

## NX-3220/3320

VHF/UHF DIGITAL TRANSCEIVER  
(Featuring 2-pin audio connector)

**NXDN™** **DMR**



**DMR**  
-based  
TRUNKING **T3&S**

**DMR** >>>>  
Auto Slot  
Select >>>>

**FleetSync®**

**5-tone**

**GPS**

**Bluetooth®**

This versatile handheld radio supports both NXDN and DMR digital protocols as well as mixed digital & FM analog 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. Additionally, for expansion capability a software license certification system facilitates extensive customization.

### ● PRODUCT HIGHLIGHTS

- **Multi-protocol digital radio:** Designed to operate under an NXDN or DMR digital, and FM analog protocols
- **Mixed Digital & FM Analog Operation** allows gradual migration at your own pace
- **4-Line Basic Frame** (2 lines of icon & key guide) / 14 Characters
- **5-Line Text Message Frame** (3 Lines of Text, icon & key guide)\*
- **7-Color 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 utilizes built-in DSP
- **Software DES and AES** Encryptions for Digital protocols
- **Built-in Motion Sensor** (Man-down, Stationary and Motion Detection)
- **MIL-STD-810 C/D/E/F/G**

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

### ● GENERAL FEATURES

- **2-pin audio connector** with 6 contacts to connect with a variety of options, and single mic Active Noise Reduction (ANR) capability



- Audio Output Power: 1 Watt
- Intrinsically Safe 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

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

### ● ANALOG - 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/78L**  
Li-ion BATTERY PACK  
(7.4 V/1480 mAh,  
7.4 V/2000 mAh,  
7.4 V/2860 mAh)
- **KNB-56N**  
Ni-MH BATTERY PACK  
(7.2 V/1400 mAh)
- **KNB-79LC**  
Li-ion BATTERY PACK  
(7.4 V/2860 mAh,  
Intrinsically Safe)
- **KBP-5**  
BATTERY CASE (6 AA)



KNB-57L

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



KSC-25S

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



- **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 (PC software)

All accessories and options may not be available in all markets.  
Contact an authorized 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	Analog 12.5 / 20 / 25 kHz Digital 6.25 / 12.5 kHz		
Power Supply	7.5 V DC ±20 %		
Battery Life*1 (Average battery life at 5-5-90)	FDMA Conv. / Trunk.	TDMA Conv. / Trunk.	
	KNB-55L (1480 mAh)	8.5 / 6.5 h	12.5 / 9.0 h
	KNB-56N (1400 mAh)	7.5 / 6.0 h	11.0 / 8.0 h
	KNB-57L (2000 mAh)	12.0 / 9.5 h	17.5 / 13.0 h
	KNB-78L (2860 mAh)	17.5 / 13.5 h	25.0 / 18.5 h
KNB-79LC (2860 mAh)*2	15.0 / 11.5 h	21.5 / 16.0 h	
Operating Temperature	-30°C to +60°C		
Frequency Stability (-30°C to +60°C; +25°C Ref.)	± 0.5 ppm		
Dimensions*3 (W x H x D) Projections not included	Radio only	56 x 119.6 x 36.4 mm	
	with KNB-55L	56 x 119.6 x 36.4 mm	
	with KNB-56N	56 x 119.6 x 42.7 mm	
	with KNB-57L	56 x 119.6 x 39.0 mm	
	with KNB-78L/79LC	56 x 119.6 x 44.9 mm	
Weight*4 (net)	Radio only	220 g	
	with KNB-55L	315 g	
	with KNB-56N	410 g	
	with KNB-57L	340 g	
	with KNB-78L	385 g	
with KNB-79LC	395 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 60215, EN 60950-1, EN62368-1	

RECEIVER	NX-3220	NX-3320	
Sensitivity	NXDN 3 % BER (6.25 kHz / 12.5 kHz)	0.20 µV / 0.25 µV	
	NXDN 1 % BER (6.25 kHz / 12.5 kHz)	-4.0 dBµV (0.32 µV) / -1 dBµV (0.45 µV)	
	DMR 12.5 kHz Digital, 5 % BER	-6 dBµV (0.25µV)	
	DMR 12.5 kHz Digital, 1 % BER	-1 dBµV (0.45 µV)	
	Analog, EIA 12 dB SINAD (12.5/20 & 25 kHz)	0.25 µV	
Analog, EN 20 dB SINAD (12.5/20 & 25 kHz)	-1 dBµV (0.45 µV) / -3 dBµV (0.35 µV) / -3 dBµV (0.35 µV)		
Selectivity	Analog 12.5 kHz	68 dB	
	Analog 20 kHz	74 dB	
	Analog 25 kHz	76 dB	
Intermodulation	65 dB		
Spurious Rejection	65 dB		
Audio Distortion	3 %		
Audio Output (Internal Speaker)	3 % Distortion	500 mW	
	5 % Distortion	1000 mW	
TRANSMITTER	NX-3220	NX-3320	
RF Power Output	5 W / 4 W / 1 W		
Spurious Emission	-36 dBm ≤1 GHz, -30 dBm >1 GHz		
FM Hum & Noise	Analog @ 12.5 kHz	40 dB	
	Analog @ 20 kHz	45 dB	
	Analog @ 25 kHz	45 dB	
Audio Distortion	3 %		
Digital Protocol	ETSI TS 102 361-1, -2, -3, -4		
Emission Designator	16K0F3E, 14K0F2D, 14K0F3E, 12K0F2D, 11K0F3E, 8K50F3E, 8K30F1E, 8K30F1D, 8K30F7W, 7K50F2D, 7K60FXE, 7K60FXD, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D		

\*1 Battery Life is measured with factory default setting, GPS/ Bluetooth OFF.

\*2 Typical value under the condition charged with KCS-25S/25LS.

\*3 Dimensions for Full Keypad/Std Keypad Models

\*4 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.

## APPLICABLE MIL-STD & IP\*5

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				

\*5 All interfaces must be fully sealed with appropriate covers or by designated genuine accessories.

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