

KENWOOD

NX-P1000 SERIES

2W & 5W VHF/UHF ANALOG RADIOS
& 5W VHF/UHF DIGITAL RADIOS

ProTalk®

Two-Way Business Radios for Every Profession

NXDN® **DMR** **FleetSync®**



ProTalk[®] NX-P1000 Series

NX-P1000 — Answering the Needs of Every Profession

From enterprise to operation-critical applications, the NX-P1000 Series will shine in a range of different business categories. In addition to the great convenience afforded by a host of powerful features.



Customize at Will

The NX-P1000 Series offers future-proof flexibility with support for both FM Analog and NXDN to later migrate to digital or expand your digital environment (Upgradable to digital).

NXDN[®] Digital Protocol

NXDN supports both channel bandwidths of 12.5 kHz and 6.25 kHz bandwidth using FDMA technology. NXDN provides excellent spectrum efficiency, wide coverage and scalability.

DMR Digital Protocol

Ability to upgrade from ProTalk analog to DMR Tier 2 when you're ready. DMR offers 2 talk paths within 12.5 kHz bandwidth, effectively doubling the capacity for a single license and/or repeater.

FM Analog

FM analog protocol is offered in 25 kHz^{*1} and narrow 12.5 kHz channel spacing. Conventional and with QT/DQT, and FleetSync[®] signaling.

*1 Some limitations apply in certain regions when configuring wide channel spacing.



For Today's Demanding Industries

NXDN[®] **DMR** ANALOG



The KENWOOD NX-P1000 Series portable two-way business radios deliver professional performance. Offering the ideal solution for communications in construction, manufacturing and warehousing, retail, hospitality, facility management and rental fleet applications. Engineered to provide superb ease of use and audio clarity, even in noisy environments and boasts rugged performance for dependable communications in all weather conditions. It's business done right!



Analog and Digital Two-Way Radios Have Many Similarities but also Vast Differences

Time-tested handheld analog radios have been a staple for reliable two-way voice communications since the early 20th Century. While the introduction of digital two-way radios has accelerated in the last few decades, analog radios are still a viable and appropriate choice, so many organizations are weighing the pros and cons of each technology. This review of typical features in analog and digital two-way radios will help you determine which technology best fits your needs.

Analog vs Digital Radios

What are the Benefits of Digital Radios?

A digital two-way radio has all the same basic features as analog radios. However, there are several key differences that increase capacity, security and functionality.

Digital two-way radios can allow more people to communicate on a single RF channel by logically grouping users and separating their traffic so that they only hear the most important and relevant information. Also, the software in the radio hones in on the user's voice when transmitting and helps to block out background noise. This ability to digitally filter and process audio allows digital radios to deliver more clear and consistent voice quality compared to analog at the edge of coverage.

Both analog and digital signals can suffer from interference and fading, however, with a digital radio, the voice message is more robust than analog because of forward error-correcting (FEC) software that helps to fix missing information. Digital radios can also operate on Very Narrow, or true 6.25KHz channels, which helps the radio receiver recover weak signals. These two benefits of digital radio can help improve the usability of radios within a facility or building without having to invest in infrastructure.

Being software-based means digital two-way radios can offer more effective encryption options compared to analog radios. As a result, digital two-way radios are more secure, and it is more difficult for outsiders to listen in on private transmissions.

Analog two-way radio technology will continue to be a reliable choice for users with simple communications requirements and budget constraints, while a digital two-way radio offers enhanced features for more complex communication needs.

Designed to Go with all Sizes and Shapes

The NX-P1000 has the flexibility to grow with your business. The ability to easily upgrade to more advanced NEXEDGE digital features or convert to DMR Tier 2 protects your initial investment and allows for cost effective expansion and capacity updates without having to sacrifice quality.

ProTalk Digital Direct	NXDN	100 Group ID's 100 User ID's	1 RAN pair per channel		Analog and Digital Mixed Mode	Single building or facility coverage
ProTalk Digital Repeater	NXDN	1000 Group ID's 1000 User ID's	16 RAN pair per channel		Analog and Digital Mixed Mode	Multiple buildings, city or town-wide coverage

Simple Yet Tough

Tough, Robust & Water Resistant

The NX-P1000 series radios go through stringent tests including drop, immersion, splash, key punch, extreme temperature, dust, and heavy rain to simulate the harshest operating conditions experienced in a variety of applications – both with and without the KMC-45 optional speaker microphone. The NX-P1000 series radios also meet the international ingress protection standards, including IP54, IP55 and also meet the MIL-STD 810 C to G standards set by the U.S. Department of Defense.*³

*³ Accessory connectors must be covered.

Enhanced Audio Quality

Based on decades of experience with professional and high quality audio products, the NX-P1000 can be customized to deliver the best digital audio to business radio users with various language backgrounds.

Clear and Confident

Voice Prompts

Voice announcement will keep you informed of a newly selected zone/channel, function and when a PF button is pressed, as well as reception status.

Cloning

Customize the radio programming one time and use the optional Cloning Cable to rapidly program groups of ProTalk radios with the same settings.

Intrinsically Safe

The NX-P1200NV/P1300NU portables offer Intrinsically Safe Option and are approved for Class I, Div. 1, Group D and are also approved for non-Incendive use in Class I, Div. 2, Groups A, B, C, D hazardous locations.



Model Lineup

ProTalk[®]

Analog Portable Radios

NX-P1000 Series analog portable models
NX-P1200AV (VHF) / NX-P1300AU (UHF)
NX-P1202AV (VHF) / NX-P1302AU (UHF)

The NX-P1200AV/P1300AU and NX-P1202AV/P1300AU portable radios deliver professional performance with extended coverage for all your on-site applications. Based upon a proven design with such features as cloning, scan, selectable color LED, second PTT, built-in VOX, long battery life and renowned Kenwood audio. The compact 2 and 5-watt ProTalk[®] radios have been expertly engineered to satisfy the toughest job requirements, in all conditions, thanks to MIL-STD 810 & IP54/55 weatherproofing.



SMA Antenna Connector:
Different antennas can be attached.



Selectable 7-Color

A large 7-colour LED indicator on the top panel illuminates to notify multi-status functions. (PC programming required.)



ProTalk[®]

Digital Portable Radios

NX-P1000 Series digital portable models
NX-P1200NVK (VHF) / NX-P1300NUK (UHF) 2-pin connector

The NX-P1200NVK and NX-P1300NUK portable radios harness KENWOOD's renowned NXDN digital protocol to enhance business efficiency or FM analog for its simplicity. They allow the combination of analog and digital channels in the same zone. This gives you the ability to easily migrate to digital at your own pace, or operate more effectively in a mixed environment where groups of users have different needs or solutions.

- Analog and/or digital capable
- Second PTT button
- Programable button for one-on-one conversations, a select group call, or use it as an emergency button (upgradable)
- Kenwood renowned audio
- 1 watt of loud robust audio to hear in noisy environments.
- Industry leading **3 year warranty**
- Lone Worker
- Stun / Kill / Revive (upgradable)
- Radio Check (upgradable)
- Monitor



ACCESSORIES

PORTABLES

BATTERY PACKS

■ **KNB-45L**
2,000mAh/7.4V
Li-ion Battery Pack



■ **KNB-69L**
2,550mAh/7.4V
Li-ion Battery Pack



■ **KNB-82LCM**
2,000mAh/7.4V
Intrinsically Safe
Li-ion Battery Pack

CHARGERS

■ **KSC-35SK**
Fast Charger
For the KNB-45L/69L
82LCM (3-Hour)



■ **KSC-43K**
Dual Chemistry
Fast Charger
For the KNB-45L/69L/82LCM



■ **KVC-22**
DC Vehicular
Charger Adapter



ANTENNAS

■ **KRA-22/23**
VHF/UHF Helical
Antenna (Low Profile)



■ **KRA-26**
VHF Helical Antenna
(Standard Length)



■ **KRA-27**
UHF Whip Antenna
(Standard Length)



HEADPHONES/EARPHONES/MICROPHONES

■ **KMC-45D**
Speaker Microphone
(IP54/55)



■ **KHS-26/31C**
Headset (with Ear Bud
In-Line PTT / with C-Ring)



KHS-26



KHS-31C

■ **KHS-27A**
D-Ring In-line PTT Headset



OTHER

■ **KBH-10**
Bet Clip



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.

FREQUENTLY ASKED QUESTIONS

How do I know which KENWOOD NX-P1000 series radio to use?

Determine how the radio will be used: UHF is better indoors through concrete walls or floors, etc. VHF is better outdoors through foliage or line of sight. Also, higher power means a radio will have a wider coverage area.

Are the NX-P1000 series analog radios compatible with other business radios?

Yes! All you have to do is match the frequency and code.

Can a VHF radio talk to a UHF radio?

No! VHF and UHF frequency bands are not compatible.

Is an FCC license required?

Yes! You can download FCC form 601 and instructions at www.fcc.gov/formpage.html or call 1-888-call-fcc.

Why are KENWOOD radios so durable and rugged?

Simply because KENWOOD knows that radios have to be tough to withstand years of hard indoor and outdoor usage. ProTalk® radios are specially designed to meet or exceed rigid Mil-Spec standards established by the US Department of Defense.

How far can I talk?

ANALOG RANGE AND COVERAGE

VHF/UHF	Steel and/or Concrete Reinforced Buildings.	High-Rise Buildings
UHF 2 Watt	Up to 250,000 sq.ft.	Up to 20 floors
UHF 5 Watt	Up to 370,000 sq.ft.	Up to 33 floors
VHF 2 Watt	Up to 220,000 sq.ft.	Up to 12 floors
VHF 5 Watt	Up to 300,000 sq.ft.	Up to 18 floor

DIGITAL RANGE AND COVERAGE

VHF/UHF	Steel and/or Concrete Reinforced Buildings.	High-Rise Buildings
UHF 2 Watt	Up to 360,000 sq.ft.	Up to 24 floors
UHF 5 Watt	Up to 530,000 sq.ft.	Up to 39 floors
VHF 2 Watt	Up to 310,000 sq.ft.	Up to 15 floors
VHF 5 Watt	Up to 430,000 sq.ft.	Up to 21 floors

SPECIFICATIONS

		2W /5W VHF/UHF Analog Portables				5W VHF/UHF Digital Portables	
GENERAL		NX-P1200AV	NX-P1300AU	NX-P1202AV	NX-P1302AU	NX-P1200NVK	NX-P1300NUK
Frequency Range		151-159 MHz	451-470 MHz	151-159 MHz	451-470 MHz	151-159 MHz	451-470 MHz
Max. Channels per Radio		64 channels				64 channels	
Number of Zones		4 zones				4 zones	
Max. Channels per Zone		16 channels				16 channels	
Channel Spacing	Analog	25 ¹ / 12.5 kHz				25 ¹ / 12.5 kHz	
	Digital					6.25/12.5 kHz	
Power Supply		7.5 V DC ±20 %				7.5 V DC ±20 %	
Battery Life 5-5-90	KNB-45L (2000mAh)	Approx. 11.5 hours Approx. 14.5 hours Approx.15 hours ^{*2} Approx. 19.5 hours ^{*2}		Approx. 15.5 hours Approx. 19.5 hours Approx. 17 hours ^{*2} Approx. 22 hours ^{*2}		Approx. 11.5 hours Approx. 14.5 hours Approx. 15 hours ^{*2} Approx. 19.5 hours ^{*2}	
	KNB-69L (2550mAh)						
DMR Mode ^{*2}							
Operating Temperature ^{*3}		-22°F to +140°F (-30°C to +60°C)				-22°F to +140°F (-30°C to +60°C)	
Frequency Stability		±0.5 ppm				±0.5 ppm	
Antenna Impedance		50 Ω				50 Ω	
Dimensions	Radio with KNB-45L/82LCM	(W x H x D) Projections Not Included 2.13 x 4.84 x 1.32 in (54 x 123 x 33.5 mm)				(W x H x D) Projections Not Included 2.13 x 4.84 x 1.32 in (54 x 123 x 33.5 mm)	
	Radio with KNB-69L	2.13 x 4.84 x 1.48 in (54 x 123 x 37.5 mm)				2.13 x 4.84 x 1.48 in (54 x 123 x 37.5 mm)	
Weight (net)	Radio Only	5.64 oz (160 g)				5.64 oz (160 g)	
	Radio with KNB-45L/82LCM	9.88 oz (280 g)				9.88 oz (280 g)	
	Radio with KNB-69L	10.41 oz (295 g)				10.41 oz (295 g)	
FCC ID		K44501000	K44501101	K44501000	K44501101	K44501000	K44501101
RECEIVER		NX-P1200AV	NX-P1300AU	NX-P1202AV	NX-P1302AU	NX-P1200NVK	NX-P1300NUK
Sensitivity	NXDN 6.25 kHz Digital, 3 % BER	0.18 μV ^{*2}				0.18 μV	
	NXDN 12.5 kHz Digital, 3 % BER	0.22 μV ^{*2}				0.22 μV	
	DMR [®] ^{*2} @ 12.5 kHz Digital (1% BER)	0.25 μV ^{*2}				0.25 μV ^{*2}	
	DMR [®] ^{*2} @ 12.5 kHz Digital (5% BER)	0.18 μV ^{*2}				0.18 μV ^{*2}	
	Analog 12.5/25 kHz 12 dB SINAD	0.20 μV / 0.24 μV				0.20 μV / 0.24 μV	
Selectivity	Analog @ 12.5 kHz / 25kHz	68 dB / 74 dB				68 dB / 74 dB	
Intermodulation		70 dB				70 dB	
Spurious Rejection		70 dB				70 dB	
Audio Distortion		7%				7%	
Audio Output		1 W / 12 Ω (Internal Output) 500 mW / 8 Ω (External Output)				1 W / 12 Ω (Internal Output) 500 mW / 8 Ω (External Output)	
TRANSMITTER		NX-P1200AV	NX-P1300AU	NX-P1202AV	NX-P1302AU	NX-P1200NVK	NX-P1300NUK
RF Power Output ^{*3}		5 W / 4 W / 1 W		2 W / 1 W		5 W / 4 W / 1 W	
Spurious Emission		-70 dB				-70 dB	
FM Hum & Noise Analog @ 12.5 kHz / 25kHz		40 dB / 45 dB				40 dB / 45 dB	
Audio Distortion		2%				2%	
Emission Designator		16K0F3E, ^{*1} 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D, 7K60FXD ^{*2} , 7K60F7W ^{*2}				16K0F3E, ^{*1} 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D, 7K60FXD ^{*2} , 7K60F7W ^{*2}	

^{*1} 25 / 30 kHz in VHF/UHF Bands excluding T-Band are not included in the models sold in the USA or US territories.
^{*2} Those specifications are all upgradeable options for NX-P1000 ProTalk Series.
^{*3} Operating temperature specification for a Li-ion battery is -10°C to +60°C [14°F to +140°F].

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NEXEDGE[®] is a registered trademark of JVCKENWOOD Corporation.
NXDN[®] is a trademark of JVCKENWOOD Corporation and Icom Inc.
ProTalk[®] is a registered trademark of JVCKENWOOD Corporation.
AMBE+2TM is a trademark of Digital Voice Systems Inc.
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Specifications shown are typical and subject to change without notice, due to advancements in technology
Details and timing of firmware and software updates are subject to change without notice.
Analog measurements made per TIA603. Specifications are measured according to applicable standards.
All interfaces must be fully sealed with appropriate covers or by designated genuine accessories.

APPLICABLE MIL-STD/IP

MIL Standard	Methods / Procedures				
	MIL 810C	MIL 810D	MIL 810E	MIL 810F	MIL 810G
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
Temp. 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
International Protection Standards					
Dust & Water Protection [*]	IP54, IP55 [*]				

^{*}To meet IP54/55, the 2-pin connector cover has to be connected on the radio or the locking bracket has to be attached to the external speaker microphone.

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