

Specification Sheet

Kenwood Nexedge NX-200S/NX-300S



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2. OVERVIEW

Simplified NEXEDGE Portable

The new NX-200S / 300S build on the outstanding performance of our existing NEXEDGE LCD-equipped models, but have been simplified for use in small-to-mid sized systems. However they still provide the user with both digital conventional and digital trunked modes, as well as plenty of FM analogue features, on up to 64 channels.

Multiple Solutions – One System

NX-200S / 300S use advanced DSP-driven digital voice technologies and support both FM analogue and new digital fleets. System type conversion or expansion only requires software options and/or additional base station units, i.e., no major hardware upgrading. Kenwood offers NEXEDGE™ conventional, trunked and wide area trunked IP network solutions with secure digital voice and an array of advanced digital feature sets for business and government sectors.

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

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.

Channel Spacing / Band Width Selection

12.5 kHz/ 6.25 kHz Band Width Operation (Digital Mode)

The NX-200S / 300S can be used for 12.5 kHz (Narrow) or 6.25 kHz (Very Narrow) band width operation in NXDN™ digital mode.

25 kHz/ 20 kHz / 12.5 kHz per Channel (Analogue mode)

The NX-200S / 300S can be used for 25 kHz (Wide), 20 kHz (Semi Wide) or 12.5 kHz (Narrow) spacing operation per channel in analogue mode.

Extended Range over FM

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

Natural Sounding Digital Voice plus Enhanced Kenwood Audio

The AMBE+2™ VOCODER, a state-of-the-art voice digitization technology, replicates an individual's natural human speech nuances accurately unlike early technologies that sounded unnatural and synthesized. The AMBE+2™ offers superior voice quality at varying signal strengths even while driving at motorway speeds.

In addition to this technology, Kenwood utilizes its long standing audio heritage to optimize voice frequency components so that the audio output cuts through typical ambient noise. This enhancement and the noise reduction also provide clarity and low distortion in FM analogue mode.

Secure Voice & Data

NEXEDGE™ offers voice security for personnel safety and reduced liability exposure by protecting sensitive communications for your facilities and operations.

Inherent Level of Security in Digital Mode

NXDN™ digital air interface prevents casual eavesdropping. Furthermore, the built-in NXDN™ Digital Scrambler allows more secure Voice & Data communication.

Voice Inversion Scrambler Built-in

The built-in analogue voice inversion scrambler provides basic communications protection against casual eavesdropping.

GENERAL FEATURES

- 5 W
- 64 CH-GID / 4 Zones
- On/Off Volume Knob
- 2 Side PF Keys
- 500 mW Speaker Audio
- Emergency Call Features
- Special Alert Tone Patterns
- Busy Channel Lockout
- Low Battery Alert
- Weather-sealed ACC Connector
- KMC-38GPS Speaker Mic Option
- Flash Firmware Upgrading
- MIL-STD-810 C/D/E/F
- VGS-1 Voice Guide/Storage Option
- IP-54/55 Water & Dust Intrusion
- Transparent Data Mode
- Transmit/Busy/Call Alert/Warn LED
- 16-Position Mechanical Selector
- Emergency/AUX Key
- VOX Ready
- Emergency Man-Down Option
- Time Out Timer
- LED Battery Status Indicator
- Battery Saver
- MIL-Spec Speaker Mic Options
- KPG-111D Windows® FPU
- Cloning
- Easy Option Port
- Programmable TX/RX Indication (On/Off)
- Lone Worker

DIGITAL – GENERAL

- NXDN™ Digital Air Interface
- 6.25 & 12.5 kHz Channels
- Paging Call
- NXDN™ Scrambler
- Remote Stun/Kill
- AMBE+2™ VOCODER
- Over-the-Air Alias (TX)
- Emergency Call
- Status Messaging*
- GPS Location with Voice

* Can be used by pre-programmed key operation

DIGITAL – CONVENTIONAL MODE

- 64 (including “none”) Radio Access Numbers (RAN)
- Individual & Group Selective Call*
- Mixed FM/Digital Operation

* Can be used by pre-programmed key operation

DIGITAL – TRUNKING MODE

- Individual Private Call
- Priority Monitor ID 1 & 2
- Broadcast Call
- Group Call
- Late Entry
- Remote Group Add

DIGITAL – TRUNKING MULTI-SITE MODE

- 60,000 GIDs per Network
- Wide Area All Group Call
- Multi-Site IP Network Compatible
- 60,000 UIDs per Network
- Auto-Roaming / Registration
- Group Registration

SCAN TYPES (FM & NXDN™ CONVENTIONAL)

- Single/Multi-Zone Scan
- List Scan
- Conventional Scan
- Dual Priority Scan

FM MODES – GENERAL

- 25, 20 & 12.5 kHz Channels
- DTMF Encode* / Decode
- Voice Inversion Scrambler
- FleetSync®/II*
- Companded Audio

* Some screen-based functions not available on the NX-200S/300S

** Can be used by pre-programmed key operation

FM CONVENTIONAL ZONES

- QT / DQT
- Single/Two-Tone Encode*
- Operator Selectable Tone
- Two-Tone Decode
- Call Key 1-6

* Can be used by pre-programmed key operation

FM LTR® TRUNKED ZONES

- Kenwood LTR® Features

FleetSync®/II (FM)

- PTT ID Digital ANI (TX)
- Status Messaging
- Caller ID Display
- Power On/Off Status Messages
- PTT ID & Emergency GPS Reporting
- VGS-1 GPS Data Storage
- GPS Ack Request
- Selective Call & Group Call
- Emergency Status
- Send GPS (KMC-38GPS)
- Status Message Block GPS Reporting
- PC Serial Interface

3. OPTIONAL ACCESSORIES

■ KBH-11	Standard Belt-Clip
■ KNB-47L	Lithium-Ion Battery (1,950 mAh)
■ KNB-48L	Lithium-Ion Battery (2,550 mAh)
■ KRA-22	VHF short Antenna
■ KRA-23	UHF short Antenna
■ KRA-26	VHF Antenna
■ KRA-27	UHF Antenna
■ KSC-32	Rapid Charger
■ KSC-326	Multiple Charger
■ KMC-41	Heavy-duty Speaker-Microphone with noise-cancelling
■ KMC-42W	IP67 Heavy-duty Speaker-Microphone with noise-cancelling
■ KMC-38GPS	GPS Speaker-Microphone
■ KEP-1	Earphone Kit
■ KHS-11BL	2-wires Microphone Kit
■ KHS-12BL	3-wires Microphone Kit
■ KHS-14	Single Headset with a boom-Mic and Inline-PTT
■ KHS-15-OH	Heavy-duty Noise Reduction Headset with inline-PTT
■ KPG-36A	Programming Interface cable
■ KCT-53U	USB Adapter
■ KPG-111D	Programming Software (Version 1.xx or more)
■ VGS-1	Voice Guide and Storage unit
■ KVC-21	Vehicular Charger
■ KAS-10	AVL / Dispatch Software

4. SUPPLIED ACCESSORIES

■ Users Manual	English, French, Germany, Dutch, Italian, Spanish, Greek, Turkish
■ KBH-11	Belt-Clip

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 (Typical) : NX-200S (E) / 300S (E) (Tentative)

General		NX-200S(E)	NX-300 S(E)
Frequency Range		136-174 MHz	400-470 MHz
Number of Channels		64 ch	
Channel Spacing	Analogue	25 / 20 / 12.5 kHz	
	Digital	12.5 / 6.25 kHz	
Antenna Impedance		50 Ω	
Operating Voltage		7.5VDC±20%	
Battery Life (5-5-90)	with KNB-48L	More than 14.5 hours	
Operating Temperature Range		-30 °C to +60 °C	
Frequency Stability(-30 °C to +60 °C)		±2.0ppm	±1.0ppm
Dimensions (W x D x H, Radio only)		58 x 127.5 x 41.3 mm	
Weight	Radio only	250g	
	with KNB-47L	375g	
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	
Environmental Specification and IP Rating		IP54/55, MIL-STD-810 C,D,E,F	
Receiver			
Sensitivity (Analogue)	EIA 12dB SINAD	0.28μV/ 0.28μV/ 0.32μV	
	(25kHz / 20kHz/12.5kHz) EN 20dB SINAD	-3dB μV/ -3dB μV/ -1dB μV	
Sensitivity (Digital)	3% BER	0.32μV/ 0.25μV	
	(12.5kHz/6.25kHz) 1% BER	-1dB μV/ -4dB μV	
Adjacent Channel Selectivity (Analogue) (25kHz / 20kHz/12.5kHz)		76dB / 74dB / 68dB	
Intermodulation (Analogue)		65dB	
Spurious Response Rejection (Analogue)		75dB	
Audio Output (8Ω impedance)		500mW with less than 3% distortion	

Transmitter	
RF Power output	High / Low
5 W / 1 W	
Modulation Limiting (Analogue)	±5.0 KHz at 25 kHz ±4.0 KHz at 20 kHz ±2.5 KHz at 12.5 kHz
Spurious Emission	-36 dBm ≤ 1 GHz, -30dBm > 1 GHz
FM Noise (EIA) (Analogue, 25kHz / 20kHz / 12.5kHz)	45dB / 45dB / 40dB
Modulation Distortion	Less than 3%
Microphone Impedance	1.8 kΩ
Modulation	16K0F3E, 14K0F3E, 14K0F2D, 12K0F2D, 8K50F3E, 7K50F2D, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

MIL Standard	Methods / Procedures			
	MIL 810C	MIL 810D	810E	810F
Low Pressure	500.1 / I	500.2 / I, II	500.3 / I, II	500.4 / I, II
High Temperature	501.1 / I, II	501.2 / I, II	501.3 / I, II	501.4 / I, II
Low Temperature	502.1 / I	502.2 / I, II	502.3 / I, II	502.4 / I, II
Temperature Shock	503.1 / I	503.2 / I	503.3 / I	503.4 / I, II
Solar Radiation	505.1 / I	505.2 / I	505.3 / I	505.4 / I
Rain	506.1 / I, II	506.2 / I, II	506.3 / I, II	506.4 / I, III
Humidity	507.1 / I, II	507.2 / II, III	507.3 / II, III	507.4
Salt Fog	509.1 / I	509.2 / I	509.3 / I	509.4
Dust	510.1 / I	510.2 / I	510.3 / I	510.4 / I, III
Vibration	514.2 / VIII, X	514.3 / I	514.4 / I	514.5 / I
Shock	516.2 / I, II, V	516.3 / I, IV	516.4 / I, IV	516.5 / I, IV

*Kenwood follows a policy of continuous advancement in development.
For this reasons, specifications may be changed without notice.*