

BC500DU

MULTI-PROTOCOL DIGITAL & ANALOG PORTABLE RADIO

A SINGULAR SOLUTION

If you are thinking of harnessing the latest digital protocols – NXDN or DMR – to enhance business efficiency or FM analog for its simplicity, the BC500DU radios have you covered. Our singular solution offers the widest selection of two-way radios for everyday use. Features include a 7-color LED indicator and the popular 2-pin audio accessory connector. Plus, mixed-mode operation ensures seamless integration with legacy radios while smoothing the onward migration path to digital. But whatever your specific needs, audio quality is what determines clear voice communications – which is why this radio is used under the most grueling conditions, like the cockpit of a racing car. Thanks to our extensive experience with professional systems, reliability is second to none. So whatever your radio requirements, the BC500DU radio offer a single platform that's right for you.

NXDN® **DMR** **DMR Auto Slot Select** **FleetSync™**



Basic Model

Features

Multi-protocol digital radio: Designed to operate under NXDN or DMR digital and FM analog protocols

Large 7-Color LED indicator on the top panel

- Selective Power-on LED
- Selective Call Alert LED
- Battery Level Indication
- Multi-status function indication

RF output power 5W UHF

Mixed Zone - analog and digital

Renowned Audio Quality: TX/RX audio profile with optimizable digital processor

- Audio Equalizer: Flat, High, Low
- Auto Gain Control: On, High, Low, Off
- Noise Suppressor
- Microphone type settings

Multiple Scan Functions: Dual Priority, Single Priority, Single Zone, Multi, Normal Scan

VOX & PTT –triggered Semi- VOX, Voice-operated TX

Emergency Function: Customizable Emergency Profile

Lone Worker

Max / Min Volume setting & Volume control

Voice Announcement

Electronic Serial Number (ESN)

MIL-STD-810 C/D/E/F/G

IP54 and IP55

Digital – DMR Mode

TDMA 2-slot 12.5 kHz bandwidth equivalent to 6.25 kHz very narrow bandwidth

DMR Tier II Conventional Operation

Site Roaming

DMR Auto Slot Select

Dual Slot Direct Mode

Digital / Analog Mixed mode

Call Interruption

Group / Individual Call

Status / Short data, Paging Call

Digital Bit Scrambler

Late Entry

Over-the-Air Alias (OAA)

Analog – FM

FM Conventional Operation

FleetSync: PTT ID, Stun/Revive,

Talk back, Selcall

MDC1200: PTT ID, Radio Inhibit/Uninhibit,

Radio check, Emergency

QT / DQT, DTMF, 2-tone

Built-in Programmable Voice Inversion

Scrambler (per channel)

Built-in Comander (per channel)

Digital – NXDN® Mode (Optional)

FDMA – Very narrow 6.25 kHz & narrow 12.5 kHz bandwidths

NXDN Conventional Operation

Site Roaming

Digital / Analog Mixed mode

Group / Individual Call

Status / Short data, Paging Call

Digital Bit Scrambler

Late Entry

Over-the-Air Alias (OAA)

Accessories

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

KNB-45L
2,000mAh/7.4V
Li-Ion Battery Pack



KSC-43K
Dual Chemistry
Fast Charger
For the KNB 29N/45L/69L



KRA-27
UHF Whip Antenna



KHS-26
Earbud In-line
PTT Headset



KBH-10
Belt Clip



KNB-69L
2,550mAh/7.4V
Li-Ion Battery Pack



KVC-22
DC Vehicular
Charger Adapter



KRA-42
UHF
Stubby Antenna



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



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



KRA-23
UHF Low Profile
Helical Antenna



KMC-45D
Speaker Microphone



KHS-31C
C-Ring PTT Ear
Hanger Headset



Specifications

General	BC500DU	
Pre-set Frequencies	450-520 MHz	
Max. Channels per Radio	64	
Number of Zones	4	
Max. Channels per Zone	16	
Channel Spacing	30* / 25* / 15 / 12.5 kHz	
Analog	12.5 / 6.25 kHz	
Digital		
Power Supply	7.5 VDC ±20 %	
Battery Life	DMR	Analog/NXDN
KNB-45L (2000mAh)	Approx. 15 hours	Approx. 11.5 hours
KNB-69L (2550mAh)	Approx. 19.5 hours	Approx. 14.5 hours
Operating Temperature(Radio only)*2	-22°F to +140°F (-30°C to +60°C)	
Frequency Stability (-30 to +60°C; +25°C Ref)	±0.5 ppm	
Antenna Impedance	50 Ω	
Dimensions	(W x H x D) Projections Not Included	
Radio with KNB-45L	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)	
Weight	(Basic model)	
Radio Only	5.64 oz (160 g)	
Radio with KNB-45L/82LCM	9.88 oz (280 g)	
Radio with KNB-69L	10.41 oz (295 g)	
FCC ID	K4450110*3 / K44501103*4	
IC Certification	282F-501100*3 / 282F-501102*4	

*125 / 30 kHz in VHF/UHF Bands excluding T-Band are not included in the models sold in the USA or US territories.

*2 Operating temperature specification for a Li-Ion battery is -10°C to +60°C [14°F to +140°F].

*3 Productions before end of May, 2021 have this FCC ID and IC Certification.

*4 Productions after end of May, 2021 have this FCC ID and IC Certification.

Analog measurements made per TIA603. Specifications are measured according to applicable standards. Specifications are subject change without notice, due to advancements in technology.

Receiver	BC500DU	
Sensitivity	NXDN* @ 6.25 kHz Digital (3% BER)	0.18 μV
	NXDN* @ 12.5 kHz Digital (3% BER)	0.22 μV
	DMR* @ 12.5 kHz Digital (1% BER)	0.25 μV
	DMR* @ 12.5 kHz Digital (5% BER)	0.18 μV
	Analog @ 12.5/25 kHz (12 dB SINAD)	0.20 μV / 0.24 μV
Selectivity	Analog @ 12.5 / 25 kHz	68 dB / 74 dB
Intermodulation Distortion		70 dB
Spurious Rejection		70 dB
Audio Distortion		7%
Audio Output Power		1W / 12 Ω (Internal Output)
Transmitter	BC500DU	
RF Power Output (High / Low)	5 W / 4 W / 1 W	
Spurious Emission	-70 dB	
FM Hum & Noise	Analog @ 12.5 / 25 kHz	40 dB / 45 dB
Audio Distortion	2%	
DMR Digital Protocol	ETSITS 102 361-1, -2, -3	
Emission Designator	16K0F3E, 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D, 7K60FXD, 7K60F7W	

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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	5001/Procedure I	5002/Procedure I, II	5003/Procedure I, II	5004/Procedure I, II	5005/Procedure I, II
High Temperature	5011/Procedure I, II	5012/Procedure I, II	5013/Procedure I, II	5014/Procedure I, II	5015/Procedure I, II
Low Temperature	5021/Procedure I	5022/Procedure I, II	5023/Procedure I, II	5024/Procedure I, II	5025/Procedure I, II
Temperature Shock	5031/Procedure I	5032/Procedure I	5033/Procedure I	5034/Procedure I, II	5035/Procedure I
Solar Radiation	5051/Procedure I	5052/Procedure I	5053/Procedure I	5054/Procedure I	5055/Procedure I
Rain*	5061/Procedure I, II	5062/Procedure I, II	5063/Procedure I, II	5064/Procedure I, III	5065/Procedure I, III
Humidity	5071/Procedure I, II	5072/Procedure II, III	5073/Procedure II, III	5074	5075/Procedure II
Salt Fog	5091/Procedure I	5092/Procedure I	5093/Procedure I	5094	5095
Dust	5101/Procedure I	5102/Procedure I	5103/Procedure I	5104/Procedure I, III	5105/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, II, V	516.5/Procedure I, IV	516.6/Procedure I, IV
International Protection Standard					
Dust & Water Protection*	IP54/55*	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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ALWAYS ON

800.527.1670

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