

# EVX-R70

## DIGITAL REPEATER

DMR Tier 2 Standard

  
Vertex Standard

eVerge™

SPECIFICATION SHEET - NORTH AMERICA

## Evolve to Better Communication and Value

You can afford to enhance your communications with the digital performance of eVerge™ two-way radios. eVerge™ radios are precision-engineered to deliver value without sacrificing quality — giving you more capabilities and the flexibility you need to communicate at your best.

### Better Flexible Support: Analog, Digital and Mixed Modes

The EVX-R70 conventional repeater operates in both analog and digital modes and can be used with any existing analog two-way radios. Includes “mixed mode” to dynamically switch between analog and digital for flexible support.

### Better Compatibility and Efficiency

eVerge™ radios are compatible with over 74% of the digital radios deployed worldwide using TDMA protocol. eVerge™ digital radios operate with the TDMA [Time Division Multiple Access] protocol for spectrum and power efficiency providing lower total equipment cost compared to FDMA. TDMA digital radio systems support twice as many talk groups and calls without more licensing costs.

### Continuous Performance

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



EVX-R70

19" (W) X 5.22" (H) X 11.67" (D)



Rear Panel



## Additional Features

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

## Accessories

- ▶ MH-67A8J: Standard microphone
- ▶ MH-12A8J: Desktop microphone
- ▶ WMB-1: Wall mount kit
- ▶ E-DC-29: Battery back-up cable

## EVX-R70 Specifications

General Specifications		
<b>Frequency Range</b>	VHF: 136 - 174 MHz	UHF: 403 - 470 MHz 450 - 512 MHz
<b>Number of Channels and Groups</b>	16	
<b>Power Supply Voltage</b>	100 - 240 V AC [13.5 V DC]	
<b>Channel Spacing</b>	25* kHz / 20* kHz / 12.5 kHz	
<b>Current Consumption</b>	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]	
<b>Operating Temperature Range</b>	-22° F to +140° F [-30° C to +60° C]	
<b>Storage Temperature Range</b>	-40° F to +185° F [-40° C to + 85° C]	
<b>Frequency Stability</b>	±0.5 ppm	
<b>Duty Cycle</b>	100%	
<b>Dimension [H x W x D]</b>	5.2 x 19 x 11.7 inches [132.6 x 482.6 x 296.5 mm]	
<b>Weight [Approx.]</b>	31 lbs. [14 [kg]	
Receiver Specifications <span style="float: right;">measured by TIA/EIA 603C</span>		
<b>Sensitivity</b>	Analog 12 db SINAD: 0.3 µV 0.22 µV typical Digital 5% BER: 0.3 µV	
<b>Adjacent Channel Selectivity</b>	VHF: TIA603 65 dB @ 12.5 kHz, 80 dB @ 20/ 25 kHz* TIA603C 50 dB @ 12.5 kHz, 80 dB @ 20/ 25 kHz*	UHF: TIA603 65 dB @ 12.5 kHz, 75 dB @ 20/ 25 kHz* TIA603C 50 dB @ 12.5 kHz, 75 dB @ 20/ 25 kHz*
<b>Intermodulation</b>	VHF: 78 dB	UHF: 75 dB
<b>Spurious Rejection</b>	VHF: 80 dB	UHF: 75 dB
<b>Audio Distortion</b>	3% [typical]	
<b>Hum and Noise</b>	-40 dB @ 12.5 kHz; -45 dB @ 20/ 25 kHz*	
<b>Conducted Spurious Emission</b>	-57 dBm	
Transmitter Specifications <span style="float: right;">measured by TIA/EIA 603C</span>		
<b>Output Power</b>	VHF: 1 - 25 W, 25 - 45 W	UHF: 403 - 470 MHz: 1-25W, 25-40W 450 - 512 MHz: 1 - 40 W
<b>Modulation (Analog)</b>	16K0F3E / 11K0F3E	
<b>Modulation Limiting</b> [136 - 174 MHz, 403 - 470 MHz]	± 2.5 kHz @ 12.5 kHz ; ± 4.0 kHz @ 20 kHz* ; ± 5.0 kHz @ 25 kHz*	
<b>Conducted Spurious Emission</b> [136 - 174 MHz, 403 - 470 MHz]	-36 dBm < 1 GHz ; -30 dBm > 1GHz	
<b>FM Hum and Noise</b> [136 - 174 MHz, 403 - 470 MHz]	-40 dB @ 12.5 kHz ; -45 dB @ 20/ 25 kHz*	
<b>Adjacent Channel Power</b> [136 - 174 MHz, 403 - 470 MHz]	60 dB @ 12.5 kHz; 70 dB @ 20/ 25 kHz*	
<b>Audio Distortion</b>	3%	
<b>FM Modulation</b>	12.5 kHz: 11K0F3E 25 kHz*: 16K0F3E	
<b>4FSK Digital Modulation</b>	12.5 KHz Data Only: 7K60FXD 12.4 kHz Data and Voice: 7K60FXE	
<b>Digital Protocol</b>	ETSI TS 102 361-1, -2, -3	

\*25 kHz and 20 kHz will not be available on new equipment in the U.S.A. after 1/1/2013. 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. ©Vertex Standard LMR, Inc. 2014.