VX-180 SERIES

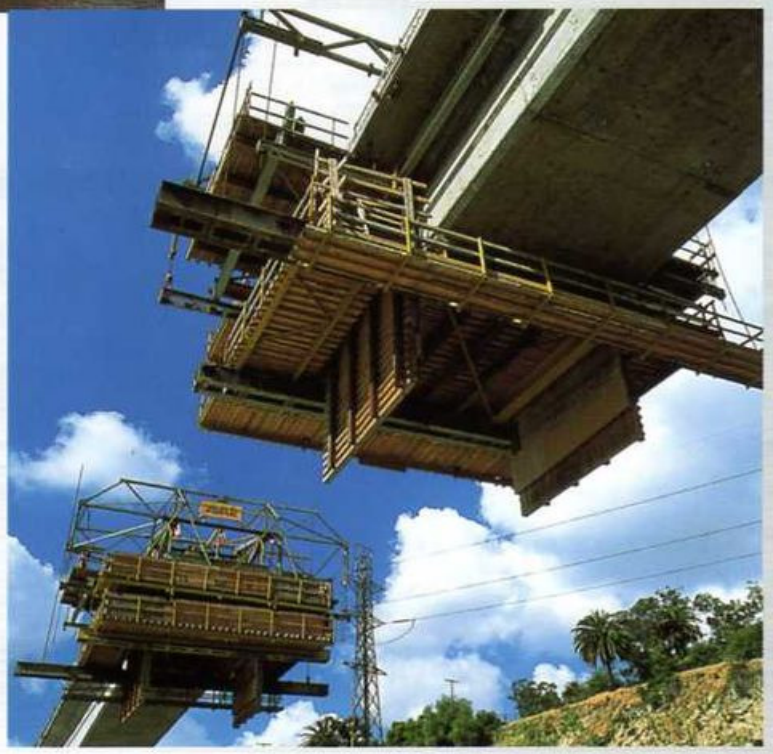
VHF/UHF Portable Radios

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

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.

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

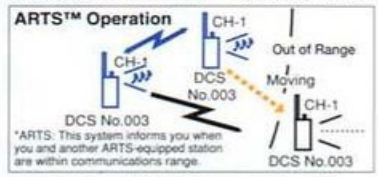
This built in feature allows you to decode up to two, 2-tone pairs per channel. These can be used for two individual pager calls, or one for Individual and one for Group call.

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)X4.7"(H)X1.2"(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 20 dB Quieting	 0.20 μV 0.30 μV	 0.25 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

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

Vertex Standard

VERTEX STANDARD CO., LTD.

4-8-8 Nakameguro, Meguro-ku, Tokyo 153-8644, Japan

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http://www.vxstd.com http://www.yaesu.co.uk

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VERTEX STANDARD

US Headquarters
17210 Edwards Road, Cerritos, CA 90703, U.S.A.
International Division
8350 N.W. 52nd Terrace, Suite 201, Miami, FL 33166, U.S.A.

YAESU EUROPE B.V.
P.O. Box 75525, 1118 ZN Schiphol, The Netherlands

YAESU UK LTD.
Unit 12, Sun Valley Business Park, Winnall Close
Winchester, Hampshire, SO23 0LB, U.K. Email:sales@yaesu.co.uk

YAESU GERMANY GmbH
Am Kronberger Hang 2, D-65824 Schwalbach, Germany

VERTEX STANDARD HK LTD.
Unit 5, 20/F., Seaview Centre, 139-141 Hoi Bun Road,
Kwun Tong, Kowloon, Hong Kong