

# VX-4500/4600 Series

## VHF/UHF Mobile Radios

### SPECIFICATION SHEET – NORTH AMERICA

#### 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 **Clear Voice** 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 mode** 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, always know your connection status with **Auto-Range Transpond System (ARTS™)**. Only Vertex Standard radios are designed to inform you when you and another ARTS™-equipped radio are within communication range. If out of range, your radio senses no signal has been received and beeps to alert you.

#### Large Group Communications Made Easy

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.



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. Vertex Standard radios are built to last and are backed by an industry-leading 3 year warranty.

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## 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
- ✦ Busy Channel Lockout (BCLO)
- ✦ Busy Tone Lockout (BTLO)
- ✦ Time Out Timer (TOT)
- ✦ Compander
- ✦ 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
- ✦ LTR® Trunking (option)
- ✦ 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, 12 W
- ✦ MLS-200: Waterproof external speaker, 12 W
- ✦ SEC-1223: External power supply
- ✦ LF-6: DC Line filter

## Option Boards

- ✦ DVS-8: Digital voice storage unit
- ✦ FVP-44: Rolling code encryption

## VX-4500/4600 Series Specifications

	VHF	UHF
<b>General Specification</b>		
Frequency Range	134 - 174 MHz	400 - 470 MHz; 450 - 512 MHz
Number of Channels and Groups	512 with 32 Groups (VX-4600) 8 (VX-4500)	
Power Supply Voltage	13.6 V 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)	1.8 x 6.5 x 6.1 inches (45 x 165 x 155 mm)	
Weight (Approx.)	2.8 lbs (1.25 kg)	
<b>Receiver Specification: measured by TIA/EIA-603</b>		
Sensitivity I2dB SINAD	0.25 µV	
Adjacent Channel Selectivity	80 dB / 70 dB	78 dB / 70 dB
Hum and Noise	45 dB / 40 dB	
Intermodulation	75 dB	
Spurious and Image Rejection	80 dB	
Audio Output	Internal: 4 W @ 20 Ohms External: 12 W @ 4 Ohms, < 5% THD	
<b>Transmitter Specification: measured by TIA/EIA-603</b>		
Output Power (Selectable)	50 / 25 / 12.5 / 5 W	45 / 25 / 12.5 / 5 W
Modulation	16K0F3E, 11K0F3E	
Maximum Deviation	± 5.0 kHz / ± 2.5 kHz	
Conducted Spurious Emissions	70 dB below carrier	
FM Hum and Noise	45 dB / 40 dB	
Audio Distortion	< 3% @1 kHz	

## Applicable MIL-STD

Standard	Methods/Procedures				
	MIL 810C	MIL 810D	MIL 810E	MIL 810F	MIL 810G
Low Pressure	–	500.2 / I	500.3 / I	500.4 / I	500.5 / I
High Temperature	501.1 / I, II	501.2 / I	501.3 / I	501.4 / I	501.5 / I
Low Temperature	502.1 / I	502.2 / I, II	502.3 / I, II	502.4 / I, II	502.5 / I, II
Temperature Shock	503.1 / I	–	–	–	–
Solar Radiation	–	–	505.3 / I	505.4 / I	–
Rain	506.1 / II	506.2 / II	506.3 / II	506.4 / III	506.5 / III
Humidity	507.1 / II	–	–	–	–
Salt Fog	509.1 / I	509.2 / I	509.3 / I	509.4 / I	509.5 / I
Dust	–	–	510.3 / I	–	–
Vibration	514.2 / VIII, X	514.3 / Cat. 10	514.4 / Cat. 10	514.5 / Cat. 24	514.6 / Cat. 24
Shock	516.2 / I	516.3 / I	516.4 / I	516.5 / I	516.6 / I
Transit Drop	–	–	–	–	516.5 / IV

Specifications are subject to change without notice or obligation. Vertex Standard is a trademark of Vertex Standard LMR, Inc. All other trademarks are the property of their respective owners.  
\*25 kHz will not be available on new equipment in the U.S.A. after 1/1/2013. © 2013 Vertex Standard LMR, Inc. All rights reserved. NSS\_4500/4600\_12/2013