

# VX-180E SERIES

## VHF/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
- AUTOMATIC NUMBER IDENTIFIER(ANI)
- 5 TONE ENCODE/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



CE

Actual Size

\* Simulated LCD display

 **Vertex Standard**

## VX-180 SERIES

### SUPER RUGGED CONSTRUCTION

Housed inside a high-impact case, the diecast chassis of the VX-180E provides a solid, rugged foundation for the VX-180E's circuitry. Built to withstand the harshe world of the factory floor, construction site or fleet user, the VX-180E 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

The VX-180E radio functions and features can be assigned to the 3 front panel programmable keys. Functions include Keypad lock, Channel change, TX Power, Scan functions, Selective Call/Reset.



### 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.

### AUTOMATIC NUMBER IDENTIFIER (ANI)

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

### 5- TONE ENCODE / DECODE

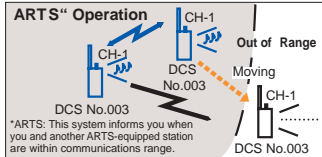
The VX-180E also has a 5 Tone Encoder and Decoder built-in. The radio can respond to an individual or group call 5 tone sequence, and can generate 5 Tone calling sequences for individual or group call facilities.

### VERSATILE SCANNING FEATURES

The high-speed scanning capabilities of the VX-160E with its all channel, dual watch, Priority channel, Last Busy and "Follow me" scanning options ensures that the VX-180E can meet the most stringent user needs.

### ARTS™ (Auto Range Transponding System)

Included in the VX-180E 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.



### BCL O, BTLO, AND TOT

To facilitate efficient channel management, the VX-180E provides Busy Channel Lock-Out (BCL O) 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-180E 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-180E radios for fleet use, the "Clone" feature allows copying of all channel and other configuration data from one VX-180E to another, using the optional CT-27 Cloning Cable.

### 500 mWAUDIO OUTPUT

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

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



### APPLICATION 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		514.2/Procedure 1	514.3/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-180E(HF)	VX-180E(BHF)
<b>General Specifications</b>		
Frequency Range	134-160 MHz (A) 146-174 MHz (C)	400-430 MHz (AS1) 440-470 MHz (CS) 450-490 MHz (D) 490-512 MHz (F)
Number of Channels	16 Channels	
Channel Spacing	12.5/25 kHz	
PLL Steps	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
Temperature Range	-30... C to +60... C(EIA)	-25... C to +55... C(ETS)
Frequency Stability	±2.5 ppm(EIA)	±1.5 kHz(ETS)
Case size(WHD)	58 x 120 x 31 mm w/FNB-64	
Weight (Approx)	365 grams w/FNB-64, antenna, belt clip	

(EIA):Measurements made per EIA Standard TIA/EIA-603 (ETS):Measurements per ETSI ETS 300 086

	VX-180E(HF)	VX-180E(BHF)
<b>Receiver Specifications</b>		
Sensitivity		
EIA 12 dB SINAD	0.20 µV	0.25 µV
20 dB Quieting	0.30 µV	0.35 µV
ETS 20 dB SINAD	0.60 µV(emf)	0.70 µV(emf)
Adjacent Channel Selectivity	65 dB (25 kHz) / 60 dB (12.5 kHz) EIA	70 dB (25 kHz) / 60 dB (12.5 kHz) ETS
Intermodulation	65 dB	
Spurious Rejection	65 dB(EIA)	70 dB(ETS)
Hum & Noise	45 dB	
AF Output	500 mW @4 Ohm, 10 % THD	
<b>Transmitter Specifications</b>		
Power Output	5.0/1.0 W	
Modulation System	Direct FM 16K0F3E, 11K0F3E	
Conducted Spurious Emissions	60 dB Below Carrier(EIA) 0.25 µW(ETS)	
FM Noise	40 dB	
Audio Distortion (@1 kHz)	5 %	

Specification are 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-3 3A4B 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 Overnight Desktop Charger	MH-4 4A4B 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

## Vertex Standard

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