

# VX-4500/4600 Series

## VHF/UHF Mobile Radios

### SPECIFICATION SHEET

### Optimized Mobile Communications

The VX-4500/4600 mobile radios are packed with enhanced features and signaling performance for increased communications flexibility and worker safety.

#### Expanded Signaling and Security

Both radios provide a full range of signaling capabilities including 2-tone, 5-tone and MDC 1200® encode/decode for selective calling.

Private communication is supported by built-in voice inversion encryption. And, if a radio is ever lost or stolen, 5-tone remote stun/kill/revive can be activated to ensure messages are only heard by those intended.

#### Enhanced Audio Performance

Features Channel Announcement which loudly speaks the current channel description to simplify changing channels when focused on other tasks simultaneously.

Includes voice activation (VOX) that enables users to transmit voice without pressing the Push to Talk button on the microphone. Enables hands-free operation for convenience.

In noisy environments, activate the ClearVoice function to enhance audio transmit to ensure your message is heard. And, to ensure a radio is not accidentally turned down too low, a minimum volume limit can be programmed by your Dealer.

Whisper capability is also included to augment audio transmit when talking quietly is necessary for discreet communications.

Record and store up to 120 seconds for keeping an audible record of important messages using the optional DVS-8 Voice Storage unit.

#### When Safety Counts

As with all Vertex Standard mobile radios, the VX-4500/4600 Series includes Emergency alert for enhanced driver safety.

Operators can activate the Lone Worker function when leaving equipment or a vehicle temporarily. If a problem arises while away, the radio switches to Emergency mode to alert help.

When constant contact is required at all times, Vertex Standard's exclusive Auto-Range Transpond System (ARTS™) is also included to inform the user that another ARTS™-equipped radios are within communication range.

#### Large Group Communications Made Easy to Manage

The VX-4600 has 512-channel capacity and 32 groups to easily manage a variety of calls at the most complex job site. For smaller operations, the VX-4500 features 8 channels.

#### FCC Narrowband Compliant

Meets the FCC Part 90 requirement for using 12.5 kHz channels by January 1, 2013.



VX-4600

VX-4500

### The Vertex Standard Difference

Our number one goal is achieving superior customer satisfaction by delivering products and services that exceed your expectations. Count on Vertex Standard for radios that are built to last and designed to provide more features for a better return on your investment. Ask your Dealer for more details.

### Additional Features

- Six programmable keys
- 8-Character alphanumeric display (VX-4600)
- RSSI signal strength indicator (VX-4600)
- DTMF Paging
- DTMF ANI
- Speed dial (VX-4600)
- CTCSS / DCS Encode and Decode
- BCLO / BTLO and TOT Functions
- Componder
- Direct channel entry (VX-4600)
- Minimum volume control
- Talk around
- Priority scan
- Dual priority scan
- Dual watch scan
- Follow-me scan
- Talk around scan
- Talk back scan
- Operator selectable scan
- Group scan
- Manual squelch control
- D-sub 15 pin accessory connector
- Public address / horn alert
- Radio-to-radio cloning

### Accessories

- MH-67A8J: Standard microphone
- MH-75A8J: Keypad microphone (16 keys)
- MD-12A8J: Desktop microphone
- MLS-100: External speaker; square, 12W
- MLS-200: External speaker, 12W (indoor/outdoor use)
- FP-1023A: External power supply
- LF-6: DC Line filter

### Option Board

- DVS-8: Digital voice storage

### VX-4500/4600 Series Specifications

	VHF	UHF
<b>General Specification</b>		
Frequency Range	134 - 174MHz	400 - 470 MHz 450 - 512 MHz
Number of Channels and Groups	512 with 32 groups (VX-4600) 8 (VX-4500)	
Power Supply Voltage	13.6V DC ± 20%	
Channel Spacing	12.5 / 20 / 25 kHz	
PLL Steps	1.25 / 2.5 / 5 / 6.25 kHz	5 / 6.25 kHz
Current Consumption	TX: 11 A, RX: 2.5 A, Standby: 200 mA	
Operating Temperature Range	-22° F to +140° F (-30° C to +60° C)	
Frequency Stability	±2.5 ppm	
RF Input-Output Impedance	50 Ohms	
Dimension (H x W x D)	6.5 x 1.8 x 6.1 inches (165 x 45 x 155mm)	
Weight (Approx.)	2.8 lbs (1.25 kg)	
<b>Receiver Specification: measured by TIA/EIA-603</b>		
Sensitivity 12dB SINAD	0.25 µV	
Adjacent Channel Selectivity	75 dB / 70 dB	
Hum and Noise	45 dB / 40 dB	
Intermodulation	75 dB	
Spurious and Image Rejection	85 dB / 80 dB	
Audio Output	Internal: 4W @ 20 Ohms; External: 12W @ 4 Ohms, <5% THD	
<b>Transmitter Specification: measured by TIA/EIA-603</b>		
Output Power (Selectable)	50 / 25 / 12.5 / 5W	45 / 25 / 12.5 / 5W
Modulation	16K0F3E, 11K0F3E	
Maximum Deviation	±5.0 kHz / ±2.5 kHz	
Hum and Noise	45 dB / 40 dB	
Audio Distortion	< 3% @ 1 kHz	
Conducted Spurious Emission	70 dB below carrier	

### Applicable MIL-STD (Pending Test Completion)

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures
Low Pressure	–	500.2 / Procedure I	500.3 / Procedure I	500.4 / Procedure I	500.5 / Procedure I
High Temperature	501.1 / Procedure I, II	501.2 / Procedure I	501.3 / Procedure I	501.4 / Procedure I	501.5 / Procedure I
Low Temperature	502.1 / Procedure I	502.2 / Procedure I, II	502.3 / Procedure I, II	502.4 / Procedure I, II	502.5 / Procedure I, II
Temperature Shock	503.1 / Procedure I	503.2 / Procedure II	503.3 / Procedure I	–	–
Solar Radiation	–	–	505.3 / Procedure I	505.4 / Procedure I	–
Rain	506.1 / Procedure II	506.2 / Procedure II	506.3 / Procedure II	506.4 / Procedure III	506.5 / Procedure III
Humidity	507.1 / Procedure II	507.2 / Procedure II	507.3 / Procedure II	–	–
Salt Fog	–	509.2 / Procedure I	509.3 / Procedure I	509.4 / Procedure I	509.5 / Procedure I
Dust	–	–	510.3 / Procedure I	–	–
Vibration	514.2 / Procedure VIII, X	514.3 / Cat. 10	514.4 / Cat. 10	514.5 / Cat. 20, 24	514.6 / Cat. 20, 24
Shock	516.2 / Procedure I, III, V	516.3 / Procedure I, IV	516.4 / Procedure I, IV	516.5 / Procedure I, IV	516.6 / Procedure I, IV