

NEXEDGE®

## NX-220E/320E

NEXEDGE® VHF/UHF Digital & FM Portable Radios

**NXDN**®

FleetSync®  
by KENWOOD

**5-tone**



NX-220E2/320E2

NX-220E/320E

NX-220E3/320E3

### ● GENERAL FEATURES

- 5 W (136-174 MHz) Models
- 5 W (400-470 MHz) Models
- Meets ETSI EN Standards
- 260 CH-GID / 128 Zones (LCD Models)
- 64 CH-GID / 4 Zones (Non LCD Models)
- 12-Key Keypad Models
- 8 Character Alphanumeric Aliases
- Backlit LCD & Keys
- Function / Status LCD Icons
- Transmit / Busy / Call Alert / Warn LED
- On / Off Volume Knob
- 16-Position Mechanical Selector
- 4 Front PF Keys (LCD Models)
- 3 Side PF Keys
- Emergency / AUX Key
- Built-in Motion Sensor
- 500 mW Speaker Audio
- Zone / CH Number Voice Announcement
- KMC-48GPS Speaker Mic Option
- KPG-141D Windows® FPU
- Flash Firmware Upgrading
- MIL-STD-810 C/D/E/F/G
- IP54/55 Water & Dust Intrusion
- PC Serial Interface
- SDM Manual Input\*<sup>1</sup>
- Transparent Data Mode\*<sup>1</sup>

### ● DIGITAL – GENERAL

- NXDN® Digital Air Interface
- AMBE+2™ VOCODER
- 6.25 & 12.5 kHz Channels
- Over-the-Air Alias
- Over-the-Air Programming
- Paging Call
- Emergency Call
- All Group Call
- Status Messaging\*<sup>1</sup> \*<sup>2</sup>
- Remote Stun / Kill\*<sup>1</sup>
- Remote Check\*<sup>1</sup>
- Short & Long Data Messages\*<sup>1</sup>
- GPS Location with Voice\*<sup>1</sup>
- NXDN® Scrambler Included

### ● DIGITAL – CONVENTIONAL MODE

- 64 Radio Access Numbers (RAN)
- Individual & Group Selective Call\*<sup>3</sup>
- Mixed FM / Digital Operation
- Conventional IP Networks
- Site Roaming

### ● DIGITAL – TRUNKING MODE

- Individual Private Call
- Group Call & Broadcast Call
- Telephone Interconnect
- Transmission Trunked Mode\*<sup>4</sup>
- Message Trunked Mode\*<sup>4</sup>
- Call Queuing with Priority\*<sup>4</sup>
- Late Entry (UID & GID)\*<sup>4</sup>
- 4 Priority Monitor ID's\*<sup>4</sup>
- Remote Group Add\*<sup>1</sup>
- Failsafe Mode

### ● MULTI-SITE IP NETWORK COMPATIBLE

- 60,000 GIDs / UIDs
- Wide Area Group Call
- Auto Roaming Registration
- Group Registration

### ● SCAN

- Single Zone / Multi-Zone / List Scan
- Single Priority Scan (Conventional)

### ● FM MODES – GENERAL

- 25, 20 & 12.5 kHz Channels
- Conventional & LTR® Zones
- FleetSync® / II, MDC-1200, DTMF\*<sup>3</sup>
- QT / DQT & 2-Tone (Conventional Zones only)\*<sup>3</sup>
- 5-Tone Encode / Decode (Conventional Zones Only)\*<sup>3</sup>
- Voice Inversion Scrambler (16 Codes)

### ● dPMR

- Kenwood NEXEDGE® mid tier digital two-way radios can now be adapted to operate as dPMR radios

### ● FleetSync® / II (FM)

- PTT ID ANI / Caller ID\*<sup>3</sup>
- Selective / Group Call\*<sup>3</sup>
- Emergency, Status & Text Messages\*<sup>1</sup>

### ● MDC-1200

- PTT ID ANI / Caller ID\*<sup>3</sup>
- Emergency, Radio Check & Inhibit

\*<sup>1</sup> Requires NX subscriber unit PC Serial Interface compatible software application (e.g. Kenwood AVL & Dispatch Messaging software) or hardware (e.g. console).

\*<sup>2</sup> Non LCD Models -Pre-programmed key operation

\*<sup>3</sup> Non LCD Models -Some screen / key-based functions are not available.

\*<sup>4</sup> These trunked features are primarily system programming and operational dependent. Priority Monitor also requires NX subscriber settings.

## Options

■ **KNB-55L**  
Li-Ion Battery  
(1480mAh)



■ **KNB-56N**  
Ni-MH Battery  
(1400mAh)



■ **KNB-57L**  
Li-Ion Battery  
(2000mAh)



■ **KBP-5**  
6 AA Alkaline  
Battery Case



■ **KSC-25**  
Rapid Charger



■ **KSC-30**  
Regular Charger  
for Ni-MH Batteries



■ **KSC-256**  
Rapid Rate 6-Unit  
Charger



■ **KMC-45**  
Speaker Microphone



■ **KMC-21**  
Speaker Microphone



■ **KMC-48GPS**  
GPS Speaker  
Microphone



■ **KRA-22/23**  
VHF/UHF Helical  
Antenna



■ **KRA-26/27**  
VHF Helical/UHF  
Whip Antenna



■ **KMB-30**  
Wall Mount Bracket  
for KSC-256



■ **KEP-2**  
2.5mm Earphone  
Kit for KMC-45



■ **KHS-7/7A**  
Single Muff Headset



■ **KHS-8BL**  
2-wire Palm Mic.  
w/Earphone



■ **KHS-9BL**  
3-wire Palm Mic.  
w/Earphone



■ **KHS-10-OH**  
Heavy-Duty Noise  
Reduction Headset



■ **KHS-21**  
Headset w/Boom Mic.  
& PTT



■ **KHS-22**  
Headset w/Boom Mic.  
& PTT



■ **KHS-29F**  
Clip Mic. w/Earhanger



■ **EMC-12**  
Clip Mic. w/Earphone  
& PTT (VOX Ready)



■ **KBH-12**  
Belt clip



■ **KWR-1**  
Water Resistant Bag



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.

## Main Specifications

GENERAL	NX-220	NX-320
<b>Frequency Range</b>	136-174 MHz	400-470 MHz
<b>Number of Channels</b>	LCD models Non LCD models	260 ch 64 ch
<b>Zones</b>	LCD models Non LCD models	128 zone 4 zone
<b>Max. Channels per Zone</b>	LCD models Non LCD models	250 ch 16 ch
<b>Channel Spacing</b>	Analogue Digital	12.5 / 20 / 25 kHz 6.25 / 12.5 kHz
<b>Operating Voltage</b>		7.5 V DC ± 20%
<b>Battery Life (5-5-90)</b>	KNB-55L (1480 mAh) KNB-56N (1400 mAh) KNB-57L (2000 mAh)	Approx. 8.5 hours Approx. 8.5 hours Approx. 11.5 hours
<b>Operating Temperature Range</b>		-30° C to +60° C
<b>Frequency Stability</b>		± 2.0 ppm
<b>Antenna Impedance</b>		50 Ω
<b>Dimensions (W x H x D)</b>	Projections not included	
	<b>LCD models</b>	
	56.0 x 110.5 x 36.9 mm (radio only)	
	56.0 x 110.5 x 37.5 mm (with KNB-55L)	
	56.0 x 110.5 x 39.5 mm (with KNB-57L)	
	<b>Non LCD models</b>	
	56.0 x 110.5 x 37.5 mm (radio only)	
	56.0 x 110.5 x 38.1 mm (with KNB-55L)	
	56.0 x 110.5 x 40.1 mm (with KNB-57L)	
<b>Weight (net)</b>	LCD models Non LCD models	210 g (radio only) 305 g (with KNB-55L) 330 g (with KNB-57L) 205 g (radio only) 300 g (with KNB-55L) 325 g (with KNB-57L)
<b>Applicable Standards</b>	ETSI R & TTE ETSI Safety	EN 300 086, EN 300 113, EN 300 219, EN 301 489, EN 301 166 EN 60065, EN 60950-1, EN 60215

RECEIVER	NX-220	NX-320
<b>Sensitivity (Analogue)</b>	EIA 12dB SINAD EN 20dB SINAD	0.28 μV / 0.28 μV / 0.32 μV -3 dB μV (0.35 μV) / -3 dB μV (0.35 μV) / -1 dB μV (0.45 μV)
<b>Sensitivity (Digital)</b>	3% BER 1% BER	0.32 μV / 0.25 μV -1 dB μV (0.45 μV) / -4 dB μV (0.32 μV)
<b>Adjacent Channel Selectivity (Analogue)</b>	(25kHz / 20kHz / 12.5kHz)	76 dB / 74 dB / 68 dB
<b>Intermodulation (Analogue)</b>		65 dB
<b>Spurious Response Rejection (Analogue)</b>		75 dB
<b>Audio Distortion</b>		Less than 3%
<b>Audio Output</b>		500 mW / 8 Ω
<b>TRANSMITTER</b>		
<b>RF Power Output</b>	High / Low	5 W / 1 W
<b>Modulation Limiting (Analogue)</b>		± 5.0 kHz at 25 kHz ± 4.0 kHz at 20 kHz ± 2.5 kHz at 12.5 kHz
<b>Spurious Emission</b>		-36 dBm ≤ 1 GHz, -30 dBm > 1 GHz
<b>FM Noise (EIA)</b>	(Analogue, 25 kHz / 20 kHz / 12.5 kHz)	45 dB / 45 dB / 40 dB
<b>Modulation Distortion</b>		Less than 3%
<b>Microphone Impedance</b>		1.8 kΩ
<b>Modulation</b>		16K0F3E, 14K0F3E, 14K0F2D, 12K0F2D, 8K50F3E, 7K50F2D, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

Analogue measurements made per TIA/EIA 603 and specifications shown are typical.  
Kenwood reserves the right to change specifications without prior notice or obligation.

FleetSync® is a registered trademark of Kenwood Corporation.

LTR® is a registered trademark of Transcript International.

AMBE+2™ is a trademark of Digital Voice Systems Inc.

Windows® is a registered trademark of Microsoft Corporation.

NXDN® is a registered trademark of Kenwood Corporation and Icom Inc.

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## Applicable MIL-STD & IP

MIL Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures
<b>Low Pressure</b>	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II	500.5/Procedure I, II
<b>High Temperature</b>	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II	501.5/Procedure I, II
<b>Low Temperature</b>	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II	502.5/Procedure I, II
<b>Temperature Shock</b>	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II	503.5/Procedure I
<b>Solar Radiation</b>	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I	505.5/Procedure I
<b>Rain</b>	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III	506.5/Procedure I, III
<b>Humidity</b>	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4	507.5/Procedure II
<b>Salt Fog</b>	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4	509.5
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III	510.5/Procedure I
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I	514.6/Procedure I
<b>Shock</b>	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV	516.6/Procedure I, IV
<b>International Protection Standard</b>					
<b>Dust &amp; Water Protection</b>	IP54/55				

To meet MIL-810 and IP grade, the 2-pin connector has to be connected.

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COMNX220ECAT