

## NX-5200/5300

NEXEDGE VHF/UHF PORTABLE RADIOS

**NXDN™**

**DMR**



**DMR T3&S**  
-based TRUNKING

**DMR Auto Slot Select**



**GPS**

**FleetSync®**

**5-tone**

### FEATURE HIGHLIGHTS

- **Multi-Digital** operation in NXDN, DMR and P25 (Phases 1 & 2) protocols
- **Any combination of two digital protocols** can be selected from NXDN, DMR, and P25
- **Mixed Digital & FM Analogue Operation** allows intelligent migration in mixed sites and easy migration with digital radios in other sites
- **Large, Colour 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 checking and **Multi-line Text** to convey more information
- **4-way Directional-pad (D-pad)** and **2-Position Lever Switch** for intuitive control and operation
- **Built-In GPS Receiver/Antenna** for effective fleet management
- **Bluetooth® Module built-in** for hands-free operation
- Renowned KENWOOD Audio Quality can be achieved with **Active Noise Reduction (ANR)** that utilises 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 life-critical man down detection
- **microSD/SDHC\* Memory Card Slot** (\*Up to 2GB/32GB)
- **IP67/68** and **MIL-STD-810 C/D/E/F/G**

### GENERAL FEATURES

- 6 W (136-174 MHz) Model
- 5 W (400-470 MHz) Model
- Full Key Models (w/ numeric keypad) and Standard Key Models (w/o numeric keypad)
- Maximum of 4,000 CH/Radio capacity, 512 CH/Zone, 128 Zones
- AMBE+2™ Enhanced Vocoder
- 1 W Loud 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

- S-Trunking
- DMR Tier III Trunking
- DMR Tier II conventional
- DMR Auto Slot Select
- Site Roaming
- Two-slot TDMA in 12.5kHz channels
- Call Interruption
- Dual-slot Direct Mode
- Energy Efficient
- DMR Enhanced Encryption
- DMR Over-the Air-Programming

### 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
- P25 Enhanced Encryption

### ANALOGUE – FM MODE

- Conventional & LTR Zones
- 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 & 5-Tone

### INTELLIGENT BATTERY SYSTEM

- System consists of a Li-ion or Ni-MH rechargeable battery (KNB-L1/L2/L3/N4), Rapid Charger (KSC-Y32), and Battery Reader (KAS-12/12PRO) software
- Up to 60 Rapid Chargers can be chain-connected to a PC
- KAS-12 Battery Reader software can display and manage information
- Up to 5,000 batteries can be managed at a time with the addition of optional KAS-12PRO license upgrade



Full Keypad Model



Limited Keypad Model

## OPTIONAL ACCESSORIES

<ul style="list-style-type: none"> <li><b>KNB-L1</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/2000 mAh)</li> <li><b>KNB-L2</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/2600 mAh)</li> <li><b>KNB-L3</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/3400 mAh)</li> <li><b>KNB-N4</b> Ni-MH BATTERY PACK, IP67/68 (7.2 V/2500 mAh)</li> </ul>	<ul style="list-style-type: none"> <li><b>KSC-Y32</b> RAPID CHARGER</li> <li><b>KSC-32/32S</b> RAPID CHARGER</li> <li><b>KSC-326/326S</b> MULTIPLE CHARGER (6-unit Rapid Rate)</li> <li><b>KBP-8</b> BATTERY CASE (12AA Alkaline Battery)</li> </ul> <p>Intrinsically Safe Batteries are also available.</p>	<ul style="list-style-type: none"> <li><b>KRA-22</b> VHF HELICAL ANTENNA (Low Profile)</li> <li><b>KRA-23</b> UHF HELICAL ANTENNA (Low Profile)</li> <li><b>KRA-26</b> VHF HELICAL ANTENNA (Standard Length)</li> <li><b>KRA-27</b> UHF WHIP ANTENNA (Standard Length)</li> <li><b>KRA-41</b> VHF STUBBY ANTENNA</li> <li><b>KRA-42</b> UHF STUBBY ANTENNA</li> </ul>	<ul style="list-style-type: none"> <li><b>KMC-54WD</b> SPEAKER MICROPHONE                     <ul style="list-style-type: none"> <li>• 2-mic digital noise cancelling via the radio's DSP</li> <li>• 3.5mm-diameter earphone jack</li> <li>• Complies with MIL-STD 810C/D/E/F/G</li> <li>• IP65/67 Dust &amp; Water*</li> </ul> </li> <li><b>KMC-42WD</b> SPEAKER MICROPHONE (IP67)</li> <li><b>KWD-AE31</b> SECURE CRYPTOGRAPHIC MODULE</li> <li><b>KBH-11</b> BELT CLIP</li> </ul> <p>*The earphone jack cap must be closed tightly</p>	<ul style="list-style-type: none"> <li><b>KPG-180AP</b> OTAP MANAGER</li> <li><b>KAS-12/12PRO</b> BATTERY READER (PC Software)</li> </ul>
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All accessories and options may not be available in all markets.  
Contact an authorised KENWOOD dealer for details and complete list of all accessories and options.

## SPECIFICATIONS

		Portable Radios	
GENERAL		NX-5200	NX-5300
Frequency Range		136-174 MHz	400-470 MHz
Max. Channels Per Radio		1024 (Up to 4000 channels with option)	
Number of Zones		128	
Max. Channels Per Zone		512	
Channel Spacing	Analog	12.5 / 20 / 25 kHz	
	Digital	6.25 / 12.5 kHz	
Power Supply		7.5 V 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)	12.5 hours / 8.5 hours	
	KBP-8 (w/ AA battery x12)	High Power: Approx. 11 hours / 8 hours, Low Power: Approx. 25 hours / 18 hours	
Operating Temperature (Radio only)*1		-30 °C to +60 °C	
Frequency Stability (-30°C to +60°C; +25°C Ref.)		±0.5 ppm	
Dimensions (W x H x D) Radio w/ Battery, Projections Not Included	KNB-L1 (2,000 mAh)	58.0 x 138.9 x 36.5 mm	
	KNB-L2 (2,600 mAh)	58.0 x 138.9 x 39.5 mm	
	KNB-L3 (3,400 mAh)	58.0 x 138.9 x 44.9 mm	
	KNB-N4 (2,500 mAh)	58.0 x 166.4 x 45.2 mm	
	KBP-8 (w/ AA x 12)	67.0 x 218.3 x 53.9 mm	
Weight (Net) Radio w/ Battery	KNB-L1 (2,000 mAh)	382 g	
	KNB-L2 (2,600 mAh)	406 g	
	KNB-L3 (3,400 mAh)	449 g	
	KNB-N4 (2,500 mAh)	579 g	
	KBP-8 (w/ AA x 12)	712 g	
Applicable Standards	ETSI (EMC)	EN 301 489-3, EN 301 489-5, EN 301 489-17	
	ETSI (Spectrum)	EN 300 086, EN 300 113, EN 300 219, EN 300 328, EN 300 440, EN 301 166	
	ETSI Safety	EN 60065, EN 60215, EN 60950-1	

		Portable Radios	
RECEIVER		NX-5200	NX-5300
Sensitivity (Digital)	NXDN 3 % BER (6.25 kHz / 12.5 kHz)	0.25 µV / 0.32 µV	
	NXDN 1 % BER (6.25 kHz / 12.5 kHz)	-4 dB µV (0.32 µV) / -1 dB µV (0.45 µV)	
	DMR 5 % BER	0.3 µV (-117.5 dBm)	
	DMR 1 % BER	0.45 µV (-114 dBm)	
	P25 5 % BER	0.28 µV	
Sensitivity (Analog)	12 dB SINAD (12.5 / 20&25 kHz)	0.32 µV / 0.28 µV	
	20 dB SINAD (12.5 / 20&25 kHz)	-1 dB µV (0.45 µV) / -3 dB µV (0.35 µV)	
Selectivity	Analogue 12.5 kHz	68 dB	
	Analogue 20 kHz	74 dB	
	Analogue 25 kHz	76 dB	
Intermodulation		65 dB	
Spurious Rejection		75 dB	
Audio Distortion		3 %	
Audio Output Power		500 mW / 8 Ω (3 % Distortion) / 1,000 mW / 8 Ω (5 % Distortion)	
TRANSMITTER		NX-5200	NX-5300
RF Power Output Power		6 to 1 W	5 to 1 W
Spurious Emission		-36 dBm ≤ 1 GHz, -30 dBm > 1 GHz	
FM Hum & Noise (Analog): @12.5 / 20 / 25 kHz		40 / 45 / 45 dB	
Audio Distortion		2 %	
Emission Designator		16K0F3E, 14K0F2D, 14K0F3E, 12K0F2D, 11K0F3E, 8K50F3E, 7K50F2D, 8K30F1E, 8K30F1D, 8K30F7W, 8K10F1E, 8K10F1D, 8K10F1W, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	

\*1 Operating temperature specification for a Li-ion battery is -10°C to +60°C.

Specifications are measured according to applicable standards, and subject to change without notice, due to advancements in technology.

## APPLICABLE MIL-STD & IP\*2

MIL Standard	810C Methods/ Procedures	810D Methods/ Procedures	810E Methods/ Procedures	810F Methods/ Procedures	810G Methods/ Procedures
Low Pressure	500.1/I	500.2/ I, II	500.3/ I, II	500.4/ I, II	500.5/ I, II
High Temperature	501.1/ I, II	501.2/ I, II	501.3/ I, II	501.4/ I, II	501.5/ I, II
Low Temperature	502.1/I	502.2/ I, II	502.3/ I, II	502.4/ I, II	502.5/ I, II
Temp. Shock	503.1/I	503.2/ I	503.3/ I	503.4/ I, II	503.5/ I
Solar Radiation	505.1/I	505.2/ I	505.3/ I	505.4/ I	505.5/ I
Rain	506.1/ I, II	506.2/ I, II	506.3/ I, II	506.4/ I, III	506.5/ I, III
Humidity	507.1/ I, II	507.2/ II, III	507.3/ II, III	507.4	507.5/ II
Salt Fog	509.1/I	509.2/ I	509.3/ I	509.4	509.5
Dust	510.1/ I	510.2/ I	510.3/ I	510.4/ I, III	510.5/ I
Vibration	514.2/ VIII, X	514.3/ I	514.4/ I	514.5/ I	514.6/ I
Shock	516.2/ I, II, V	516.3/ I, IV	516.4/ I, IV	516.5/ I, IV	516.6/ I, IV
Immersion	—	—	—	512.4/ I	512.5/ I
International Protection Standard					
Dust & Water	IP54, IP55				
Immersion	IP67, IP68*3				

\*2 All interfaces must be fully sealed with appropriate covers or by designated genuine accessories.

\*3 Conditions: Portable radio immersed for 2 hours at a depth of 1 meter

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CL854E-E-2R2