# KENWOOD

## NEXEDGE®

# NX-5200/5300/5400

## VHF/UHF/700-800MHz MULTI-PROTOCOL DIGITAL & ANALOG PORTABLE RADIOS

The NX-5000 Series offers unsurpassed interoperability for a wide variety of users as it supports three digital CAIs — NXDN, DMR and P25 (Phase 1 & 2) — plus FM analog in a single radio. Best of all, a desired CAI can be selected at will, giving you the freedom to migrate at your own pace — whether you are intent on going fully digital, undecided about which digital system to pick, or just wanting to maintain both digital and analog for a while. A NX-5000 radio can simultaneously support two digital protocols plus analog, offering the following combinations: FM/DMR/NXDN, FM/NXDN/P25, and FM/DMR/P25.

*Full Keypad & Standard Models*

### FEATURES

- Multi-Digital operation in NXDN, DMR, and P25 (Phase 1 & 2)
- Any combination of two digital protocols may be selected from NXDN, DMR, and P25
- Mixed Digital & FM Analog Operation allows intelligent migration in mixed sites and easy migration with digital radios in other sites
- Large, Color 1.74" (240 x 180 pixels) Transflective TFT Display for better interface even in direct sunlight and with use of polarized sunglasses
- Easy to follow GUI for at-a-glance operational status and Multi-line Text to convey information
- 4-way Directional-pad (D-pad) and 2-Position Lever Switch for intuitive control
- Built-In GPS Receiver/Antenna for effective fleet management
- Bluetooth® Module Built-in for hands-free operation
- Renowned KENWOOD Audio Quality achieved with Active Noise Reduction (ANR) that utilizes built-in DSP with two microphones for suppression of ambient noise
- Built-in 56-bit DES Encryption
- Optional 256-bit AES Encryption
- Built-in Motion Sensor for man down detection
- microSD/microSDHC Up to 2GB/32GB Memory Card Slot for increased memory capacity for "Voice & Data"
- IP67/68 and MIL-STD-810 C/D/E/F/G
- 6 W (136-174 MHz ) Models
- 5 W (380-470, 450-520 MHz) Models
- 3 W (700/800 MHz) Models
- Full Key Models (w/numeric keypad) and Standard Key Models (w/o numeric keypad)
- Maximum of 1024 CH, 128 Zones (4000 Ch. Opt)
- 1 W Speaker Audio

### DIGITAL – NXDN® MODE

- Gen2 & NXDN® Type-C Trunked Operation
- NXDN Conventional Operation
- 6.25 & 12.5 kHz Channels
- Over-the-Air Alias
- Over-the-Air Programming
- Paging Call
- Emergency Call
- All Group Call
- Status Messaging
- Remote Stun/Kill
- Remote Check
- Short & Long Data Messages
- NXDN Digital Scrambler

### DIGITAL – DMR MODE

- Complies with ETSI DMR Tier II standards
- Two-slot TDMA in 12.5kHz channels
- Call Interruption
- Dual-slot Direct Mode
- Energy Efficient

### DIGITAL - P25 MODE

- P25 Phase 1 Conventional/Trunked Operation
- P25 Phase 2 Trunked Operation
- Talk Group ID Lists
- Individual ID Lists
- Caller ID Display
- Remote Monitor/Remote Check
- Radio Inhibit
- Encryption Key Zeroize & Retention
- P25 Over-the-Air Re-keying
- P25 Over-the-Air Programming

### FM MODES – GENERAL

- Conventional & LTR Zones
- NPSPAC (USA only) Channels (±4.0 Modulation)
- FleetSync®/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / Text Messages
- MDC-1200: PTT ID ANI / Caller ID Display, Emergency, Radio Check / Inhibit
- QT / DQT & Two-Tone
- Built-in Voice Inversion Scrambler

### INTELLIGENT BATTERY SYSTEM (Option)

- System consists of the optional high-capacity Battery Series (KNB-L1/L2/L3/N4/LS5), Rapid Charger (KSC-Y32), and Battery Reader (KAS-12) software
- Up to 60 Rapid Chargers can be chain-connected to a PC installed with the KAS-12
- KAS-12 Battery Reader software can display and manage information including battery type, model name, voltage, temperature, discharge cycle, expected life, and remaining capacity
- Up to 5,000 batteries can be managed at a time (requires an additional option)

### Multi-Protocol

*Unsurpassed interoperability for Public Safety and Enterprise radio users with the freedom to migrate at your own pace.*

### Gen2

*Scalable server-based system architecture for management of NEXEDGE wide area digital communications systems.*

### Klarity

*The ultimate level of sound clarity technology combining Optimization, advanced Sound Analysis and Active Noise Reduction.*

P25  NXDN®  DMR  Gen2  Bluetooth®  microSD  GPS  FleetSync  JVCKENWOOD

- **KNB-L1/L2/L3**
Li-ion Battery Pack
(IP67/68 Immersion)

- **KNB-N4**
Ni-MH Battery Pack
(IP67/68 Immersion)

- **KNB-LS5**
Li-ion Battery (2,000mAh)
CSA US Intrinsically Safe

- **KBP-8**
Alkaline Battery Case

- **KSC-Y32**
Rapid Charger

- **KSC-32**
Rapid Charger

- **KSC-326/326S**
Rapid Charger
(6-unit Rapid Rate)

- **KAS-12/PRO**
Battery Reader
(PC Software)

- **KRA-22**
VHF Helical Antenna
(Low Profile)

- **KRA-23**
UHF Helical Antenna
(Low Profile)

- **KRA-26**
VHF Helical Antenna
(Standard Length)

- **KRA-27**
UHF Whip Antenna
(Standard Length)

- **KRA-32**
700/800MHz
Whip Antenna

- **KRA-41**
VHF Stubby Antenna

- **KRA-42**
UHF Stubby Antenna

- **KMC-42WD**
Speaker Microphone
(IP67)

- **KMC-54W**
Speaker Microphone
• 2-mic digital noise
cancelling via the radio's DSP
• 3.5mm-diameter EP jack
• Complies with MIL-STD 810C/D/E/F/G
• IP65/67 Dust & Water

- **KWD-AE30/AE31**
Secure Cryptographic Module

- **KPG-180AP**
OTAP Manager

- **KBH-11**
Belt Clip

# Specifications

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

| GENERAL | NX-5200 | NX-5300 | NX-5400 |
|---|---|---|---|
| Frequency Range | 136-174 MHz | Type 1: 450-520 MHz
Type 2: 380-470 MHz | RX: 763-776, 851-870 MHz
TX: 763-776, 793-806, 806-825, 851-870 MHz |
| Max. Channels Per Radio | 1024 (Up to 4000 CH with option) | | |
| Number of Zones | 128 | | |
| Max. Channels per Zone | 512 | | |
| Channel Spacing | | | |
| Analog | 12.5/15/20/25*/30* kHz | 12.5/25* kHz | 12.5/25 kHz |
| Digital | 6.25 kHz/12.5 kHz | 6.25 kHz/12.5 kHz | 12.5 kHz (6.25 kHz) |
| Power Supply | 7.5V DC ± 20% | | |
| Battery Life | (5-5-90/10-10-80 duty cycle) | | |
| KNB-L1 (2,000 mAh) | 10 hours / 6.5 hours | | |
| KNB-L2 (2,600 mAh) | 12.5 hours / 8.5 hours | | |
| KNB-L3 (3,400 mAh) | 17 hours / 11 hours | | |
| KNB-N4 (2,500 mAh) | 12 hours / 8.5 hours | | |
| KBP-8 (w/AA x12) | High Power 11 hours / 8 hours / Low Power 26 hours / 18.5 hours | | |
| Operating Temperature | -22ºF to +140ºF (-30ºC to +60ºC) | | |
| Frequency Stability | ±2.0 ppm | ±1.0 ppm | ±1.5 ppm |
| Dimensions/Weight Radio w/battery | (W x H x D) Projections Not Included | | |
| KNB-L1 (2,000 mAh) | 2.28 x 5.47 x 1.44 in. (58.0 x 138.9 x 36.5 mm) | | 13.5 oz (382 g) |
| KNB-L2 (2,600 mAh) | 2.28 x 5.47 x 1.56 in. (58.0 x 138.9 x 39.5 mm) | | 14.3 oz (406 g) |
| KNB-L3 (3,400 mAh) | 2.28 x 5.47 x 1.77 in. (58.0 x 138.9 x 44.9 mm) | | 15.8 oz (449 g) |
| KNB-N4 (2,500 mAh) | 2.28 x 6.55 x 1.78 in. (58.0 x 166.4 x 45.2 mm) | | 20.4 oz (579 g) |
| KBP-8 | 2.64 x 8.59 x 2.12 in. (67.0 x 218.3 x 53.9 mm) | | 5.1 oz (712 g) |
| FCC ID | | | |
| Type 1 | K44431400 | K44431500 | ALH442000 |
| Type 2 | | K44431501 | |
| IC Certification | | | |
| Type 1 | 282F-431400 | - | 282D-442000 |
| Type 2 | | 282F-431501 | |

| RECEIVER | NX-5200 | NX-5300 | NX-5400 |
|---|---|---|---|
| Sensitivity | | | |
| NXDN® 6.25 kHz Digital (3% BER) | 0.20 µV | | |
| NXDN®12.5 kHz Digital (3% BER) | 0.25 µV | | |
| DMR Digital (5% BER) | 0.25 µV | | |
| DMR Digital (1% BER) | 0.40 µV | | |
| P25 Digital (5% BER) | 0.25 µV | | |
| P25 Digital (1% BER) | 0.40 µV | | |
| Analog (12dB SINAD) | 0.25 µV | | |
| Selectivity | | | |
| Analog @ 12.5 kHz | 67 dB | | 64 dB |
| Analog @ 25 kHz | 73 dB | | |
| Intermodulation | 73 dB | | 75 dB |
| Spurious Rejection | 80 dB | 75 dB | |
| Audio Distortion | 3% | | |
| Audio Output Power | 500 mW/8Ω (3% Distortion) / 1,000 mW/8Ω (5% Distortion) | | |
| TRANSMITTER | | | |
| RF Power Output Power | 6 W to 1 W | 5 W to 1 W | 3 W to 1 W |
| Spurious Emission | -70 dB | | |
| FM Hum & Noise | | | |
| Analog @ 12.5 kHz | 40 dB | | |
| Analog @ 25 kHz | 45 dB | | |
| Audio Distortion | 2% | | |
| Emission Designator | 16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D | | 16K0F3E, 14K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXE, 7K60FXD,4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D |

*25 and 30 kHz are not included in the models sold in the USA or US territories.
Analog measurements made per TIA 603 and specifications shown are typical.
P25 Digital measurements made per TIA 102CAAA and specifications shown are typical.
Specifications are subject to change without notice, due to advancements in technology.

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# MIL-STD & IP

| MIL Standard | MIL 810C Methods/Procedures | MIL 810D Methods/Procedures | MIL 810E Methods/Procedures | MIL 810F Methods/Procedures | MIL 810G Methods/Procedures |
|---|---|---|---|---|---|
| Low Pressure | 500.1/Procedure I | 500.2/Procedure I, II | 500.3/Procedure I, II | 500.4/Procedure I, II | 500.5/Procedure I, II |
| High Temperature | 501.1/Procedure I, II | 501.2/Procedure I, II | 501.3/Procedure I, II | 501.4/Procedure I, II | 501.5/Procedure I, II |
| Low Temperature | 502.1/Procedure I | 502.2/Procedure I, II | 502.3/Procedure I, II | 502.4/Procedure I, II | 502.5/Procedure I, II |
| Temperature Shock | 503.1/Procedure I | 503.2/Procedure I | 503.3/Procedure I | 503.4/Procedure I, II | 503.5/Procedure I |
| Solar Radiation | 505.1/Procedure I | 505.2/Procedure I | 505.3/Procedure I | 505.4/Procedure I | 505.5/Procedure I |
| Rain | 506.1/Procedure I, II | 506.2/Procedure I, II | 506.3/Procedure I, II | 506.4/Procedure I, III | 506.5/Procedure I, III |
| Humidity | 507.1/Procedure I, II | 507.2/Procedure II, III | 507.3/Procedure II, III | 507.4 | 507.5/Procedure II |
| Salt Fog | 509.1/Procedure I | 509.2/Procedure I | 509.3/Procedure I | 509.4 | 509.5 |
| Dust | 510.1/Procedure I | 510.2/Procedure I | 510.3/Procedure I | 510.4/Procedure I, III | 510.5/Procedure I |
| Vibration | 514.2/Procedure VIII, X | 514.3/Procedure I | 514.4/Procedure I | 514.5/Procedure I | 514.6/Procedure I |
| Shock | 516.2/Procedure I, II, V | 516.3/Procedure I, IV | 516.4/Procedure I, IV | 516.5/Procedure I, IV | 516.6/Procedure I, IV |
| Immersion | - | - | - | 512.4/Procedure I | 512.5/Procedure I |
| International Protection Standard | | | | | |
| Dust & Water Protection | IP54/55 | | | | |
| Immersion | IP6768* | | | | |

*Conditions: Portable radio immersed for 2 hours at a depth of 1 meter (IP68=1m/2H)

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