

NXR-1700E

VHF ANALOG & DIGITAL REPEATER

NXDN™ **DMR**

MULTI-MODE, SPACE SAVING SOLUTION

The KENWOOD NXR-1700E repeater continues the line of migration friendly and forward thinking infrastructure to offer the ultimate in modern scalability and security for analog, NXDN™ and DMR two-way systems in a new and compact form-factor. Whether you are managing a single repeater, a wide area multi-site system or are managing multiple systems remotely, the NXR-1700E brings forward the same great digital two-way system capabilities while introducing the native ability to network analog and digital voice and data calls, enhanced secure remote programming, support for SSL certificates, SNMP monitoring, event and hardware logging, as well as tiered user management roles. For IT managers, this powerful repeater easily fits within modern organizational and technical requirements for support. For RF professionals the NXR-1700E is the perfect solution for an extensive range of customer needs.



Features

- 50 – 1 W RF Output Power (Up to 50 W @ 50%, 25 W @ 100% Duty Cycle)
- Light, Compact and Space-Efficient
- 1.71-inch OLED with Icons and Numeric Displays
- Thermal-Controlled Cooling Fan
- External Power Supply
- Up to 32 Channels
- Dual Digital Protocol: DMR Tier II / NXDN Conventional^{1,2,3} (programmable one at a time)
- USB-A Connector Ready for Audio Accessories
- External In/Out Pin from DB25
- Non-repeat Simplex / Semi-Duplex Mode for Analog and NXDN Digital^{2,3}
- Hot Standby System Redundancy
- Built-in IP Network Adapter
- Unicast and Multicast Call Routing
- SNMP Protocol for Direct Reporting to a Generic System³
- Supports G.711 Audio Codec (for Test onsole and Third-party Applications)
- IP Remote Management (Monitor / Control / Programming / Test Console)
- Ready for IPIF to External Applications (for IP Console, OTAP) / Voice Logging
- Built-in SIP IF without External IP Console or Gateway (Digital Only)^{1,2,3}
- IP Remote Control Interface (IPRCI)³
- Enhanced Security (HTTPS)
- CW ID
- Hang Timer
- Multi-Site Conventional IP Network up to 16 Sites (for both Digital and Analog)²
- IP Networking Compatible with NXR-5000 (NXDN)^{2,3}, legacy KTI-3 (NXDN)^{2,3} and KTI-5 (DMR)²

Digital – Common

- | | |
|----------------------------------|---|
| Built-in AMBE+2™ Vocoder | Repeat Encrypted Voice/Data (AES / DES / DMR Enhanced Encryption) |
| Mixed Analog / Digital Operation | User List / Site Group Table |
| Site Roaming with Beacon | Radio Access Control ^{1,3} |
| RF-Link: NXDN / DMR ³ | |

Digital – NXDN™ Mode

- | | |
|--|--|
| NXDN Digital Voting ^{2,3} | FDMA – Very narrow 6.25 kHz & narrow 12.5 kHz bandwidths |
| NXDN Digital Site Roaming ³ | NXDN Conventional Operation ^{2,3} |
| NXDN RF Link ³ | |

Digital – DMR Mode

- | | |
|---|----------------------|
| TDMA 2-slot 12.5 kHz bandwidth equivalent to 6.25 kHz very narrow bandwidth | DMR Site Roaming |
| DMR Tier II Conventional Operation ² | DMR Auto Slot Select |

FM Modes – General

- | | |
|---------------------------|---------------------|
| FM Conventional Operation | Analog call routing |
| Multiple QT/DQT | Voting |

¹ Requires version upgrade of terminal to obtain compatibility with this model

² Software option

³ Future release

Accessories

All accessories may not be available in all markets.
Contact an authorized KENWOOD dealer for details and complete list of all accessories.

Supplied Accessories

DC Power Cable
Single mounting bracket
Dual mounting bracket
Rack handles



Example of rack mount options.

Specifications

General	NXR-1700E
Frequency Range	136 - 174 MHz
Channel Capacity	32
Channel Spacing	
Analog	30* / 25* / 15 / 12.5 kHz
Digital	12.5 / 6.25 kHz
PLL Channel Step	2.5 / 3.125 / 5 / 6.25 kHz
Power Supply	10.8 - 15.6 V DC
Current Drain	
Standby	0.6 A
Transmitting	12.0 A (Max. power), 9.0 A (25 W)
Operating Temperature	-22°F to +140°F (-30°C to +60°C)
Frequency Stability	± 0.5 ppm
Antenna Impedance	50 Ω
Dimensions	(W x H x D) Projections Not Included 8.21 x 1.73 x 8.33 in (208.5 x 44.0 x 211.5 mm)
Weight Radio	4.18 lb (1.9 kg)
FCC ID	K44513100
ISED Certification	282F-513100

*25/30 kHz in VHF Band excluding T-Band are not included in the models sold in the USA or US territories.
Analog measurements made per TIA603. Specifications are measured according to applicable standards.
Specifications shown are typical and subject to change without notice, due to advancements in technology.
Details and timing of firmware and software updates are subject to change without notice.

Receiver	NXR-1700E
Sensitivity	
DMR (5% BER)	0.22 μV
DMR (1% BER)	0.28 μV
NXDN 12.5 / 6.25 kHz (3% BER)	0.25 / 0.20 μV
Analog (12dB SINAD)	0.25 μV
Selectivity	
Analog @ 25 / 12.5kHz (TIA603)	83 / 77 dB
Analog @ 25 / 12.5kHz (TIA603E)	80 / 50 dB
FM Hum & Noise	
Analog @ 12.5kHz	50 dB
Analog @ 25kHz	55 dB
Intermodulation	80 dB
Spurious Rejection	90 dB

Transmitter	NXR-1700E
RF Power Output	50 - 1W (50 W @ 50% Duty, 25 W @ 100% Duty)
Spurious Emission	-80 dB
FM Hum & Noise	
Analog @ 12.5kHz	50 dB
Analog @ 25kHz	55 dB
Audio Distortion	1%
Emission Designator	16K0F3E, 11K0F3E, 7K60FXD, 7K60F7D, 7K60FXE, 7K60F7E, 7K60FXW, 7K60F7W, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

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MIL-STD & IP

MIL Standard	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures	MIL 810H Methods/Procedures
High Temperature	501.4/Procedure I, II	501.5/Procedure I, II	501.7/Procedure I, II
Low Temperature	502.4/Procedure II	502.5/Procedure II	502.7/Procedure II
Temperature Shock	503.4/Procedure I, II	503.5/Procedure I	503.7/Procedure I

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