

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\*1
- Transparent Data Mode\*1

### ● 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\*1 \*2
- Remote Stun / Kill\*1
- Remote Check\*1
- Short & Long Data Messages\*1
- GPS Location with Voice\*1
- NXDN® Scrambler Included

### ● DIGITAL – CONVENTIONAL MODE

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

### ● DIGITAL – TRUNKING MODE

- Individual Private Call
- Group Call & Broadcast Call
- Telephone Interconnect
- Transmission Trunked Mode\*4
- Message Trunked Mode\*4
- Call Queuing with Priority\*4
- Late Entry (UID & GID)\*4
- 4 Priority Monitor ID's\*4
- Remote Group Add\*1
- 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\*3
- QT / DQT & 2-Tone (Conventional Zones only)\*3
- 5-Tone Encode / Decode (Conventional Zones Only)\*3
- 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\*3
- Selective / Group Call\*3
- Emergency, Status & Text Messages\*1

### ● MDC-1200

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

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

\*2 Non LCD Models -Pre-programmed key operation

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

\*4 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-10-0H**  
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

		NX-220	NX-320
<b>GENERAL</b>			
Frequency Range		136-174 MHz	400-470 MHz
Number of Channels	LCD models	260 ch	
	Non LCD models	64 ch	
Zones	LCD models	128 zone	
	Non LCD models	4 zone	
Max. Channels per Zone	LCD models	250 ch	
	Non LCD models	16 ch	
Channel Spacing	Analogue	12.5 / 20 / 25 kHz	
	Digital	6.25 / 12.5 kHz	
Operating Voltage	7.5 V DC ± 20%		
Battery Life (5-5-90)	KNB-55L (1480 mAh)	Approx. 8.5 hours	
	KNB-56N (1400 mAh)	Approx. 8.5 hours	
	KNB-57L (2000 mAh)	Approx. 11.5 hours	
Operating Temperature Range	-30° C to +60° C		
Frequency Stability	± 2.0 ppm		± 1.0 ppm
Antenna Impedance	50 Ω		
Dimensions (W x H x D) Projections not included	LCD models	56.0 x 110.5 x 36.9 mm (radio only) 56.0 x 110.5 x 37.5 mm (with KNB-55L)	
	Non LCD models	56.0 x 110.5 x 39.5 mm (with KNB-57L) 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)	
Weight (net)	LCD models	210 g (radio only) 305 g (with KNB-55L) 330 g (with KNB-57L)	
	Non LCD models	205 g (radio only) 300 g (with KNB-55L) 325 g (with KNB-57L)	
Applicable Standards	ETSI R & TTE	EN 300 086, EN 300 113, EN 300 219, EN 301 489, EN 301 166	
	ETSI Safety	EN 60065, EN 60950-1, EN 60215	

		NX-220	NX-320
<b>RECEIVER</b>			
Sensitivity (Analogue) (25kHz / 20kHz / 12.5kHz)	EIA 12dB SINAD	0.28 μV / 0.28 μV / 0.32 μV	
	EN 20dB SINAD	-3 dB μV (0.35 μV) / -3 dB μV (0.35 μV) / -1 dB μV (0.45 μV)	
Sensitivity (Digital) (12.5kHz / 6.25kHz)	3% BER	0.32 μV / 0.25 μV	
	1% BER	-1 dB μV (0.45 μV) / -4 dB μV (0.32 μV)	
Adjacent Channel Selectivity (Analogue) (25kHz / 20kHz / 12.5kHz)	76 dB / 74 dB / 68 dB		
Intermodulation (Analogue)	65 dB		
Spurious Response Rejection (Analogue)	75 dB		
Audio Distortion	Less than 3%		
Audio Output	500 mW / 8 Ω		
<b>TRANSMITTER</b>			
RF Power Output	High / Low	5 W / 1 W	
Modulation Limiting (Analogue)	± 5.0 kHz at 25 kHz		
	± 4.0 kHz at 20 kHz		
	± 2.5 kHz at 12.5 kHz		
Spurious Emission	-36 dBm ≤ 1 GHz, -30 dBm > 1 GHz		
FM Noise (EIA) (Analogue, 25 kHz / 20 kHz / 12.5 kHz)	45 dB / 45 dB / 40 dB		
Modulation Distortion	Less than 3%		
Microphone Impedance	1.8 kΩ		
Modulation	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
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II	500.5/Procedure I, II
High Temperature	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
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II	502.5/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II	503.5/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I	505.5/Procedure I
Rain	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
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4	507.5/Procedure II
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4	509.5
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III	510.5/Procedure I
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I	514.6/Procedure I
Shock	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>					
Dust & Water Protection	IP54/55				

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