

# NX-3720HG/3820HG

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

This adaptable mobile 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. Designed with flexibility in mind, it's packed with convenient features like Bluetooth® for hands-free operation and built-in GPS. This model offers greater freedom of installation, the radio's front panel can be used as a remote control head. Additionally, for expansion capability a software license certification system facilitates extensive customization.

### FEATURES

- Multi-protocol digital radio: Designed to operate under 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
- 4-Line Text Message Frame (2 Lines of Text, icon & key guide)
- 7-color LED indicator
- External and Internal Speaker Switching
- Built-In GPS Receiver 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; availability depends on the model)
- Renowned KENWOOD Audio Quality with Active Noise Reduction (ANR) that utilizes built-in DSP

- IP54 and MIL-STD-810 C/D/E/F/G
- 4 Watts Audio Output Power
- 512 CH/128 Zones
- 1000 Channel 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
- Software DES and AES Encryptions for NXDN Conventional/Trunking and DMR Conventional protocols
- 12.5 kHz Two-slot TDMA channels
- Call Interruption
- Dual-slot Direct Mode
- Optional ARC4 Encryption
- Over-the-Air Alias (OAA)

### ANALOG - FM MODE

- Conventional & LTR Trunking
- FleetSync/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / TextMessages
- 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.

|  |   |  |   |  |   |  |   |
|--|---|--|---|--|---|--|---|
| <ul style="list-style-type: none"> <li>■ <b>KMC-9C/59C</b><br/>Desktop Microphone</li> <li>■ <b>KMC-35</b><br/>Microphone</li> <li>■ <b>KMC-36</b><br/>Keypad Microphone</li> <li>■ <b>KES-3S</b><br/>External Speaker<br/>(compact low profile;<br/>3.5 mm plug)</li> </ul> |     | <ul style="list-style-type: none"> <li>■ <b>KES-5</b><br/>External Speaker<br/>(40 W max input,<br/>requires KAP-2)</li> <li>■ <b>KCT-18</b><br/>Ignition Sense Cable<br/>(Requires KCT-60)</li> <li>■ <b>KCT-23</b><br/>DC Power Cable<br/>M: 10ft (3m) / M3: 23ft (7m)</li> <li>■ <b>KCT-60</b><br/>Connection Cable<br/>(D-sub 15 to Molex<br/>15 Pin Connector)</li> </ul> |     | <ul style="list-style-type: none"> <li>■ <b>KLF-2</b><br/>Line Filter</li> <li>■ <b>KMB-10</b><br/>Key Lock Adapter</li> <li>■ <b>KRA-40G</b><br/>GPS Active Antenna</li> <li>■ <b>KCT-73MIC</b><br/>Visor Microphone</li> <li>■ <b>KCT-74PTT</b><br/>Remote PTT Switch</li> <li>■ <b>KCT-71M2/3/4</b><br/>17ft/25ft/1.6ft Remote Control Cable</li> </ul> |       | <ul style="list-style-type: none"> <li>■ <b>KCT-72M</b><br/>KCT-73MIC &amp; KCT-74PTT Connection<br/>cable for KRK-18H</li> <li>■ <b>KPS-15</b><br/>DC Power Supply<br/>(23A max)</li> <li>■ <b>KMB-34</b><br/>Mounting Case<br/>for KPS-15</li> <li>■ <b>KRK-18H</b><br/>Control Head Adapter Panel</li> <li>■ <b>KRK-19B</b><br/>RF Deck Remote Adapter Panel</li> </ul> |      |
|--|---|--|---|--|---|--|---|

All accessories may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories.

Specifications

|                         | NX-3720HG                                 | NX-3820HG     |
|-------------------------|---|---------------|
| <b>GENERAL</b>          |   |               |
| Frequency Range         | 136-174 MHz                               | 400-470 MHz   |
| Max. Channels Per Radio | Up to 1,000 CH with option                |               |
| Number of Channels      | 512                                       |               |
| Number of Zones         | 128                                       |               |
| Channel Spacing         |   |               |
| Analog                  | 12.5/15/20/25/30 kHz                      | 12.5/25 kHz   |
| Digital                 | 6.25/12.5 kHz                             | 6.25/12.5 kHz |
| Power Supply            | 13.6 V DC ±15%                            |               |
| Current Drain           |   |               |
| Standby                 | 0.45 A                                    |               |
| RX                      | 2.3 A                                     |               |
| TX                      | 12 A                                      |               |
| Operating Temperature   | -22°F to +140°F (-30°C to +60°C)          |               |
| Frequency Stability     | ±1.0 ppm                                  |               |
| Antenna Impedance       | 50 Ω                                      |               |
| Dimensions              | (W x H x D) Projections Not Included      |               |
| Radio w/Control Head    | 6.30 x 1.69 x 6.30 in (160 x 43 x 160 mm) |               |
| Weight (net)            | 2.65 lbs (1.2 kg)                         |               |
| Radio w/Control Head    |   |               |
| IC Certification        | 282F-479200                               | 282F-479301   |

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.

|                                    | NX-3720HG   | NX-3820HG        |
|------------------------------------|---|------------------|
| <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                  |   | 70 dB            |
| Analog @ 25 kHz                    |   | 80 dB            |
| Intermodulation                    |   | 70 dB            |
| Audio Distortion                   |   | 2 %              |
| Audio Output Power                 |   | 4 W/4 Ω          |
| <b>TRANSMITTER</b>                 |   |                  |
| RF Power Output (High / Mid / Low) | 50 W / 30 W / 5 W   | 45 W /30 W / 5 W |
| Spurious Emission                  | 73 dB   | 75 dB            |
| FM Hum & Noise                     |   |                  |
| Analog @ 12.5 kHz                  |   | 45 dB            |
| Analog @ 25 kHz                    |   | 40 dB            |
| Audio Distortion                   |   | 2%               |
| Digital Protocol                   | ETSI TS 102 361-1, -2, -3   |                  |
| Emission Designator                | 16K0F3E, 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W, 7K60FXD, 7K60FXE, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D |                  |

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MIL-STD & IP

| MIL Standard                             | MIL 810C<br>Methods/Procedures | MIL 810D<br>Methods/Procedures | MIL 810E<br>Methods/Procedures | MIL 810F<br>Methods/Procedures | MIL 810G<br>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, V       | 516.4/Procedure I, IV, V       | 516.5/Procedure I, IV, V       | 516.6/Procedure I, IV, V       |
| <b>International Protection Standard</b> |                                |                                |                                |                                |                                |
| Dust & Water*                            | IP54, IP55** (Radio unit)      |                                |                                |                                |                                |

\*Microphone KMC-35 or KMC-36 must be connected to the radio, and all accessory connectors must be covered.  
\*\*IP54: RF Deck of the mobile radio; IP54/IP55: Remote Control Head of the mobile radio.



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