



#### ● 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

<ul style="list-style-type: none"> <li>■ <b>KNB-L1</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/2000 mAh)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KSC-Y32</b> RAPID CHARGER</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KRA-22</b> VHF HELICAL ANTENNA (Low Profile)</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> </ul>	
<ul style="list-style-type: none"> <li>■ <b>KNB-L2</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/2600 mAh)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KSC-32/32S</b> RAPID CHARGER</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KRA-23</b> UHF HELICAL ANTENNA (Low Profile)</li> </ul>		*The earphone jack cap must be closed tightly	
<ul style="list-style-type: none"> <li>■ <b>KNB-L3</b> Li-ion BATTERY PACK, IP67/68 (7.4 V/3400 mAh)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KSC-326/326S</b> MULTIPLE CHARGER (6-unit Rapid Rate)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KRA-26</b> VHF HELICAL ANTENNA (Standard Length)</li> </ul>			<ul style="list-style-type: none"> <li>■ <b>KMC-42WD</b> SPEAKER MICROPHONE (IP67)</li> </ul>
<ul style="list-style-type: none"> <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>KBP-8</b> BATTERY CASE (12AA Alkaline Battery)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KRA-27</b> UHF WHIP ANTENNA (Standard Length)</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KWD-AE31</b> SECURE CRYPTOGRAPHIC MODULE</li> </ul>	
				<ul style="list-style-type: none"> <li>■ <b>KRA-41</b> VHF STUBBY ANTENNA</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KPG-180AP</b> OTAP MANAGER</li> </ul>	
				<ul style="list-style-type: none"> <li>■ <b>KRA-42</b> UHF STUBBY ANTENNA</li> </ul>		<ul style="list-style-type: none"> <li>■ <b>KAS-12</b> BATTERY READER (PC Software)</li> </ul>	
						<ul style="list-style-type: none"> <li>■ <b>KBH-11</b> BELT CLIP</li> </ul>	

## 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 $\pm 20\%$	
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		$\pm 2.0$ ppm	$\pm 1.0$ ppm
Dimensions (W x H x D) Radio w/ Battery, Projections Not Included	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	

RECEIVER		Portable Radios	
		NX-5200	NX-5300
Sensitivity (Digital)	NXDN 3 % BER (6.25 kHz/12.5 kHz)	0.25 $\mu$ V / 0.32 $\mu$ V	
	NXDN 1 % BER (6.25 kHz/12.5 kHz)	-4 dB $\mu$ V (0.32 $\mu$ V) / -1 dB $\mu$ V (0.45 $\mu$ V)	
Sensitivity (Analogue)	P25 5 % BER	0.28 $\mu$ V	
	12 dB SINAD (12.5/20&25 kHz)	0.32 $\mu$ V / 0.28 $\mu$ V	
Selectivity	20 dB SINAD (12.5/20&25 kHz)	-1 dB $\mu$ V (0.45 $\mu$ V) / -3 dB $\mu$ V (0.35 $\mu$ V)	
	P25 Digital	63 dB	
	Analogue 12.5 kHz	68 dB	
	Analogue 20 kHz	74 dB	
Intermodulation	Analogue 25 kHz	76 dB	
		65 dB	
Spurious Rejection		75 dB	
Audio Distortion		3 %	
Audio Output Power		500 mW/8 $\Omega$ (3 % Distortion)/ 1,000 mW/8 $\Omega$ (5 % Distortion)	
TRANSMITTER		NX-5200	NX-5300
RF Power Output Power		6 to 1 W	5 to 1 W
Spurious Emission		-36 dBm $\leq$ 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/I, III	507.3/I, III	507.4	507.5/I, 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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