



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<br>(FDMA/TDMA)<br>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<br>(W x H x D)<br>*Projections not included | Radio only               | 56 x 119.6 x 36.4 mm <sup>*1</sup>                                     |               |
|                                                        | With KNB-55L (1,480 mAh) | 56 x 119.6 x 36.4 mm <sup>*1</sup>                                     |               |
|                                                        | With KNB-56N (1,400 mAh) | 56 x 119.6 x 42.7 mm <sup>*1</sup>                                     |               |
|                                                        | With KNB-57L (2,000 mAh) | 56 x 119.6 x 39 mm <sup>*1</sup>                                       |               |
| Weight (net)                                           | Radio only               | 220 g <sup>*2</sup>                                                    |               |
|                                                        | With KNB-55L (1,480 mAh) | 315 g <sup>*2</sup>                                                    |               |
|                                                        | With KNB-56N (1,400 mAh) | 410 g <sup>*2</sup>                                                    |               |
|                                                        | With KNB-57L (2,000 mAh) | 340 g <sup>*2</sup>                                                    |               |
| 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                                         |               |

\*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                                                                                                                                 |         |
| Intermodulation                       | Analogue 25 kHz                              | 76 dB                                                                                                                                 |         |
|                                       |                                              | 65 dB                                                                                                                                 |         |
| Spurious Rejection                    |                                              | 65 dB                                                                                                                                 |         |
| Audio Distortion                      |                                              | 3 %                                                                                                                                   |         |
| Audio Output<br>(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 |                      |                  |                |               |               |
| Dust & Water*                      |                      | IP54, IP55, IP67 |                |               |               |

\*Audio accessory connector must be covered.

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