

New Product Release Information

NEXEDGE®

NXR-710E / NXR-810E NEXEDGE® VHF/UHF Digital & FM Repeater/Base Units

April 2010

We are pleased to inform you of our new NEXEDGE® Digital System.



1. SCHEDULE

Launch : May.

2. OVERVIEW

Simple Analogue/ Digital Repeater

The NXR-710/810 are new NEXEDGE® repeaters supporting both FM analogue and new digital fleets. Kenwood offers simple conventional solution with secure digital voice and an array of advanced digital feature sets for business and government sectors.

NEXEDGE® conventional systems offer extended system sharing with conventional analogue systems. Also both FM analogue & digital units can share the same NEXEDGE® RF channel!

Multi-Mode Flexibility/Migration

NEXEDGE® equipment supports FM Analogue and NXDN™ Digital modes providing a self-paced migration path from analogue to fully digital.

Easy Migration MIXED MODE – Analogue and Digital

FM analogue & NXDN™ digital conventional radios can share and operate on the same RF channel. Both subscriber units and repeaters autosense incoming FM analogue or NXDN™ digital calls and talkback or repeat the same mode.

Extended Range over FM Analogue

As RF signal strength weakens with distance, FM analogue reception becomes increasingly noisy and intermittent. NXDN™'s low BER (Bit Error Rate) improves reception in fringe areas, thereby increasing the effective range generally by as much as twenty percent over analogue FM.

Channel Spacing / Band Width Selection

The NXR-710/810 uses various bandwidths including 12.5kHz (Narrow) or 6.25kHz (Very Narrow) band width operation in NXDN™ digital mode.

Meet Analogue & Digital ETSI European Standard

R&TTE Standard : EN 300 086, EN 300 113, , EN 300 219, EN301 489,
EN 301 166 (Voice & Data for 6.25 kHz Digital)

Safety Standard : EN 60065, EN 60950-1, EN 60215

GENERAL FEATURES

- 136-174 MHz, NXR-710E
- Output Power : 5-50W for VHF, 5-40W for UHF
- Repeater Operation
- 30 CH Scanning Base (Conventional)
- LED Status Indicators
- 2 W Front Panel Speaker (4 W External Speaker)
- Volume Control
- Program/Modem Interface
- Programmable AUX I/O's
- DTMF AUX Output Control
- External frequency reference (10MHz) connectivity
- Flash Firmware Upgrading
- 400-470MHz, NXR-810E
- Duplex/Simplex Base Operation
- Two-Digit LED Display
- 6 Programmable Function Keys
- Microphone Jack
- Remote Termination Interface
- DTMF Front Panel PF Key Control
- DTMF AUX Input Monitoring

DIGITAL – GENERAL

- NXDN™ Digital Air Interface
- NXDN™ Scrambler (Included)
- AMBE+2™ VOCODER
- 12.5 & 6.25 kHz Channels

DIGITAL – CONVENTIONAL MODE

- 16 RAN Repeater Controller Built-in
- 1,000 GIDs Per Repeater
- 1,000 UIDs Per Repeater
- Mixed FM/Digital Operation

DIGITAL – SINGLE SITE TRUNKING OPTION (Future Upgrade) MULTI-SITE IP NETWORK OPTION (Future Upgrade)

FM MODES – GENERAL

- VHF/UHF: 25, 20 & 12.5 kHz Channels

FM CONVENTIONAL MODE

- 16 QT/DQT Repeater Control Built-in
- External FM Controller Interface
- Hang Timer / Time Out Timer / CW ID
- EIA Voter Tone Generation

FM TRUNKED MODE

- External MPT Controller Interface



3. OPTIONAL ACCESSORIES

- KMC-30 Standard Hand-Microphone
- KMC-35 Hand Microphone with IP55
- KMC-9C Desk-Top Microphone
- KES-5 External Speaker
- KPG-129DM Programming Software
- Interface Unit for Interconnect & IP Network (Future availability)

4. SUPPLIED ACCESSORIES

- Users Manual English, French, Spanish, Germany, Dutch, Italian, Greek, Turkish
- Mounting Bracket (Handle)
- Front Glass
- DC-Cable

Notes:

FleetSync® is a registered trademark of Kenwood Corporation.

LTR® is a registered trademark of Transcript International.

AMBE+2™ is a trademark of Digital Voice Systems Inc.

Windows® is a registered trademark of Microsoft Corporation.

NXDN™ is a trademark of Kenwood Corporation and Icom Inc.

NEXEDGE® is a trademark of Kenwood Corporation. For details, please refer to the web site:

<http://nexedge.kenwood.com/>

5. SPECIFICATIONS: NXR-710E/810E

General		NXR-710E	NXR-810E
Frequency Range		136-174 MHz	400-470 MHz
Number of Channels		30 ch	
Channel Spacing	Analogue	25 / 20 / 12.5 kHz	
	Digital	12.5 / 6.25 kHz	
PLL Channel Step	kHz	2.5 / 3.125	3.125 / 5
Antenna Impedance		50 Ω	
Operating Voltage		13.2VDC(10.8- 15.6V DC)	
Current Drain	Stand-by	0.5 A	
	Receive	1.0 A	
	Transmit	11.0 A	
Duty Cycle (TX, RX)		100% at 25W, 50% at maximum power	
Operating Temperature Range		-30°C to +60°C	
Frequency Stability(-30°C to +60°C)		±1.0 ppm	
Dimensions (W x H x D, Projections not included)		483 x 88 x 340 mm	
Weight		9.7kg	
Applicable Standards	ETSI R&TTE	EN 300 086, EN 300 113, , EN 300 219, EN301 489, EN 301 166	
	ETSI Safety	EN 60065, EN 60950-1, EN 60215	
Receiver		NXR-710E	NXR-810E
Sensitivity (Analogue)	EIA 12dB SINAD	0.28 μV	
	EN 20dB SINAD	-3 dB μV (0.35 μV)	
Sensitivity (Digital)	3% BER	0.28 μV / 0.22 μV	
	(12.5kHz/6.25kHz) 1% BER	-4 dB μV (0.32 μV) / -6 dB μV (0.25 μV)	
Adjacent Channel Selectivity (Analogue) (25kHz / 20kHz/12.5kHz)		83dB / 81dB / 77dB	80dB / 78dB / 74dB
Intermodulation (Analogue)		72dB	
Spurious Response Rejection (Analogue)		85dB	
Audio Distortion		Less than 2.5% at 1kHz	
Audio Output (4Ω impedance)		4W with less than 5% distortion	

Transmitter	NXR-710E	NXR-810E
RF Power output	5– 50W	5- 40W
Modulation Limiting (Analogue)	±5.0 kHz at 25 kHz ±4.0 kHz at 20kHz ±2.5 kHz at 12.5 kHz	
Spurious Emission	-36 dBm≤1 GHz, -30dBm > 1 GHz	
FM Noise (EIA) (Analogue, 25kHz/20kHz*/12.5kHz)	55dB / 53dB / 50dB	
Modulation Distortion	Less than 1% at 1kHz	
Modulation	16K0F3E, 14K0F3E, 14K0F2D, 12K0F2D, 8K50F3E, 7K50F2D, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	

*Measurements made per EN Standards.
 Specifications shown are typical. Radios meet applicable regulatory requirements.
 Kenwood follows a policy of continuous advancement in development.
 For this reasons, specifications may be changed without notice.*