

VX-160E/180E 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 (VX-180E)
- RUGGED CONSTRUCTION
- LOUD, CLEAR AUDIO OUTPUT
- 25/20/12.5 kHz BANDWIDTH PROGRAMMABLE BY CHANNEL
- 3 PROGRAMMABLE FRONT-PANEL FUNCTION KEYS (VX-180E)
- CTCSS/DCS ENCODE + DECODE
- AUTOMATIC NUMBER IDENTIFIER (ANI)
- 5 TONE ENCODE/DECODE
- MULTI-MODE SCAN (incl. Dual Watch, Priority, Follow-Me)
 - ARTS™ (Auto-Range Transpond System)
 - BCLO, BTLO, AND TOT FUNCTIONS
 - TX/RX BATTERY SAVER CIRCUIT
 - PC PROGRAMMING
 - RADIO-TO-RADIO CLONING
 - MIL-STD 810 C/D/E
 - IP54

VX-160 **VX-180** (w / LCD + 3 Programmable keys)

Actual Size
* Simulated LCD display

IP54
CE

VX-160E/180E 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-160E/180E's circuitry. Built to withstand the harshest world of the factory floor, construction site or fleet user, the VX-180E will provide many years of reliable communications.

8-CHARACTER ALPHANUMERIC DISPLAY (VX-180E)

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-160E/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

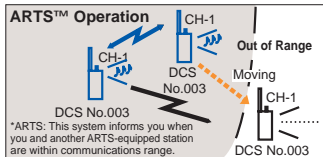
The VX-160E/180E also has a 5 Tone Encoder and Decoder built-in. The radio can respond to an individual or group call 5 tone sequence, and can generate 5 Tone calling sequences for individual or group call facilities.

VERSATILE SCANNING FEATURES

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

ARTS™ (Auto Range Transponding System)

Included in the VX-160E/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.



BCL0, BTLO, AND TOT

To facilitate efficient channel management, the VX-160E/180E provides Busy Channel Lock-Out (BCL0) 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-160E/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 Programming Cable and Programming Software.

RADIO TO RADIO CLONE FEATURE

For quick programming of VX-160/180E radios for fleet use, the "Clone" feature allows copying of all channel and other configuration data from one VX-160E/180E to another, using the optional Cloning Cable.

500 mW AUDIO OUTPUT

Ideal for reception in noisy environments, the VX-160E/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-160E/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.



Water Resistant Construction

APPLICABLE MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure		500.2/Procedure I	500.3/Procedure I
High Temperature		501.2/Procedure I, II	501.3/Procedure I, II
Low Temperature		502.2/Procedure I, II	502.3/Procedure I, II
Temperature Shock		503.2/Procedure I	503.3/Procedure I
Solar Radiation		505.2/Procedure I	505.3/Procedure I
Rain		506.2/Procedure II	506.3/Procedure II
Humidity		507.2/Procedure II	507.3/Procedure II
Salt Fog		509.2/Procedure I	509.3/Procedure I
Dust		510.2/Procedure I	510.3/Procedure I
Vibration	514.2/Procedure VIII	514.3/Procedure I Cat. 10	514.4/Procedure I Cat. 10
Shock	516.2/Procedure I	516.3/Procedure I, IV	516.4/Procedure I, IV

Specifications

	VX-160E/180E(VHF)	VX-160E/180E(UHF)
General Specifications		
Applicable Standard	EN 300 086, EN 301 489, EN 60065	
Frequency Range	134-160 MHz (A) 146-174 MHz (C)	400-430 MHz (AS1) 440-470 MHz (CS)
Number of Channels	16 ch	
Channel Spacing	25 / 20 / 12.5 kHz	
PLL Steps	5 / 6.25 kHz	
Operating voltage	7.5 VDC ± 20 %	
Battery Life (5-90 duty) @ 5 W		
w/FNB-V67LI (2000mAh)	14.8 hrs. (18 hrs. w/saver)	12.8 hrs. (15.3 hrs. w/saver)
w/FNB-V57(1100 mAh)	8.2 hrs. (9.9 hrs. w/saver)	7.1 hrs. (8.5 hrs. w/saver)
Temperature Range	-20° C to +55° C	
Frequency Stability	±1.5 kHz	
Case size(WxHxD)	58 x 120 x 34 mm (w/FNB-V67LI)	58 x 120 x 31 mm (w/FNB-83)
Weight (Approx)	320 g (w/FNB-V67LI, Antenna, Belt clip)	365 g (w/FNB-83, antenna, belt clip)

Receiver Specifications

	VX-160E/180E(VHF)	VX-160E/180E(UHF)
Sensitivity	20 dB SINAD	
Adjacent Channel Selectivity	65 dB	
Intermodulation	65 dB	
Spurious response rejection	70 dB	
Hum & Noise	45 dB (TIA/EIA)	
Audio output	500 mW @ 4 Ohm, 10 % THD	

Transmitter Specifications

Power Output	5.0/1.0 W	
Modulation Limiting (EN)	±5.0 kHz at 25 kHz ±4.0 kHz at 20 kHz ±2.5 kHz at 12.5 kHz	
Type of emission	16K0F3E / 14K0F3E / 11K0F3E(TIA/EIA)	
Conducted Spurious Emissions	-36 dBm @ ≤1 GHz, -30 dBm @ > 1 GHz	
FM Noise	45 dB/45 dB/40dB (TIA/EIA)	
Modulation distortion (@ 1 kHz)	3 %	

Specification are subject to change without notice or obligation.

Accessories & Options

ANTENNA LIST

UHF	ATU-6A	400-430 MHz
	ATU-6C	440-470 MHz
VHF	ATV-6A	134-151 MHz/3.5"
	ATV-6B	150-163 MHz/3.5"
	ATV-6C	161-174 MHz/3.5"
	ATV-6XL	VHF UNTUNED
	ATV-8A	134-151 MHz
	ATV-8B	150-163 MHz
	ATV-8C	161-174 MHz

- LCC-180 / S Leather Case (S for swivel belt clip)
- CT-27 Radio to Radio Cloning Cable
- CLIP-17C Swivel Belt Clip

Programming Cable: USB, FIF-10/A + CT-106, RS-232C, CT-29 + CT-28, Programming Software: CE51 *B for 120 VAC / C for 240 VAC / U for 230 VAC



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