

## NEXEDGE® NX-5200/5300

### NXDN™



NEXEDGE VHF/UHF MULTI-PROTOCOL  
DIGITAL & ANALOGUE PORTABLE RADIOS



### ● MAIN FEATURES

- **Multi-Digital** operation in NXDN, P25 (Phases 1 & 2) and DMR\* protocols.
- **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 Cancelling** 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 life-critical man down detection motion and stationary
- **microSD/microSDHC Memory Card Slot** for increased memory capacity for "Voice & Data"
- **IP67/68 and MIL-STD-810 C/D/E/F/G**

\* The radio platform is ready for DMR and 5-Tone, software for these features will follow.

### ● 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
- 1 W Loud Speaker Audio

### ● DIGITAL – NXDN MODE

- Gen2 & NXDN Type-C Trunked Operation
- NXDN Conventional Operation
- AMBE+2™ Enhanced Vocoder
- 6.25 & 12.5 kHz Channels
- Over-the-Air Alias
- Over-the-Air Programming\*1
- Paging Call
- Emergency Call
- All Group Call

- Status Messaging
- Remote Stun/Kill\*2
- Remote Check\*2
- Short Data Messages
- Long Data Messages\*2
- GPS Location
- NXDN Digital Scrambler Included

### ● DIGITAL – P25 MODE

- P25 Phase 1 Conventional/Trunked Operation
- P25 Phase 2 Trunked Operation
- AMBE+2™ Enhanced Vocoder
- Talk Group ID Lists
- P25 Voting in Conventional Operation
- Individual ID Lists
- Caller ID Display
- Remote Monitor/Remote Check
- Radio Inhibit
- Encryption Key Zeroize & Retention
- P25 GPS Location
- Over-the-Air Programming\*1

### ● ANALOGUE – FM MODE

- Conventional & LTR Zones
- FleetSync®/I: 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 & 2-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
- Up to 30/60 Rapid Chargers can be chain-connected to a PC installed with the KAS-12\*3
- 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 battery profiles can be managed at a time (requires an additional option)\*4



E-Type

E2-Type

\*1 Requires KENWOOD OTAP Management software.

\*2 Requires NX subscriber unit PC serial interface compatible software application (e.g. KENWOOD AVL & Dispatch Messaging software) or hardware (e.g. console).

\*3 Version 1 = 30, Version 2 = 60

\*4 KAS-12 PRO January 2016

## OPTIONAL ACCESSORIES

■ **KNB-L1**  
Li-ion BATTERY PACK, IP67/68  
(7.4 V/2000 mAh)



■ **KNB-L2**  
Li-ion BATTERY PACK, IP67/68  
(7.4 V/2600 mAh)



■ **KNB-L3**  
Li-ion BATTERY PACK, IP67/68  
(7.4 V/3400 mAh)



■ **KNB-N4**  
Ni-MH BATTERY PACK, IP67/68  
(7.2 V/2500 mAh)



■ **KSC-Y32**  
RAPID CHARGER



■ **KSC-32/32S**  
RAPID CHARGER



■ **KSC-326/326S**  
MULTIPLE CHARGER  
(6-unit Rapid Rate)



■ **KBP-8**  
BATTERY CASE  
(12AA Alkaline Battery)



■ **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-41**  
VHF STUBBY ANTENNA



■ **KRA-42**  
UHF STUBBY ANTENNA



■ **KMC-54WD**

SPEAKER MICROPHONE  
• 2-mic digital noise cancelling  
via the radio's DSP  
• 3.5mm-diameter earphone jack  
• Complies with MIL-STD 810C/D/E/F/G  
• IP65/67 Dust & Water\*



\*The earphone jack cap must be closed tightly

■ **KMC-42WD**  
SPEAKER  
MICROPHONE (IP67)



■ **KWD-AE31**  
SECURE CRYPTOGRAPHIC MODULE



■ **KBH-11**  
BELT CLIP



■ **KPG-180AP**  
OTAP MANAGER

■ **KAS-12**  
BATTERY READER  
(PC Software)

## SPECIFICATIONS

GENERAL	Portable Radios	
	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	Analogue 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	-30 °C to +60 °C	
Frequency Stability	±2.0 ppm	±1.0 ppm
Dimensions (W x H x D)	KNB-L1 (2,000 mAh)	58.0 x 138.9 x 39.8 mm
	KNB-L2 (2,600 mAh)	58.0 x 138.9 x 42.8 mm
	KNB-L3 (3,400 mAh)	58.0 x 138.9 x 48.2 mm
	KNB-N4 (2,500 mAh)	58.0 x 166.4 x 48.5 mm
	KBP-8	67.0 x 218.3 x 44.6 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)	Approx. 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	

RECEIVER	Portable Radios	
	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)
Sensitivity (Analogue)	P25 5 % BER	0.28 µV
	12 dB SINAD (12.5/20&25 kHz)	0.32 µV / 0.28 µV
Selectivity	20 dB SINAD (12.5/20&25 kHz)	-1 dB µV (0.45 µV) / -3 dB µV (0.35 µV)
	P25 Digital	63 dB
	Analogue 12.5 kHz	68 dB
	Analogue 20 kHz	74 dB
Intermodulation	Analogue 25 kHz	76 dB
Spurious Rejection		65 dB
Audio Distortion		75 dB
Audio Output Power		3 %
		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 (Analogue): @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, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	

Analogue measurements made per EN Standards or TIA 603 and specifications shown are typical.

P25 digital measurements made per TIA 102CAAA and specifications shown are typical.

Details and timing of firmware and software updates are subject to change without notice. Specifications are subject to change without notice, due to advancements in technology.

## APPLICABLE MIL-STD & IP

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*				

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

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