



This versatile handheld radio supports both NXDN and DMR digital protocols as well as mixed digital & FM analogue 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. Three different models are available: Full Keypad model with LCD, Standard Keypad model with LCD and a large 4-way D-pad, and the Basic Model without LCD or keypad. Additionally, for expansion capability a software license certification system facilitates extensive customisation.

#### ● PRODUCT HIGHLIGHTS

- **Multi-protocol digital** radio: Designed to operate under an NXDN or DMR digital, and FM analogue protocols
- **NXDN** Conventional and Type-C & Gen2 Trunking
- **DMR** Tier II & Site Roaming
- **Mixed Digital & FM Analog Operation** allows gradual migration at your own pace
- **4-Line** Basic Frame (2-Line Main/Sub-LCD, icon & key guide) / 14 Characters
- **5-Line** Text Message Frame (3 Lines of Text, icon & key guide)\*
- **7-Colour Light Bar Indicator** on the top panel
- **4-way Directional-pad (D-pad)** for intuitive control and operation
- **Built-in GPS Receiver/Antenna** for effective fleet management
- **Built-in Bluetooth** for hands-free operation – Applicable Bluetooth profiles: HSP (Headset Profile provided) and SPP (Serial Port Profile available as an option)
- Renowned **KENWOOD Audio Quality** with **Active Noise Reduction (ANR)** that utilises built-in DSP
- Software **DES** and **AES** Encryptions for **NXDN** Conventional/Trunking and **DMR** Conventional protocols
- **Built-in Motion Sensor** (Man-down, Stationary and Motion Detection)
- **IP54/55/67** and **MIL-STD-810 C/D/E/F/G**

\*The number of lines may vary depending on the display language (character set).

#### ● GENERAL FEATURES

- 1 Watt Audio Output Power
- UHF: 120 MHz capability
- Available models: Full Keypad (w/ LCD and full keypad), Standard Keypad (w/ LCD and 4-way large D-pad/4 key), and Basic (w/o LCD and keypad)
- 260 CH/128 Zones (64 CH/4 Zones for Basic model)
- 1,000 CH with option
- Paging Call
- Emergency Call
- Status/Text Message
- Remote Stun/Kill/Check

#### ● DIGITAL - NXDN MODE

- NXDN Type-C & Gen2 Trunked
- NXDN Conventional
- 6.25 & 12.5 kHz Channels
- All Group Call
- Over-the-Air Alias (OAA)
- Over-the-Air Programming (OTAP)

#### ● DIGITAL - DMR MODE

- Complies with ETSI DMR Tier II standards
- 12.5 kHz Two-slot TDMA channels
- Call Interruption
- Site Roaming
- Dual-slot Direct Mode
- ARC4 Encryption
- Energy Efficient

#### ● ANALOGUE - FM MODE

- Conventional & LTR Trunking
- FleetSync/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / Text Messages
- MDC-1200: PTT ID ANI / Caller ID Display, Selective Call, Emergency, Radio Check / Inhibit
- QT / DQT, DTMF, 5-Tone
- Built-in Voice Inversion Scrambler



Full Keypad Model

Standard Keypad Model

Basic Model

## OPTIONAL ACCESSORIES

- **KNB-55L/57L**  
Li-ion BATTERY PACK  
(7.4 V/1480 mAh,  
7.4 V/2000 mAh)
- **KNB-56N**  
Ni-MH BATTERY PACK  
(7.2 V/1400 mAh)
- **KNB-78L\***  
Li-ion BATTERY PACK  
(7.4 V/2860 mAh)  
\*Available Later
- **KBP-5**  
BATTERY CASE (6 AA)



KNB-57L

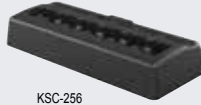
- **KSC-25LS/25S**  
RAPID CHARGER  
(Li-ion Only/Tri-Chem)



KSC-25S

- **KSC-256**  
MULTIPLE CHARGER  
(6-pocket)

- **KMB-30**  
MOUNTING BRACKET  
(for KSC-256)



KSC-256

- **KRA-22/23**  
VHF/UHF HELICAL  
ANTENNA  
(Low Profile)



KRA-22

KRA-23

- **KRA-26**  
VHF HELICAL ANTENNA  
(Standard Length)



- **KRA-27**  
UHF WHIP ANTENNA  
(Standard Length)



- **KRA-41/42**  
VHF/UHF STUBBY  
ANTENNA



KRA-41

KRA-42

- **KMC-45D**  
SPEAKER  
MICROPHONE  
(IP54/55)



- **KBH-11**  
BELT CLIP (2.5 in)



- **KPG-180AP**  
OTAP MANAGER

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

GENERAL	NX-3220	NX-3320
Frequency Range	136-174 MHz	400-520 MHz
Max. Channels per Radio	Up to 1000 channels with option	
Number of Channels	260 (64 for no LCD models)	
Number of Zones	128 (4 for no LCD models)	
Channel Spacing	Analogue	12.5/20/25 kHz
	Digital	6.25/12.5 kHz
Power Supply	7.5 V DC $\pm$ 20 %	
Battery Life (FDMA/TDMA) 5-5-90	KNB-55L (1,480 mAh)	Approx. 8 hours/Approx. 9.5 hours
	KNB-56N (1,400 mAh)	Approx. 8 hours/Approx. 9 hours
	KNB-57L (2,000 mAh)	Approx. 11 hours/Approx. 13.5 hours
	Operating Temperature	-30°C to +60°C
Frequency Stability	$\pm$ 2.0 ppm	$\pm$ 1.0 ppm
Dimensions (W x H x D) *Projections not included	Radio only	56 x 119.6 x 36.4 mm*1
	With KNB-55L (1,480 mAh)	56 x 119.6 x 36.4 mm*1
	With KNB-56N (1,400 mAh)	56 x 119.6 x 42.7 mm*1
	With KNB-57L (2,000 mAh)	56 x 119.6 x 39 mm*1
Weight (net)	Radio only	220 g*2
	With KNB-55L (1,480 mAh)	315 g*2
	With KNB-56N (1,400 mAh)	410 g*2
	With KNB-57L (2,000 mAh)	340 g*2
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 60215, EN 60950-1

\*1 Dimensions for Full Keypad/Std Keypad Models \*2 Weight for Full Keypad Model  
Specifications are measured according to applicable standards.  
Specifications shown are typical and subject to change without notice, due to advancements in technology.

RECEIVER	NX-3220	NX-3320
Sensitivity	NXDN 3 % BER (6.25 kHz/12.5 kHz)	0.20 $\mu$ V / 0.25 $\mu$ V
	NXDN 1 % BER (6.25 kHz/12.5 kHz)	-4.0 dB $\mu$ V (0.32 $\mu$ V) / -1 dB $\mu$ V (0.45 $\mu$ V)
	DMR 12.5 kHz Digital, 5 % BER	-4.5 dB $\mu$ V (0.30 $\mu$ V)
	DMR 12.5 kHz Digital, 1 % BER	-1 dB $\mu$ V (0.45 $\mu$ V)
	Analogue, EIA 12 dB SINAD (12.5/20 & 25 kHz)	0.25 $\mu$ V
Selectivity	Analogue, EN 20 dB SINAD (12.5/20 & 25 kHz)	-1 dB $\mu$ V (0.45 $\mu$ V) / -3 dB $\mu$ V (0.35 $\mu$ V) / -3 dB $\mu$ V (0.35 $\mu$ V)
	Analogue 12.5 kHz	68 dB
	Analogue 20 kHz	74 dB
	Analogue 25 kHz	76 dB
Intermodulation	65 dB	
Spurious Rejection	65 dB	
Audio Distortion	3 %	
Audio Output (Internal Speaker)	3 % Distortion	500 mW/8 Ohms
	5 % Distortion	1000 mW/8 Ohms
TRANSMITTER	NX-3220	NX-3320
RF Power Output (High / Medium / Low)	5 W / 4 W / 1 W	
Spurious Emission	-36 dBm $\leq$ 1 GHz, -30 dBm $>$ 1 GHz	
FM Hum & Noise	Analogue @ 25 kHz	45 dB
	Analogue @ 20 kHz	45 dB
	Analogue @ 12.5 kHz	40 dB
Audio Distortion	3 %	
Digital Protocol	ETSI TS 102 361-1, -2, -3	
Emission Designator	16K0F3E, 14K0F2D, 14K0F3E, 12K0F2D, 8K50F3E, 8K30F1E, 8K30F1D, 8K30F7W, 7K50F2D, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D	

## APPLICABLE MIL-STD & IP

MIL Standards	Methods / Procedures				
	810C	810D	810E	810F	810G
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
International Protection Standards	IP54, IP55, IP67				
Dust & Water*	IP54, IP55, IP67				

\*Audio accessory connector must be covered.

• The Bluetooth word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. • NXDN™ is a trademark of JVCKENWOOD Corporation and Icom Inc. • NEXEDGE® is a registered trademark of JVCKENWOOD Corporation.  
• FleetSync® is a registered trademark of JVCKENWOOD Corporation. • All other trademarks are the property of their respective holders.

JVCKENWOOD U.K. Limited  
12 Priestley Way, London NW2 7BA, United Kingdom  
<http://kenwoodcommunications.co.uk>



www.purcellradio.com  
info@purcellradio.com  
+44 (0)20 7739 8060



ISO9001 Registered  
Communications Systems Business Unit  
JVCKENWOOD Corporation

CL862E-E-2