the optional CT-72 Cloning Cable.

SECURITY

BCLO, BTLO AND TOT FUNCTIONS

To facilitate efficient channel management, the VX-800 provides Busy Channel Lock-Out (BCLO) and Busy Tone Lock-Out (BTLO) features. What's more, the transmitter's Time-Out Timer (TOT) function prevents a "stuck microphone" condition from jamming a channel for an extended period of time.

EMERGENCY FUNCTIONS

The VX-800 may be programmed to transmit an emergency DTMF ANI burst, with or without a "live microphone" engaged, to alert the dispatcher to an emergency situation requiring assistance to the officer.



ENCRYPTION

The FVP-25 Encryption Unit provides security for your important public safety and private security communications, and it also includes a DTMF Paging function for selective calling.

EMBEDDED MESSAGE

At the time of programming, an I.D. number may be imbedded in the radio's memory, allowing identification of a stolen radio if its serial number or other external identification tags have been removed.



DURABLE CONSTRUCTION

MIL-STD 810 C/D/E

Built to meet or exceed the requirements of the U.S. MIL-STD 810 C/D/E standard, the VX-800 is designed to survive under difficult operating conditions of shock, vibration, and driving rain. Cost-performance begins with durability, and the Mil-Spec toughness of the VX-800 is your guarantee of its design quality.



● Weatherproof Construction

DIE-CAST CHASSIS AND WEATHERPROOF CASE DESIGN

The VX-800's ruggedness begins with its one-piece die-cast aluminum chassis, which provides high strength and durability along with light weight. Surrounding the portable's circuitry is a one-piece high-impact case, sealed against water ingress by a robust O-ring.



● Rugged Die-cast Chassis with Robust O-ring

WATER SHIELD MICROPHONE CONNECTION

The multi-pin accessory connector on the side of the VX-800, sealed for protection against weather, provides a convenient connection point for the MH-50A7A Speaker/Microphone or other accessories. Its gold-plated contacts ensure many years of reliable service.



INTRINSICALLY SAFE VERSION AVAILABLE

Included in the VX-800 Intrinsically Safe version's certification is approval for use in the hazardous Hydrogen and Acetylene environments. This difficult-to-obtain certification attests to the superior design and manufacture of the VX-800.



ACTUAL SIZE