

## NX-5200S/5300S

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

This versatile handheld radio supports both NXDN® and DMR digital protocols as well as mixed digital & FM analog operation, enabling it to serve with distinction in a wide range of enterprise and operation-critical applications. Compact yet designed with durability in mind, it's packed with convenient features like Bluetooth® for hands-free operation and built-in GPS. Two different models with 14-pin Universal connector are available: Full Keypad model with LCD and Standard Keypad model with LCD and a large 4-way D-pad. Additionally, for expansion capability a software license certification system facilitates extensive customization.



Full-Keypad & Standard Models

### Features

- Multi-protocol digital radio: Designed to operate under NXDN® or DMR digital, and FM analog protocols
- Mixed Digital & FM Analog Operation allows intelligent migration in mixed sites and easy migration with digital radios in other sites
- Large, 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 and incident management
- Bluetooth® Module Built-in for hands-free and IoT applications 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
- Full Key Models (w/numeric keypad) and Standard Key Models (w/o numeric keypad)
- Maximum of 1024 CH, 128 Zones
- 1 W Speaker Audio

### Digital – NXDN® Mode

- |  |                                 |
|--|---------------------------------|
| NXDN Conventional                      | Remote Stun/Kill                |
| NXDN Type-C & Gen2 Trunking (Optional) | Remote Check                    |
| 6.25 & 12.5 kHz Channels               | Over-the-Air Alias (OAA)        |
| Paging Call                            | Over-the-Air Programming (OTAP) |
| Emergency Call                         | Short & Long Data Messages      |
| All Group Call                         | NXDN Digital Scrambler          |
| Status Messaging                       |                                 |

### Digital – DMR Mode

- |                                    |                          |
|------------------------------------|--------------------------|
| Two-slot TDMA in 12.5 kHz channels | Call Interruption        |
| DMR Tier 2 Conventional            | Dual-slot Direct Mode    |
| DMR Tier 3 Trunking (Optional)     | Energy Efficient         |
| DMR Over-the-Air Programming       | Optional ARC4 encryption |

### FM Modes – General

- |   |  |
|---|--|
| Conventional & LTR Zones  | MDC-1200: PTT ID ANI / Caller ID Display, Emergency, Radio Check / Inhibit |
| FleetSync®/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / Text Messages | 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), Rapid Charger (KSC-Y32), and Battery Reader (KAS-12) software | 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 60 Rapid Chargers can be chain-connected to a PC installed with the KAS-12  | Up to 5,000 batteries can be managed at a time (requires an additional option)   |

# Accessories

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

<p><b>KNB-L1/L2/L3</b> Li-ion Battery Pack (IP67/68 Immersion)</p> 	<p><b>KSC-32</b> Rapid Charger</p> 	<p><b>KRA-23</b> UHF Helical Antenna (Low Profile)</p> 	<p><b>KRA-41</b> UHF Stubby Antenna</p> 	<p><b>KBH-11</b> Belt Clip (2.5")</p> 
<p><b>KNB-N4</b> Ni-MH Battery Pack (IP67/68 Immersion)</p> 	<p><b>KSC-326AK</b> Rapid Charger (6-unit Rapid Rate)</p> 	<p><b>KRA-26</b> VHF Helical Antenna (Standard Length)</p> 	<p><b>KRA-42</b> UHF Stubby Antenna</p> 	<p><b>KWD-AE30/AE31</b> Secure Cryptographic Module</p> 
<p><b>KBP-8</b> Alkaline Battery Case</p> 	<p><b>KAS-12/PRO</b> Battery Reader (PC Software)</p> 	<p><b>KRA-27</b> UHF Whip Antenna (Standard Length)</p> 	<p><b>KMC-72W</b> Speaker Microphone (IP67)</p> 	<p><b>KPG-180AP</b> OTAP Manager</p> 
<p><b>KSC-Y32</b> Rapid Charger</p> 	<p><b>KRA-22</b> VHF Helical Antenna (Low Profile)</p> 	<p><b>KRA-32</b> 700/800MHz Whip Antenna</p> 	<p><b>KMC-70M</b> Speaker Microphone (with dual-sided 2-mic for superior ANR, IP67)</p> 	

# Specifications

General	NX-5200S	NX-5300S
Frequency Range	136-174 MHz	Type 1: 450-520 MHz Type 2: 380-470 MHz
Max. Channels Per Radio	1024	
Number of Zones	128	
Max. Channels per Zone	512	
Channel Spacing		
Analog	12.5/15/20/25*/30* kHz	12.5/25* kHz
Digital	6.25 kHz/12.5 kHz	6.25 kHz/12.5 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	-22°F to +140°F (-30°C to +60°C)	
Frequency Stability	± 0.5 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)	25.1 oz (712 g)
FCC ID		
Type 1	K44431400	K44431500
Type 2		K44431501

\*25/30 kHz in VHF/UHF Bands (except 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 are subject to change without notice, due to advancements in technology.

Receiver	NX-5200S	NX-5300S
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	
Analog (12dB SINAD)	0.25 µV	
Selectivity		
Analog @ 12.5kHz	67 dB	75 dB
Analog @ 25kHz	73 dB	
Intermodulation	73 dB	75 dB
Spurious Rejection	80 dB	75 dB
Audio Distortion	3%	
Audio Output Power	500 mW/8Q (3% Distortion) / 1,000 mW/8Q (5% Distortion)	

Transmitter	NX-5200S	NX-5300S
RF Power Output	6 W to 1 W	5 W to 1 W
Spurious Emission	-70 dB	
FM Hum & Noise		
Analog @ 12.5kHz	40 dB	
Analog @ 25kHz	45 dB	
Audio Distortion	Less than 2%	
Emission Designator	16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W, 8K30F1E, 8K30F1D, 8K30F1W, 7K60F3E, 7K60F3D, 4K00F1E, 4K00F1D, 4K00F1W, 4K00F2D	

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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	5001/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II	500.5/Procedure I, II
High Temperature	5011/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	5021/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II	502.5/Procedure I, II
Temperature Shock	5031/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II	503.5/Procedure I
Solar Radiation	5051/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I	505.5/Procedure I
Rain	5061/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III	506.5/Procedure I, III
Humidity	5071/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4	507.5/Procedure II
Salt Fog	5091/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4	509.5
Dust	5101/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III	510.5/Procedure I
Vibration	5142/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I	514.6/Procedure I
Shock	5162/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	IP54/55	IP67/68*
Dust & Water Protection	IP54/55	IP67/68*
Immersion	IP67/68*	IP67/68*

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

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