EVX-R70

DIGITAL REPEATER
DMR Tier 2 Standard

Vertex Standard

eVerge™

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.
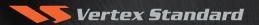
EVX-R70

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

Rear Panel

FACTORY WARRANTY 3 YEAR

DMR DIGITAL MOBILE RADIO ASSOCIATION

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		
Frequency Range	VHF: 136 - 174 MHz	UHF: 403 – 470 MHz 450 – 512 MHz
Number of Channels and Groups	16	
Power Supply Voltage	100 - 240 V AC (13.5 V DC)	
Channel Spacing	25* kHz / 20* kHz / 12.5 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	-22° F to +140° F (-30° C to +60° C)	
Storage Temperature Range	-40° F to +185°F (-40° C to + 85° C)	
Frequency Stability	±0.5 ppm	
Duty Cycle	100%	
Dimension (H x W x D)	5.2 x 19 x 11.7 inches (132.6 x 482.6 x 296.5 mm)	
Weight (Approx.)	31 lbs. (14 (kg)	

Receiver Specifications	measured by TIA/EIA 603C	
Sensitivity	Analog 12 db SINAD: 0.3 µV 0.22 µV typical	
	Digital 5% BER: 0.3 µV	
Adjacent Channel Selectivity	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*
Intermodulation	VHF: 78 dB	UHF: 75 dB
Spurious Rejection	VHF: 80 dB	UHF: 75 dB
Audio Distortion	3% (typical)	
Hum and Noise	-40 dB @ 12.5 kHz ; -45 dB @ 20/ 25 kHz*	
Conducted Spurious Emission	-57 dBm	

Transmitter Specifications	measured by TIA/EIA 603C	
Output Power	VHF: 1 - 25 W, 25 - 45 W	UHF: 403 - 470 MHz: 1-25 W, 25-40 W 450 - 512 MHz: 1 - 40 W
Modulation (Analog)	16K0F3E / 11K0F3E	
Modulation Limiting (136 - 174 MHz, 403 - 470 MHz)	± 2.5 kHz @ 12.5 kHz ; ± 4.0 kHz @ 20 kHz*; ± 5.0 kHz @ 25 kHz*	
Conducted Spurious Emission (136 - 174 MHz, 403 - 470 MHz)	-36 dBm < 1 GHz ; -30 dBm > 1GHz	
FM Hum and Noise (136 - 174 MHz, 403 - 470 MHz)	-40 dB @ 12.5 kHz ; -45 dB @ 20/ 25 kHz*	
Adjacent Channel Power (136 - 174 MHz, 403 - 470 MHz)	60 dB @ 12.5 KHz; 70 dB @ 20/ 25 kHz*	
Audio Distortion	3%	
FM Modulation	12.5 kHz: 11K0F3E 25 kHz*: 16K0F3E	
4FSK Digital Modulation	12.5 Khz Data Only: 7K60FXD 12.4 kHz Data and Voice: 7K60FXE	
Digital Protocol	ETSI TS 102 361-1, -2, -3	