

# VXD-R70

## Digital Repeater

SPECIFICATION SHEET

DMR TIER 2 STANDARD

### Digital Quality Performance

Easily convert to digital with the VXD-R70 conventional repeater. The VXD digital radio series operates on the most widely-used Digital Mobile Radio (DMR) protocol, making it compatible to work with other DMR models and brands. The VXD Series can also be used with any existing analog two-way radios providing an easy transition to new equipment for maximum return on investment.

Get 100% continuous duty at 45 Watt VHF and 40 Watt UHF for easy integration into most repeater sites.

### Easy Digital Conversion: Operate in Analog or Digital Mode

VXD-R70 operates in either analog or digital mode providing an easy path to switch to digital when ready. Any brand of analog two-way radios can be supported by the VXD-R70 repeater in addition to using DMR portable or mobile radios.

### Digital Doubles Call Capacity With One License

All Vertex Standard VXD radios use Time-Division Multiple-Access (TDMA) 6.25kHz efficient digital technology that doubles the capacity for the price of one frequency license. The radios support twice as many talk groups or calls without adding more licensing costs.

### Continuous Performance with Power Supply Backup

Includes integrated power supply with connector for optional external DC battery backup.

### Multicolored LED Status Indicator

LED indicator enables easy monitoring of repeater status. Status indicators include: power, digital/analog mode, repeater disabled, transmit analog/digital mode by slot, and receive analog/digital mode by slot.

### AMCA Narrowband Compliant

The VXD-R70 meets ACMA requirements for using 12.5kHz channels to double the call capacity with the two-slot TDMA technology. Using digital meets the ACMA recommendation to convert directly to 6.25kHz efficient equipment for greater spectrum efficiency.

The ACMA intends to ensure all radios are narrowband compliant by 31 December 2015 in urban areas and by 31 December 2018 in rural areas.



**VXD-R70**  
132.6 (H) X 482.6 (W) X 296.5mm (D)

REAR PANEL



### 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 – another great reason to choose Vertex Standard. Ask your Dealer for more details.

### Additional Features

- EIA Rack mount size
- AMBE+2™ Digital vocoder
- 26-Pin accessory connector

### Accessories

- WMB-1: Wall mount kit
- E-DC-29: Battery back-up cable

### VX-R70 Specifications

	VHF	UHF	
<b>General Specification</b>			
Frequency Range	136 – 174 MHz	403 – 470 MHz	450 – 512 MHz
Number of Channels	16		
Power Supply Voltage	100 – 240 V AC (13.6 V DC)		
Channel Spacing	12.5 / 25 kHz		
Current Consumption	Standby: 1 A (1 A DC typical) TX Low Power: 3 A (7.5 A DC typical) TX High Power: 4 A (12 A DC typical)		
Operating Temperature Range	–30° C to +60° C		
Frequency Stability	±0.5 ppm		
Duty Cycle	100%		
Dimension (H x W x D)	132.6 x 482.6 x 296.5 mm		
Weight (Approx.)	14 kg		
<b>Receiver Specification: measured by TIA/EIA-603C</b>			
Sensitivity :			
Analog 12dB SINAD	0.3 µV 0.22 µV typical		
Digital	5% BER: 0.3 µV		
Adjacent Channel Selectivity:			
TIA603	65 dB @ 12.5 kHz, 80 dB @ 25 kHz	65 dB @ 12.5 kHz, 75 dB @ 25 kHz	
TIA603C	50 dB @ 12.5 kHz, 80 dB @ 25 kHz	50 dB @ 12.5 kHz, 75 dB @ 25 kHz	
Intermodulation	78 dB	75 dB	
Spurious Rejection	80 dB	75 dB	
Audio Distortion	3% (typical)		
Hum and Noise	–40 dB @ 12.5 kHz –45 dB @ 25 kHz		
Conducted Spurious Emission	–57 dBm		
<b>Transmitter Specification: measured by TIA/EIA-603C</b>			
Output Power	1 – 25 W 25 – 45 W	1 – 25 W 25 – 45 W	– 1 – 40 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz      ± 5.0 kHz @ 25 kHz		
Conducted/Radiated Emission	–36 dBm < 1 GHz      –30 dBm > 1 GHz		
FM Hum & Noise	–40 dB @ 12.5 kHz      –45 dB @ 25 kHz		
Adjacent Channel Power	60 dB @ 12.5 kHz      70 dB @ 25 kHz		
Audio Distortion	3%		
FM Modulation	11K0F3E, 16K0F3E		
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE		
Digital Protocol	ETSI TS 102 361-1, -2, -3		

Specifications are subject to change without notice or obligation.

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**Have a question about Vertex Standard radios?**  
Contact your authorised Vertex Standard dealer today!