KENWOOD



Multi-Digital Operation for Public Safety and Enterprise





The NX-5000 Series – Ready to Digital Trunked Network System





Meet NEXEDGE Gen2 Multi-Site

Radios are a lifeline for those who work on the front lines – crews tackling a four-alarm fire, utility engineers repairing ice-storm damage, or school guards responding to a security alert. They demand and deserve equipment that is truly fit for purpose, and then some.

To meet this demand KENWOOD has drawn on its extensive experience, its renowned technologies, and an expert analysis of market needs to develop NEXEDGE[®]. This innovative digital solution satisfies the most stringent requirements of today's mission-critical radio users. And now NEXEDGE[®] leaps further ahead of the competition with NX-5000 Series portable and mobile radios, ready to serve in all public safety, public sector and commercial roles with flawless performance and advanced feature sets.

The NX-5000 Series truly sets a new standard.

Public Safety

Round-the-clock public safety operations - police, fire and EMS – can be extremely demanding for both personnel and equipment. The NX-5000 Series radios are robust and offer clear mission-critical communications in numerous environments - even with sirens in the background. Advanced emergency features, such as mandown detection and ease of operation, even with gloves, make NX-5000 series radios the perfect choice to enhance safety in the line of duty.



MISSION OR OPERATIONS CRITICAL –

 We want to be able to communicate and coordinate with other public safety agencies and departments.

We often need to talk on a radio in noisy environments and cannot afford to miss a command or request for help.

We must have secure communications, free from monitoring or interception.

From a crime or accident scene, we need to be able to alert dispatch or the entire network instantly.

We use our radios day & night, 24/7.

NX-5000 SERIES RADIOS DELIVER

Can we keep our gloves on while operating the radio?

We need radios that are robust.

School buses may need to communicate directly with the police in an emergency.

 We want advance warning when batteries are dying – and we also want batteries that last longer.

> Our employees need to look smart in suits and uniforms, so no bulky radios.

Public Sector and Commercial Operations

Thanks to multi-digital operation, NEXEDGE[®] offers a flexible communications system that is ideal for a wide range of industries and fields - ranging from utilities and traffic agencies to schools, taxi services and security companies. What's more, top-of-the-line features such as the transflective display for easy viewing in sunshine, GPS capability and Bluetooth[®] connectivity all contribute to enhanced efficiency and cost-effectiveness. From top to bottom, the NX-5000 Series means business.



NX-5000 SERIES FEATURES

OCOL SUP,

ONE-RADIO, **MULTI-PROTOCOL SUPPORT**

The NX-5000 Series offers unsurpassed interoperability as it supports 2 digital CAIs - NXDN, DMR and P25 (Phase 1 & 2) - plus

FM analogue in a single radio. Best of all, a desired CAI can be selected at will, giving you the freedom to migrate at your own pace – whether you are intent on going fully digital, undecided about which digital system to pick, or just wanting to maintain both digital and analogue for a while.



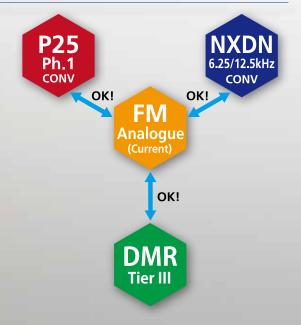
NXDN & P25 FOR **MISSION-CRITICAL USERS**

P25 is a digital CAI to ensure interoperability among public safety agencies in North America, Australia and New Zealand. The NX-5000 Series is compatible with Phase 1 (conventional and trunked), and Phase 2 (trunked). But it also offers NXDN, expanding the envelope of interoperability for a wide variety of users.



AUTOMATIC CALL SIGNAL IDENTIFICATION

An NX-5000 Series radio automatically identifies a call signal - whether it's NXDN, DMR, P25, or FM analogue - and transmits in the same mode received. Setting your radio to Mixed Mode allows the radio to wait for a call in both digital and analogue modes in a digital/analogue environment. Moreover, the new Geographical Zone function allows these radios to operate in any mode - conventional or trunked in NXDN, DMR, P25, and FM - in the same zone.



INTUITIVE DISPLAY & OPERABILITY



DSE

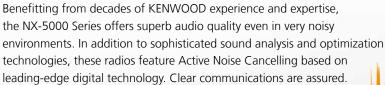
The 65,536-colour TFT display allows the user to check at a glance on operating status, shown in multi-line text to convey more information.

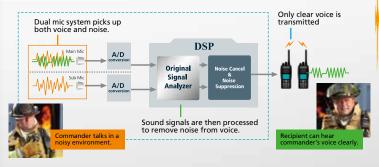
The portables feature a 1.74-inch (240 x 180 pixel) LCD that can be viewed clearly in direct sunlight or in the dark, even while wearing polarised sunglasses.

The mobile models feature a 2.55-inch (154 x 422 pixel) TFT display with integrated luminance sensor that automatically adjusts the brightness of the backlight. What's more, the optional remote control panel (KCH-20R) features a 2.75-inch (240 x 400 pixel) TFT display with Auto LCD Brightness mode to adjust display intensity for round-the-clock operation.

Further enhancing operating ease is the 4-way Directional-pad (D-pad) and 2-position lever switch, which offer intuitive control and can be operated with gloves on.

RENOWNED KENWOOD AUDIO



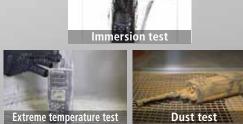




TOUGH & ROBUST



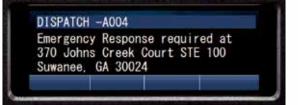
During the development stage, NX-5000 Series radios go through a number of stringent tests to make sure they can withstand harsh usage. In addition to MIL-STD-810 C/D/E/F/G environmental standards, NX-5000 portable radios comply with IP67/68 immersion standards, offering max. 2 hour protection at a depth of 1 meter*. The rugged mobile radios comply with IP54/55** dust/water ingress protection standards.



*Applies for IP68 ** IP54: RF Deck of the mobile radio; IP55: Remote Control Head for the mobile radio



NX-5200/5300/5400 (actual size)



NX-5700/5800/5900 (actual size)

NX-5000 SERIES FEATURES

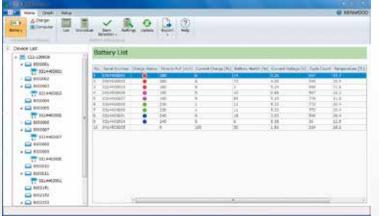
INTELLIGENT BATTERY MANAGEMENT SYSTEM (Portables: option)

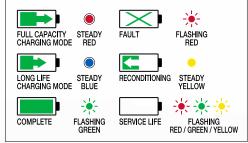
The Intelligent Battery System helps to extend battery lifetime and ensure that the batteries are optimally maintained so as to be ready for mission-critical operations. The system comprises the optional high-capacity Li-ion and Ni-MH Batteries (KNB-L1/L2/L3/N4), Intelligent Charger (KSC-Y32), and Battery Reader software (KAS-12). Up to 60 Intelligent Chargers can be chain-connected to a PC installed with the KAS-12 Battery Reader software, which can display and manage information: battery type, model name, voltage, temperature, discharge cycle, expected life, and remaining capacity.



• Long Life Charging Mode: stops recharging at 80 % capacity to extend life.

Up to 5,000 batteries can be managed at a time (requires additional option - Available later).
Deterioration (end-of-life) notification (requires additional option - Available later).





Battery conditions are displayed in colour illuminated indicators on the charger, which are also displayed on a connected PC with the same colour scheme. Colourcoordinated patterns provide users with at-a-glance information for comprehensive battery management.

BUILT-IN BLUETOOTH®



Hands-free operation is vital for many

NX-5000 users. The radios' built-in Bluetooth[®] module is compatible with Headset and Serial Port Profiles (ver. 3.0) and keeps your hands open for other important tasks you are into.



GPS TO TRANSMIT YOUR POSITION



Featuring an integrated GPS module and antenna, NX-5000 portable radios can transmit positional data, enabling effective management when used with tracking applications like KAS-10 software. Mobile models can support GPS with the optional KRA-40G GPS Active Antenna.

ENCRYPTION EQUIPPED

9
•

Secure communications are an essential requirement, especially for public safety applications. NX-5000 radios are equipped with 56-bit key Data Encryption Standard (DES) Encryption. For even higher protection there is the optional KWD-AE31 Secure Cryptographic Module, which supports the 256-bit Advanced Encryption Standard (AES) Encryption.

MULTIPLE CONFIGURATION (Mobiles: option)

The NX-5000 mobile series allows users to create a variety of configurations to suit diverse requirements by combining different options.

- Single Remote Control Head x Single RF Deck
 Suited for distribution and courier services, this is the simplest
 configuration. The detachable front control panel of the
 NX-5000 mobile series is used as a Remote Control Head.
- 2. Single Remote Control Head x Multi RF Decks

You can operate multiple radios (e.g. VHF and UHF) as if they were one by adding an NX-5000 mobile series RF Deck. This configuration is recommended for law enforcement agencies.

3. Dual Remote Control Heads x Single RF Deck

One controller can be mounted on the dashboard, with the other at the rear. Useful for EMS applications.

4. Dual Remote Control Heads x Multi RF Decks

This adds the convenience of a dual control head to the multi RF decks (3 max.) configuration. Two operators can control 2 radios (e.g. VHF and UHF) from separate control heads. Best suited for battalion chiefs.



SD CARD SLOT

For storing voice and data, memory capacity can be increased by up to a huge 32 GB.*

* Purchase a card separately.



SENSORS FOR USER SAFETY

Life-critical detection is built-in. When unusual behavior is detected by the acceleration and tilt sensors, one of three Emergency Modes – Man-down Detection, Stationary Detection, and Motion Detection – will be automatically engaged.

In addition to the built-in motion sensor, these portables feature a Lone Worker function that automatically places the radio in Emergency Mode if it is not operated for a certain period of time. Also the

bright orange Emergency Button is located at the top (portables) or front (mobiles) of the radio for high visibility and instant access when needed.



NX-5200/5300

NEXEDGE VHF/UHF

MULTI-PROTOCOL DIGITAL & ANALOGUE PORTABLE RADIOS



NX-5700/5800 **NEXEDGE VHF/UHF MULTI-PROTOCOL DIGITAL & ANALOGUE MOBILE RADIOS**

GENERAL FEATURES

- Multi-Digital + FM Analogue Operation
 - Gen2 & NXDN Conventional/Type-C Trunking Protocol
 - DMR Tier II Conventional
 - DMR Tier III Trunking
 - DMR-S Trunking
 - P25 Conventional/Trunking (Phase 1/Phase 2)
 - FM Analogue Conventional & LTR Zones
- Large, Colour 2.55" (154 x 422 pixel) TFT Display
- Easy-to-follow GUI and Multi-line Text Display
- Speaker Audio: 4 W/4 Ω ; 3 W/4 Ω for the Remote Control Head
- 6 Front PF keys & 4 Up / Down Selectors

OPTIONAL ACCESSORIES

INTERFACE KIT

KRK-15B

■ KCT-71

(Adapter for the Head)

CONTROL HEAD REMOTE KIT

(Adapter for the RF Deck)

REMOTE CONTROL CABLE

(Available in 3 lengths of

5.2 m, 7.6 m, 0.5 m)

Emergency Button

- FleetSync[®]/II, MDC-1200, QT/DQT, 2-Tone (Analogue mode)
- Frequency Range
 - VHF: 136-174 MHz (NX-5700)
 - •UHF: 400-470 MHz (NX-5800)
- RF Output
 - •VHF: 50-5 W (NX-5700/5700B)
 - •UHF: 45-5 W (NX-5800/5800B)
- Maximum of 4,000 CH/Radio capacity, 512 CH/Zone, 128 Zones

The radio platform is ready for DMR and 5-Tone, software for these features will follow.

EXTERNAL MIC KIT ■ KCH-19 (Cable length: 3m) BASIC CONTROL HEAD KIT KCT-74PTT EXTERNAL PTT KIT (Cable length: 3m) KCH-20R FEATURED CONTROL HEAD KWD-AE31 SECURE CRYPTOGRAPHIC MODULE KRK-14H KPG-180AP CONTROL HEAD

OTAP MANAGER

KCT-73MIC

- KMC-35 MICROPHONE
- KMC-36 **KEYPAD MICROPHONE**
- KMC-53 DESKTOP MICROPHONE



- KES-3 EXTERNAL SPEAKER (Compact low profile; φ3.5 mm plug)
- KES-5 EXTERNAL SPEAKER (40 W max input, Requires KAP-2)
- KCT-23 DC POWER CABLE M: 3 m / 7 m
- KCT-46 IGNITION SENSE CABLE
- KCT-72 CONNECTION CABLE ■ KΔP-2
- **RELAY UNIT** KRA-40G GPS ACTIVE ANTENNA

HORN ALERT/P.A.

■ KPS-16 DC POWER SUPPLY









Combination of DC Power Supply KPS-16 and Desktop Microphone KMC-53 for the mobile radio. Suitable for applications such as taxi dispatching system etc.



SPECIFICATIONS

			e Radios				Radios
GENERAL		NX-5200	NX-5300	GENERAL		NX-5700	NX-5800
Frequency Range		136-174 MHz	400-470 MHz	Frequency Range		136-174 MHz	400-470 MHz
Max. Channels Per	Radio	1024 (Up to 4000 d	hannels with option)	Max. Channels Per I	Radio	1024 (Up to 4000 c	hannels with option)
Number of Zones		1	28	Number of Zones		1	28
Max. Channels Per	Zone	5	12	Max. Channels Per 2	Zone	5	512
Channel Spacing	Analogue	12.5/2	0/25 kHz	Channel Spacing	Analogue	12.5/20	0/25 kHz
Channel spacing	Digital	6.25/12.5 kHz		Channel Spacing Digital		6.25/12.5 kHz	
Power Supply		7.5 V D	C ±20 %	Power Supply		13.2 V DC (10	0.8 - 15.6 V DC)
	KNB-L1 (2,000 mAh)	10 hours / 6.5 hours			Standby		45 A
Pottory Life	KNB-L2 (2,600 mAh)	12.5 hours / 8.5 hours		Current Drain	RX	2.	3 A
(5-5-90/10-10-80	KNB-L3 (3,400 mAh)	17 hours / 11 hours		TX		9 A	
duty cycle)	KNB-N4 (2,500 mAh)		/ 8.5 hours	Operating Temperature		-30 °C to +60 °C	
, -,,	KBP-8		<. 11 hours / 8 hours,	Frequency Stability		±1.0 ppm	
	(w/ AA battery x12)		. 25 hours/ 18 hours	Dimensions (W x H :		171 v //8	x 176 mm
Operating Tempera		-30 °C t	o +60 °C	Radio with Control		171 X 40	x 170 mm
Frequency Stability	(-30°C to +60°C; +25°C Ref.)	±0.5 ppm	±0.5 ppm	Weight: Radio with	Control Head	1.6	6 kg
Dimensions	KNB-L1 (2,000 mAh)		9 x 39.8 mm		ETSI (EMC)	EN 301 489-3, EN 301	489-5, EN 301 489-17
(W x H x D)	KNB-L2 (2,600 mAh)	58.0 x 138	9 x 42.8 mm	Applicable Standard	s ETSI (Spectrum)	EN 300 086, EN 300 113,	, EN 300 219, EN 300 328,
Radio w/ Battery,	KNB-L3 (3,400 mAh)	58.0 x 138	9 x 48.2 mm	Applicable Standard), EN 301 166
Projections Not	KNB-N4 (2,500 mAh)	58.0 x 166	4 x 48.5 mm		ETSI Safety		0215, EN 60950-1
Included	KBP-8	67.0 x 218.	3 x 44.6 mm	RECEIVER		NX-5700	NX-5800
	KNB-L1 (2,000 mAh)	38	32 g	Soncitivity	N 3 % BER (6.25 kHz/12.5 kHz)	· · · ·	/ 0.32 μV
	KNB-L2 (2,600 mAh)	406 g		(Digital) NXD	N 1 % BER (6.25 kHz/12.5 kHz)	-4 dB μV (0.32 μV)	/ -1 dB μV (0.45 μV)
Weight (Net) Radio w/ Battery	KNB-L3 (3,400 mAh)	449 g		P25			8 µV
	KNB-N4 (2,500 mAh)	579 g			B SINAD (12.5/20&25 kHz)	0.32 µV	/ 0.28 μV
	KBP-8 (w/AA x 12)	Approx. 712 g		(Analogue) 20 dB SINAD (12.5/20&25 kHz)		-1 dB μV (0.45 μV) / -3 dB μV (0.35 μV)	
	ETSI (EMC)	EN 301 489-3, EN 301	489-5, EN 301 489-17		Digital		3 dB
Applicable	ETSI (Spectrum)	EN 300 086, EN 300 113	EN 300 219, EN 300 328,	Analogue 12.5 kHz		70 dB	
Standards			, EN 301 166	Anal	ogue 20 kHz		3 dB
	ETSI Safety		0215, EN 60950-1		ogue 25 kHz) dB
RECEIVER		NX-5200	NX-5300	Intermodulation (Ar) dB
	DN 3 % BER (6.25 kHz/12.5 kHz)		/ 0.32 μV	Spurious Rejection (Analogue)) dB
(Digital) NXI	DN 1 % BER (6.25 kHz/12.5 kHz)	-4 dB μV (0.32 μV)	/ -1 dB μV (0.45 μV)	Audio Distortion		2	%
P25	5 % BER	0.2	8 µV	Audio Output Powe	r		ontrol Head: 3 W/4 Ω)
	B SINAD (12.5/20&25 kHz)	0.32 µV	/ 0.28 μV	TRANSMITTER		NX-5700	NX-5800
(Analogue) 20 d	dB SINAD (12.5/20&25 kHz)	-1 dB μV (0.45 μV)	/ -3 dB μV (0.35 μV)	RF Power Output Po	ower		o 5 W
P25	Digital	63	dB	Spurious Emission		-36 dBm ≤1 GHz,	, -30 dBm > 1 GHz
	logue 12.5 kHz	68	dB		nalogue): @25/20/12.5 kHz)/50 dB
Ana	logue 20 kHz	74	dB	Audio Distortion		2	%
Ana	logue 25 kHz	76	dB			16K0F3E, 14K0F2D, 14K	OF3E, 12K0F2D, 11K0F3E,
Intermodulation		65	dB	Emission Designato	r		0F1E, 8K30F1D, 8K30F7W,
Spurious Rejection		75	dB				DF1W, 4K00F1E, 4K00F1D,
Audio Distortion		3	%	1 L		4K00F7W	/, 4K00F2D
Audio Output Pow	ex.	500 mW/8 Ω (3 % Distortion)/	1			
•		1,000 mW/8 Ω	(5 % Distortion)				
TRANSMITTER		NX-5200	NX-5300				
RF Power Output P	ower	6 to 1 W	5 to 1 W				
Spurious Emission			-30 dBm > 1 GHz				
FM Hum & Noise (A	Analogue): @12.5/20/25 kHz	40/45	/45 dB				
Audio Distortion		2	%]			
Emission Designato	or	8K50F3E, 7K50F2D, 8K30 8K10F1E, 8K10F1D, 8K10	DF3E, 12K0F2D, 11K0F3E, DF1E, 8K30F1D, 8K30F7W, IF1W, 4K00F1E, 4K00F1D, ', 4K00F2D				

Analogue measurements made per EN Standards or TIA 603 and specifications shown are typical. P25 digital measurements made per TIA 102CAAA and specifications shown are typical. Details and timing of firmware and software updates are subject to change without notice. Specifications are subject change without notice, due to advancements in technology.

APPLICABLE MIL-STD & IP

MIL Standard	810C Methods/ Procedures	810D Methods/ Procedures	810E Methods/ Procedures	810F Methods/ Procedures	810G Methods/ Procedures				
Low Pressure	500.1/1	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	502.1/1	502.2/ I, II	502.3/ I, II	502.4/ I, II	502.5/ I, II				
Temp. Shock	503.1/1	503.2/1	503.3/1	503.4/ I, II	503.5/1				
Solar Radiation	505.1/1	505.2/1	505.3/1	505.4/1	505.5/1				
Rain*1	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	509.1/1	509.2/1	509.3/1	509.4	509.5				
Dust	510.1/1	510.2/1	510.3/1	510.4/ I, III	510.5/1				
Vibration	514.2/ VIII, X	514.3/1	514.4/1	514.5/ I	514.6/1				
Shock	516.2/ I, II, V	516.3/ I, IV, V*2	516.4/ I, IV, V*2	516.5/ I, IV, V*2	516.6/ I, IV, V*2				
Immersion* ³	_	_	_	512.4/I	512.5/I				
International Protection Sta	andard								
Dust & Water	IP54, IP55*4	IP54, IP55*4							
Immersion*3	IP67, IP68*5								

*1: Blowing rain protection for the mobile radio's Remote Control Head only. *2: Shock (Crash Hazard) standard for 810D/E/F/G Method/Procedure V applies only for the mobile radios *3: Immersion standard applies only for the portable radios *4: IP54: RF Deck of the mobile radio; IP55: Remote Control Head for the mobile radio *5: Conditions: Portable radio immersed for 2 hours at a depth of 1 meter

The Bluetooth word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. ● SD and microSD are trademarks of SD-3C, LLC in the United States, and/or other countries ● AMBE+2[™] is a trademark of Digital Voice Systems Inc.
 Windows[®] is a registered trademark of Microsoft Corporation. ● NXDN[™] is a trademark of JVCKENWOOD Corporation and Icom Inc. ● NEXEDGE[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● NXDN[™] is a trademark of JVCKENWOOD Corporation. ● NXDN[™] is a trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● NXDN[™] is a trademark of JVCKENWOOD Corporation. ● NXDN[™] is a trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered trademark of JVCKENWOOD Corporation. ● FleetSync[®] is a registered tr

JVCKENWOOD U.K. Limited