

VX-180 SERIES

VHF/UHF Portable Radios



Rugged, Durable Portables with Unmatched Operating Ease

- 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
- 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



Actual Size

* Simulated LCD display

 **Vertex Standard**

VX-180 SERIES

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-180 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-180 is your guarantee of its design quality.



Water Resistant Construction

SUPER RUGGED CONSTRUCTION

Housed inside a high-impact case, the diecast chassis of the VX-180 provides a solid, rugged foundation for the VX-180's circuitry. Built to survive in the real world of factory, construction site, or fleet use, the VX-180 will provide many years of reliable communications.

8-CHARACTER 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.



3 PROGRAMMABLE OPERATING FUNCTION KEYS

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.

DTMF ANI

The VX-180 includes a DTMF Automatic Number Identifier (ANI) circuit, which will respond to an incoming ANI burst for selective paging of an individual portable.

DUAL 2-TONE DECODE

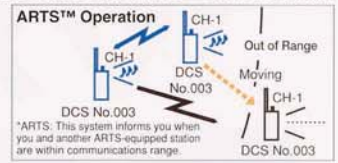
This built in feature allows you to decode up to two, 2-tone pairs per channel. These can be used for two individual pager calls, or one for Individual and one for Group call.

VERSATILE SCANNING FEATURES

The high-speed scanning capability of the VX-180 includes "All-Channel" scanning, plus Dual Watch and Priority Channel capability. And with "Follow-Me" scanning, a designated channel may be watched during scanning of other channels.

ARTS™ (Auto Range Transponding System)

Included in the VX-180 is Vertex Standard's exclusive ARTS™ feature, which can be critically important in search-and-rescue applications. ARTS™ provides a "hand-shake" with other ARTS™-equipped transceivers, and the display indicates if an "Out of Range" condition exists. The base station can then alert the field unit to move to a better location.



BCLO, BTLO, AND TOT

To facilitate efficient channel management, the VX-180 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.

TX/RX BATTERY SAVER CIRCUIT

To maximize battery life, the VX-180 includes both transmit- and receive-mode battery savers. On transmit, the portable will reduce power when the incoming signal is very strong. On receive, the radio will put itself into a pulsing "sleep" mode, periodically checking for channel activity.

PC PROGRAMMING

The channel and feature configurations are easily programmed in minutes by the dealer, using the optional CT-42A Programming Cable and CE44 Programming Software.

RADIO TO RADIO CLONE FEATURE

For quick programming of VX-180 radios for fleet use, the "Clone" feature allows copying of all channel and other configuration data from one VX-180 to another, using the optional CT-27 Cloning Cable.

500 mW AUDIO OUTPUT

Ideal for reception in noisy environments, the VX-180's high-powered audio is coupled to a large internal speaker, assuring solid copy throughout difficult construction site or field operations.

APPLICABLE MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure		500.2/Procedure 1	500.3/Procedure 1
High Temperature		501.2/Procedure 1, 2	501.3/Procedure 1, 2
Low Temperature		502.2/Procedure 1, 2	502.3/Procedure 1, 2
Temperature Shock		503.2/Procedure 1	503.3/Procedure 1
Solar Radiation		505.2/Procedure 1	505.3/Procedure 1
Rain		506.2/Procedure 2	506.3/Procedure 2
Humidity		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	514.3/Procedure 1 Cat. 10	514.4/Procedure 1 Cat. 10
Shock	516.2/Procedure 1	516.3/Procedure 1, 4	516.4/Procedure 1, 4

Specifications

	VX-180V	VX-180U
General Specifications		
Frequency Range	134-160 MHz (A) 148-174 MHz (C)	400-430 MHz (AS1) 440-470 MHz (CS1) 450-490 MHz (D) 485-512 MHz (F)
Number of Channels	16 Channels	
Channel Spacing	15/30 kHz	12.5/25 kHz
PLL Steps	2.5/6.25 kHz	5/6.25 kHz
Power Supply Voltage	7.5 VDC ± 20 %	
Battery Life (5-5-90 duty)		
w/ FNB-V57 (1100 mAh)	8.2 hrs. (9.9 hrs. w/saver) @ 5 W	7.1 hrs. (8.5 hrs. w/saver) @ 5 W
w/ FNB-64 (700 mAh)	5.2 hrs. (6.3 hrs. w/saver) @ 5 W	4.5 hrs. (5.4 hrs. w/saver) @ 5 W
Operating Temperature Range	-22° F to +140° F (-30° C to +60° C)	
Frequency Stability	± 2.5 ppm	
Dimensions	2.3" (W) X 4.7" (H) X 1.2" (D) 58X120X31 mm	
Weight (Approx)	0.81 lb. (365 g) w/FNB-64	

	VX-180V	VX-180U
Receiver Specifications		
Measurements made per EIA standard TIA/EIA-603		
Sensitivity		
EIA 12 dB SINAD	0.20 µV	0.25 µV
20 dB Quieting	0.30 µV	0.35 µV
Adjacent Channel Selectivity	65 dB (25 kHz) / 60 dB (12.5 kHz)	
Intermodulation	65 dB	
Spurious and Image Rejection	65 dB	
Hum & Noise	45 dB	
Audio Output	500 mW @ 4 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	40 dB (25 kHz) / 35 dB (12.5 kHz)	
Audio Distortion @ 1 kHz	< 5 %	

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

Accessories & Options

FNB-64 7.2 V 700 mAh Ni-Cd Battery Pack	FBA-25 Alkaline Battery Case (6 X AA)	VAC-6800 6-unit Multi-Charger	VCM-1 Mobile Mounting Bracket for VAC-800	MH-37A4B Earpiece/Microphone	LCC-180 / S Leather Case (S for swivel belt clip)	CT-27 Radio to Radio Programming Cable
FNB-V57 7.2 V 1100 mAh Ni-Cd Battery Pack	VAC-800B/C/U Desktop Rapid Charger	NC-77B/C/U Wall Charger	MH-45B4B Speaker/Microphone (Noise Cancelling)	VC-25 VOX Headset	CE44 Programming Software	CT-42A Radio Programming Cable

⊕B for 120 VAC/ C for 240 VAC/ U for 230 VAC

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