

# NX-3220/3320

### VHF/UHF MULTI-PROTOCOL DIGITAL & ANALOG PORTABLE RADIOS

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. 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 customization.



Full Keypad Model  
Standard & Basic Models



7-color Light Bar Indicator

#### FEATURES

- Multi-protocol digital radio: Designed to operate NXDN® or DMR digital, and FM analog 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-color Light Bar Indicator on the top panel. Individual color can be set for each channel.
- 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 achieved with Active Noise Reduction (ANR) that utilizes built-in DSP
- Software DES and AES Encryptions for NXDN Conventional Trunking and AES for 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
- 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)
- Maximum of 1,000 CH/Radio with option

- Intrinsically Safe Option (Future Availability)
- 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
- Two-slot TDMA in 12.5 kHz channels
- Call Interruption
- Dual-slot Direct Mode
- ARC4 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, Emergency, Radio Check / Inhibit
- QT / DQT, 2-Tone
- Built-in Voice Inversion Scrambler



#### Multi-Protocol

Unsurpassed interoperability for Public Safety and Enterprise radio users with the freedom to migrate at your own pace.



#### Gen2

Scalable server-based system architecture for management of NEXEDGE wide area digital communications systems.



#### Klarity

The ultimate level of sound clarity technology combining Optimization, advanced Sound Analysis and Active Noise Reduction.

## Accessories

## NX-3220/3320 Portable Radios

<ul style="list-style-type: none"> <li>■ <b>KNB-55L/57L/78L</b> Li-ion Battery Pack (7.4V/1480mAh, 7.4V/2000mAh, 7.4V/2860mAh)</li> <li>■ <b>KNB-56N</b> Ni-MH Battery Pack (7.2 V/1400 mAh)</li> <li>■ <b>KBP-5</b> Battery Case (6 AA)</li> <li>■ <b>KSC-25LSK/25SK</b> Rapid Charger (Li-ion Only/Tri-Chem)</li> <li>■ <b>KSC-256K</b> Multiple Charger (6-pocket)</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>KMB-30</b> Mounting Bracket (for KSC-256)</li> <li>■ <b>KVC-23</b> Vehicular Charger</li> <li>■ <b>KRA-22</b> VHF Low Profile Helical Antenna</li> <li>■ <b>KRA-23</b> UHF Low Profile Helical Antenna</li> <li>■ <b>KRA-25</b> High Gain Whip Antenna</li> <li>■ <b>KRA-26</b> VHF Helical Antenna</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>KRA-27</b> UHF Whip Antenna</li> <li>■ <b>KRA-28</b> Broadband VHF Whip Antenna</li> <li>■ <b>KEP-2</b> Earphone Kit for KMC-45D (2.5mm plug)</li> <li>■ <b>KMC-45D</b> Speaker Microphone (IP54/55 &amp; TDMA)</li> <li>■ <b>KHS-7</b> Headset (Single Muff / Single Muff &amp; In-line PTT / Heavy Duty Behind-the-Head)</li> <li>■ <b>KHS-7A</b> Lightweight Single Muff Headset</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>KHS-8BL</b> 2-wire Palm Mic with Earphone (Black)</li> <li>■ <b>KHS-9BL</b> 3-wire Lapel Mic with Earphone (Black)</li> <li>■ <b>KHS-10</b> Headset (Single Muff Single Muff &amp; In-line PTT Heavy Duty Behind-the-Head)</li> <li>■ <b>KHS-22</b> Head Set</li> <li>■ <b>KHS-26</b> Head Set (with Ear Bud In-Line PTT)</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>KHS-27A</b> Head Set (with D-Ring In-Line PTT)</li> <li>■ <b>KHS-31C</b> Head Set (with C-Ring)</li> <li>■ <b>KBH-11</b> Belt Clip (2.5")</li> <li>■ <b>KPG-180P</b> OTAP Manager</li> <li>■ <b>KLH-206</b> Leather Case</li> <li>■ <b>KLH-207</b> Nylon Case</li> </ul>
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All accessories may not be available in all markets.  
Contact an authorized Kenwood dealer for details and complete list of all accessories.

## Specifications

	NX-3220	NX-3320		NX-3220	NX-3320
<b>GENERAL</b>					
Frequency Range	136-174 MHz		400-520 MHz		
Max. Channels Per Radio	Up to 1000 CH with option				
Number of Channels	260 (64 for no LCD models)				
Number of Zones	128 (4 for no LCD models)				
Channel Spacing	12.5/15/25*/30* kHz		12.5/25* kHz		
Analog			6.25 kHz/12.5 kHz		
Digital					
Power Supply	7.5V DC ± 20%				
Battery Life	5-5-90		(FDMA/TDMA)		
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	-22°F to +140°F (-30°C to +60°C)				
Frequency Stability	±2.0 ppm		±1.0 ppm		
Dimensions	(W x H x D) Projections Not Included				
Radio Full Keypad Model	2.20 x 4.71 x 1.43 in (56 x 119.6 x 36.4 mm)				
KNB-55L (1,480 mAh)	2.20 x 4.71 x 1.43 in (56 x 119.6 x 36.4 mm)				
KNB-56N (1,400 mAh)	2.20 x 4.71 x 1.68 in (56 x 119.6 x 42.7 mm)				
KNB-57L (2,000 mAh)	2.20 x 4.71 x 1.53 in (56 x 119.6 x 39 mm)				
Weight Radio Full Keypad Model	7.8 oz (220 g)				
KNB-55L (1,480 mAh)	11.1 oz (315 g)				
KNB-56N (1,400 mAh)	14.5 oz (410 g)				
KNB-57L (2,000 mAh)	12.0 oz (340 g)				
FCC ID	K44479000		K44479100		
IC Certification	282F-479000		282F-479100		
<b>RECEIVER</b>					
Sensitivity	NXDN® 6.25 kHz Digital (3% BER)		0.20 µV		
	NXDN® 12.5 kHz Digital (3% BER)		0.25 µV		
	DMR 12.5 KHz Digital (5% BER)		0.30 µV		
	DMR 12.5 KHz Digital (1% BER)		0.45 µV		
	Analog (12dB SINAD)		0.25 µV		
Selectivity	Analog @ 12.5 kHz		65 dB		
	Analog @ 25 kHz		72 dB		
Intermodulation			70 dB		
Spurious Rejection			70 dB		
Audio Distortion			3%		
Audio Output Power	500 mW/8Ω (3% Distortion) / 1,000 mW/8Ω (5% Distortion)				
<b>TRANSMITTER</b>					
RF Power Output (High / Mid / Low)	5 W / 4 W / 1 W				
Spurious Emission	-70 dB				
FM Hum & Noise					
Analog @ 12.5 kHz	40 dB				
Analog @ 25kHz	45 dB				
Audio Distortion	3%				
Digital Protocol	ETSI TS 102 361-1, -2, -3				
Emission Designator	16K0F3E*, 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXD, 7K60FXE, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D				

\*1.25 and 30 kHz are not included in the models sold in the USA or US territories.  
Analog measurements made per TIA603. Specifications are measured according to applicable standards.  
Specifications shown are typical and subject to change without notice, due to advancements in technology.

The Bluetooth word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc.  
NXDN® is a registered trademark of JVCKENWOOD Corporation and Icom Inc.  
NEXEDGE® & FleetSync® are a registered trademarks of JVCKENWOOD Corporation.  
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## 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*	IP54/55/67				

\*Radio must equip 2PIN accessory cover.

# KENWOOD

JVCKENWOOD USA Corporation  
Communications Sector Headquarters

3970 Johns Creek Court, Suite 100, Suwanee, GA 30024-1265

Order Administration/Distribution

P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745

[www.kenwood.com/usa](http://www.kenwood.com/usa)

JVCKENWOOD Canada Inc.

Canadian Headquarters and Distribution

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

[www.kenwood.com/ca](http://www.kenwood.com/ca)



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