

VX-2500E SERIES

VHF/UHF Mobile Radios



- 32 SEMI-DUPLEX CHANNELS
- WIDE / NARROW
(25 / 20 / 12.5 kHz PER CHANNEL)
- DIE-CAST CONSTRUCTION
ALUMINUM CHASSIS
- CTCSS OR DCS ENCODER / DECODER
- 5 TONE ENCODE/DECODE
(COMPATIBLE WITH VX-180E/160E)
- 5 TONE/DTMF ANI
- 2 TONE DECODER
- FIRMWARE UPDATE CAPABILITY
- PRIORITY SCANNING
- PROGRAMMABLE KEY ASSIGNMENT
- PROGRAMMABLE ALERT TONES
- COMPANDER INCLUDED
- EMERGENCY FUNCTION
- ALPHANUMERIC LCD DISPLAY
(14-SEGMENTS x 8-CHARACTORS)
- BCLO, BTLO, TOT FUNCTIONS
- FRONT MOUNTED SPEAKER
- MIL-STD 810 C/D/E
- PC PROGRAMMABLE AND CLONE
- EN 300 086, EN 300 219



CE

VX-2500E SERIES

The 32-channel VX-2500E Series mobile transceivers are ideal for business and public safety applications. With 25 Watts of power output, an easy-to-read 8-character invertible alpha-numeric display, seven programmable keys, and a host of signaling formats, the VX-2500E will get your message through under the toughest conditions.

Alpha-numeric Display (14 Segments x 8 Digits)

The 8-digit Alpha-numeric display allows quick channel identification by the user, and is easy to read from a wide range of viewing angles.

CTCSS Encoder/Decoder

Subaudible (CTCSS) 50-tone Encoder and Decoder circuits are built into every VX-2500E, ensuring compatibility with modern repeater requirements.

DCS Encoder/Decoder

For applications requiring Digital Coded Squelch signaling, full-featured DCS Encoder and Decoder circuits provide leading-edge protection from false decoding.

5-TONE ENCODE/DECODE

The VX-2500E 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.

DTMF ANI Encoder

Automatic Number Identification (ANI) via an automatic DTMF Encoder is also provided among the VX-2500E's versatile signaling capabilities.

Versatile Scanning

A wide range of set-up options are available during configuration of the VX-2500E, to ensure compatibility with the operating requirements of your system's users.

Companion Included

For narrow-band channel applications, the built-in Audio Companding system compresses the voice waveform during transmission, and expands it during reception, allowing full-sounding audio despite the restricted transmission bandwidth.

Emergency Mode

When activated, the "Emergency" feature sends out the 5-Tone or DTMF ANI, and cycles between transmit and receive, to serve as an emergency beacon to alert the dispatcher as to the need for immediate aid.

ARTS™ Feature

The Auto-Range Transponder System, a Vertex Standard exclusive, alerts the operator when another ARTS™-equipped station (for example, a hand-held unit) moves out of communication range. You can then advise the other user to move to a better location.

TOT, BCLO, BTLO Features

Among the most useful protection features of the VX-2500E are the transmitter Time-Out Timer (TOT), Busy Channel Lock-Out (BCLO), and Busy Tone Lock-Out (BTLO), to ensure efficient network performance at all times.

Programmable Front Panel Keys

Custom assignment of important functions to front panel keys is available at the time of programming, to provide the most ergonomically-friendly transceiver available today.

Programmable Alert Tones

Among the useful set-up options for the VX-2500E is the capability to customize the "Alert" tones generated from the transceiver, for ease of recognition by the user.

Rugged, Die-cast Construction

The VX-2500E's circuitry is housed within a die-cast aluminum enclosure, which doubles as a heat sink. This extraordinarily durable construction ensures many years of reliable operation, even in high-vibration installations.



MIL-Spec Rated (MIL 810 C/D/E)

The ultra-rugged design of the VX-2500E Series enables it to be fully compliant with the existing specifications of MIL 810 C, D, and E, pursuant to the test procedures documented below.

APPLICABLE MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure	501.1/Procedure 1,2	500.2/Procedure 1	500.3/Procedure 1
High Temperature	502.1/Procedure 1	501.2/Procedure 1,2	501.3/Procedure 1,2
Low Temperature	503.1/Procedure 1	502.2/Procedure 1	502.3/Procedure 1,2
Temperature Shock	505.1/Procedure 1	503.2/Procedure 1	503.3/Procedure 1
Solar Radiation	506.1/Procedure 2	505.2/Procedure 1	505.3/Procedure 1
Rain	507.1/Procedure 2	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 1,8	514.3/Procedure 1,8	514.4/Procedure 1,8
Shock	516.2/Procedure 1,4	516.3/Procedure 1,4	516.4/Procedure 1,4

Specifications

	VX-2500E(VHF)	VX-2500E(UHF)
General Specifications		
Frequency range	134-174 MHz (C)	400-470 MHz (CS1)
Applicable Standard	EN 300 086, EN 300 219 (EN) TIA/EIA-603-A (TIA/EIA)	
Number of Channels	32 Channels (16+16)	
Frequency Steps	5 kHz/ 6.25 kHz	
Power Supply Voltage	13.2 VDC	
Channel Spacing	25 kHz/ 20 kHz/ 12.5 kHz	
Current Consumption	Receive 700 mA Transmit 6 A	
Temperature Range	-20° C to +55° C (EN) -30° C to +60° C (TIA/EIA)	
Frequency Stability	±1.5 kHz (EN) < ±2.5 ppm (TIA/EIA)	
RF Input-Output Impedance	50 Ohms	
Dimensions (W x H x D)	160 mm x 40 mm x 110 mm	
Weight (approx.)	0.85 kg	

(TIA/EIA): Measurements made per EIA Standard TIA/EIA-603-A (EN): Measurements per ETSI ETS 300 086 Specification are subject to change without notice or obligation.

	VX-2500E(VHF)	VX-2500E(UHF)
Receiver Specifications		
Circuit Type	Double-conversion Super-heterodyne	
Sensitivity 20 dB SINAD	-5 dBµV (EN)	-4 dBµV(EN)
12 dB SINAD	0.22 µV (TIA/EIA)	0.25 µV (TIA/EIA)
Adjacent Channel Selectivity	78 dB / 78 dB / 65 dB (EN) 25/ 20/ 12.5 kHz	
Intermodulation	80 dB / 80 dB / 67 dB (TIA/EIA) 68 dB (EN) / 75 dB (TIA/EIA)	
Spurious & Image Rejection	80 dB	
Hum & Noise 25/ 20/ 12.5 kHz	45 dB/ 45 dB/ 40 dB (TIA/EIA)	
AF Output	4 W @ 4 Ohms (< 5% THD)	
Transmitter Specifications		
Power Output	25 W / 5 W	
Maximum Deviation 25/ 20/ 12.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz (EN)	
Type of emission 25/ 20/ 12.5 kHz	16K0F3E / 14K0F3E / 11K0F3E (TIA/EIA)	
Conducted Spurious Emissions	0.25 µV (EN) / 80 dB Below Carrier (TIA/EIA)	
Hum & Noise	45 dB/ 45 dB/ 40 dB (TIA/EIA)	
Audio Distortion	< 3% @ 1 kHz	
Microphone Type	Dynamic	
Microphone Impedance	600 Ohms	

Accessories & Options

 MH-25A8J Standard Microphone	 MH-700D DTMF Dial Microphone	 MD-11A8J Desktop Microphone	 MLS-100 Mobile Loud Speaker (12 Watts Peak Power)	 FP-1030A External Power Supply 30 A DC
 LF-1 Line Filter	 CT-4 (T9101411) Cloning cable	 VPL-1 Programming Kit (Computer to Radio)	 CE 63 PC-Programming Software	



VERTEX STANDARD CO., LTD.

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

For our latest product news, visit us on the Internet:
<http://www.vxstd.com>

VERTEX STANDARD <http://www.vxstdusa.com>

US Headquarters

10900 Walker Street, Cypress, CA 90630, 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

<http://www.yaesu.co.uk>
Email: sales@yaesu.co.uk

YAESU UK LTD.

Unit 12, Sun Valley Business Park, Winnall Close
Winchester, Hampshire, SO23 0LB, U.K.

VERTEX STANDARD HK LTD. <http://www.vxstd.com.hk>

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