Actual size

TK-D200(G)/D300(G)

Colour 2-inch LCD

The colour 2.0-inch QVGA (320 x 240 pixels) transflective TFT display allows the user to check at a glance on operating status, including signal strength and battery level, and caller identity. The sunlight-readable display is recessed to minimise the risk of damage to the screen and to prolong the usable life of the product.

Intuitive GUI

Unique to this DMR radio are the vibrant 250-colour icons that can be assigned separately for each channel to easily distinguish the caller. A function can be assigned to any key on the keypad; this is then displayed on the LCD (Key Guide). Backlighting and brightness adjustment ensure easy viewing in the dark.

Text Message and Status Message

The user can send extra-long text messages (up to 368 characters), and as many as 200 status messages can be stored for convenience.

Long-Lasting Battery Life

The TK-D200/300 Series features a long-lasting 18 hours of battery life (with KNB-55L) to ensure users are always available on demand.

Contact List

Users can call up a Contact List that holds Individual IDs and Group IDs, enabling quick selection and access to individual, group, status or message functions.

Key Features

- High-resolution Colour 2.0-inch QVGA (320 x 240 pixels) Transflective TFT Display
- Recessed and Sunlight-Readable Display
- Intuitive, User-friendly GUI
- Text capacity of up to 368 Characters per Message
- Storage for 200 Status Messages
- High-speed Start-up
- Emergency Status Detection with Motion Sensor
- GPS Data Transmission for Each Channel
- 3-colour LED (Red, Green, Orange)
- Enhanced Audio Quality
- IP54/55 & MIL-STD C/D/E/F/G
- Max. RF Output Power: 5W for VHF (TK-D200(G)), 4W for UHF (TK-D300(G))
- Model Variations (VHF and UHF):
  Full 18-key model with colour 2-inch LCD and integrated GPS module
  Full 18-key model with colour 2-inch LCD
  Non-keypad, non-LCD model with integrated GPS module
  Non-keypad, non-LCD model

Options

- **KRA-22** VHF Helical Antenna (Low Profile)
- **KRA-23** UHF Helical Antenna (Low Profile)
- **KRA-26** VHF Helical Antenna (Standard Length)
- **KRA-27** UHF Whip Antenna (Standard Length)
- **KRA-41** VHF Stubby Antenna
- **KRA-42** UHF Stubby Antenna
- **KRA-43G** VHF Helical Antenna (GPS Combination)*
- **KRA-44G** UHF Helical Antenna (GPS Combination)*
- **KNB-55L** Li-Ion Battery (7.2V/1480mAh)
- **KNB-56N** Ni-MH Battery (7.2V/1400mAh)
- **KNB-57L** Li-Ion Battery (7.2V/2000mAh)
- **KMC-41D** Speaker Microphone (IP55)
- **KMC-42WD** Speaker Microphone (IP67)
- **KMC-47GPSD** GPS Speaker Microphone
- **KMC-51D** Speaker Microphone (Noise Cancel/IP55)
- **KMC-52D** Speaker Microphone (Noise Cancel/IP67)
- **KSC-25/L** Rapid Charger
- **KSC-256** Multiple Charger (6-unit Rapid Rate)
- **KBH-10** Belt Clip
- **KBH-12** Belt Clip

All accessories and options may not be available in all markets. Contact an authorised KENWOOD dealer for details and complete list of all accessories and options.

Specifications

		TK-D200(G)	TK-D300(G)
GENERAL			
Frequency Range		136-174 MHz	400-470 MHz
Number of Channels	**LCD models**	512 ch	
	Non-LCD models	64 ch	
Zones per Radio	**LCD models**	128 zones (max. 250ch/zone)	
	Non-LCD models	4 zones (max. 16ch/zone)	
Channel Spacing	**Analogue**	12.5 / 20 / 25 kHz	
	Digital	12.5 kHz	
Operating Voltage		7.5 V DC, ± 20%	
Battery Life (5-5-90): Digital	**KNB-55L (1,480 mAh)**	Saver Off: More than 10 hours, Saver On: More than 14 hours	
	KNB-56N (1,400 mAh)	Saver Off: More than 8.5 hours, Saver On: More than 12 hours	
	KNB-57L (2,000 mAh)	Saver Off: More than 13.5 hours, Saver On: More than 19 hours	
Operating Temperature Range*1		-30°C to 60°C	
Frequency Stability		±1.5ppm	
Antenna Impedance		50 Ω	
Dimensions (W x H x D)	**LCD models**	56.0 x 129.8 x 35.8 mm (with KNB-55L) 56.0 x 129.8 x 41.5 mm (with KNB-56N) 56.0 x 129.8 x 37.8 mm (with KNB-57L)	
	Non-LCD models	56.0 x 129.5 x 33.2 mm (with KNB-55L) 56.0 x 129.5 x 38.9 mm (with KNB-56N) 56.0 x 129.5 x 35.2 mm (with KNB-57L)	
Weight (net)	**LCD models**	Approx. 353 g (with KNB-55L) Approx. 452 g (with KNB-56N) Approx. 380 g (with KNB-57L)	
	Non-LCD models	Approx. 343 g (with KNB-55L) Approx. 442 g (with KNB-56N) Approx. 370 g (with KNB-57L)	
SAFETY ATANDARDS			
R & TTE Safety Standard		EN 300 086-2, EN 300 113-2, EN 300 219-2, EN 301 489-5, EN 300 440-2 (Receiver category 3) EN 60065, EN 60950-1, EN 60215, EN 62209 (SAR)	

		TK-D200(G)	TK-D300(G)
GPS			
TTFF	**Cold Start**	<1 minute	
	Hot Start	<10 seconds	
Horizontal Accuracy		<10 meters	
GPS Receiver Category		Category 3	
RECEIVER*2			
Sensitivity	**Digital @12.5 kHz**	0.3 µV (5% BER), 0.45 dBµV emf (5% BER) 0.45 µV (1% BER), -1 dBµV emf (1% BER)	
	Analogue @25 kHz	0.28 µV (EIA 12 dB SINAD), -3 dBµV emf (EN 20 dB SINAD)	
	Analogue @12.5 kHz	0.32 µV (EIA 12 dB SINAD), -1 dBµV emf (EN 20 dB SINAD)	
Adjacent CH Selectivity	**Analogue @25/12 kHz**	76 dB / 68 dB	
Intermodulation	**Analogue**	65 dB	
Spurious Response Rejection	**Analogue**	75 dB	
Audio Distortion		Less than 3%	
Audio Output		500 mW / 8Ω	
TRANSMITTER			
RF Power Output		5 / 1W	4 / 1W
Modulation Limiting	**Analogue @25 kHz**	±5.0 kHz	
	Analogue @12.5 kHz	±2.5 kHz	
Spurious Emission		-36 dBm ≤1 GHz, -30 dBm >1 GHz	
FM Noise (BA)	**Analogue @25/12 kHz**	-45 dB / 40 dB	
Modulation Distortion		Less than 3%	
Vocoder Type		AMBE+2™	
Modulation		16k0F3E, 14K0F2D, 14K0F3E, 12K0F2D, 8K50F3E, 7K50F2D, 7K60FXD, 7K60FX3	

*1: Operating temperature range of the KNB-55L/57L: -10°C to +60°C

*2: Analogue measurements made per EN 300 086 and 219; Digital measurements made per EN 300 113.

Applicable Standards

MIL-STD*	Method / Procedures				
	810C	810D	810E	810F	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
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
International Protection Standard**					
Dust & Water Protection	IP54/IP55				

*To meet MIL810 and IP grade, the universal connector has to be connected. **Required conditions: The phone jack connector and USB connector must be covered; Locking bracket must be attached.

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ISO9001 Registered
JVCKENWOOD Corporation

CL799M-E-6

KENWOOD

TK-D200(G)/D300(G)

VHF/UHF Digital Transceiver

A New Way of Looking at DMR

GPS DMR

KENWOOD DMR — Clearly a Better Choice.

The KENWOOD TK-D200(G)/D300(G) provides all the benefits of advanced digital technology – such as low audio noise for superior clarity and advanced vocoding technology for inherently secure voice communication – to increase the efficiency of your business, and is compatible with both analogue and digital modes. The large colour LCD display and intuitive GUI are designed for user-friendly operation.

DMR

Designed for business users, Digital Mobile Radio (DMR) is a digital radio standard developed by leading manufacturers under the umbrella of the European Telecommunications Standards Institute (ETSI). Radios complying with the standard can operate within a license holder's existing 12.5 kHz channel, while doubling the channel capacity. The TK-D200(G)/D300(G) supports DMR Tier II (conventional) licensed operation.

For enhanced trunking applications (Tier III equivalent), the KENWOOD NEXEDGE® digital trunking system provides the ideal solution.

TK-D200(G)/D300(G)
LCD model

TK-D200(G)/D300(G)
Non-keypad, non-LCD model

Enhanced Detection of Possible Emergencies

KENWOOD DMR radios are equipped with special features to provide an extra layer of security for individuals working remotely or in potentially hazardous situations.

Man-Down Detection will sense if the radio is positioned at an unusual angle – for example, when a body-worn radio is horizontal. Stationary Detection* senses a lack of movement for a set period, and Motion Detection senses vigorous movement (such as running). Each of these can activate Emergency Mode: a message can be sent to a (selectable) predetermined person or group to alert them that the user may be in distress.

Operating in Lone Worker mode, the radio will detect a long (programmable) pause in button operation and audibly alert the user; if the user does not respond, the radio can then place an emergency call to a predetermined person, group or dispatcher.

*Optional software license required.

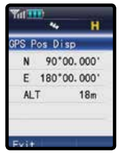
Enhanced Audio Quality

JVCKENWOOD has drawn on decades of expertise in audio equipment development to ensure that the sound quality of the new TK-D200(G)/D300(G) is clear and crisp, as well as loud. The AMBE+2™ VOCODER technology accurately replicates natural human speech nuances for superior voice quality, even with high levels of ambient noise. Additionally, Voice Announcement can read out the received channel number to inform the user of channel changes, so there is no need to look at the display.

Built-in GPS

GPS

The TK-D200G and TK-D300G models (identified by the letter G) feature an integrated GPS module which can transmit positional data (latitude, longitude, and altitude). In Emergency Mode, this information can be sent to a dispatch or control centre (designated separately for each zone/channel), if desired. The user can view GPS positional data on the LCD for convenience.



Comfortable yet Rugged

The rounded contours of the TK-D200(G)/D300(G) provide a superbly comfortable grip, while the non-slip rubberised channel knob with improved torque characteristics ensures a positive tactile response during operation. The radio is compliant with MIL-STD C/D/E/F/G and IP55 dust/water protection.

Use Your Existing KENWOOD Accessories

TK-D200/300 Series radios are designed to operate with existing accessories such as the KSC-25, KSC-25L, KSC-256 series chargers; the current KNB-55L, KNB-56N, KNB-57L Series batteries; and standard whip antennas. This helps to minimise outlay and provides a cost-effective migration path from analogue to digital radio systems.

Rapid User Response

After powering up the TK-D200(G)/D300(G) or changing the battery, the radio is ready in a few seconds, enabling a rapid user response. Similarly fast is the GPS Time To First Fix, taking just 10 seconds (hot start), or less than a minute from a cold start.

FUNCTIONS & FEATURES

General

- VHF (136-174 MHz)/UHF (400-470 MHz) Models
- Model Variations (VHF and UHF):
  - Full-fledged 18-key model with colour 2.0-inch LCD (with or without integrated GPS module)
  - Simple, non-keypad, non-LCD model (with or without integrated GPS module)
- Models with LCD: 512 Channels/128 Zones (Max 250ch/zone); Non-LCD Models: 64 Channels/4 Zones (Max. 16ch/zone)
- Dual Mode: Digital & Analogue
  - Digital: Twin 6.25 kHz-equivalent TDMA Slots (12.5 kHz bandwidth)
  - Analogue: 12.5/20/25 kHz
- RSSI
- Busy/Call Alert/Warn LED
- Mechanical On/Off Volume Knob
- 500 mW Audio
- Man-Down
- Motion Detection*, Stationary*, Remote Control*
- Emergency Call Features
- Emergency Status
- Voice Announcement
- Special Alert Tone Patterns
- Lone Worker
- Time-Out-Timer
- Busy Channel Lockout
- LCD Battery Status Indicator
- Low Battery Alert
- Battery Saver
- Tx LED On/Off Setting

*Optional software license required.

Models with LCD Display & Keypad

- Colour 2.0-inch QVGA (320 x 240 pixels) TFT
- Transflective (easy to read in sunlight)
- 18-Key Keypad
- Sub-display
- Intuitive Icon Design
- Contact List Mode
- Key Assignment
- Remote Command
- Message (368 characters/message) Mode
- GPS Location Display
- BER Display (maintenance display)

DIGITAL – General

- DMR® Digital Air Interface
- AMBE+2™ Vocoder
- 2-slot TDMA solution and RF carrier bandwidth of 12.5 kHz
- TDMA Direct Mode
- Built-in Scrambler
- Scrambler Status Memory
- Status Messaging
- Transmit GPS Data

GENERAL – FM Modes

- 25, 20 & 12.5 kHz Channels
- QT/DQT Encode/Decode
- 5-Tone Encode/Decode

DIGITAL – Conventional Mode

- Individual & Group Selective Call
- Mixed FM/Digital Operation
- Voice Call/Data Call
- Stack Mode
- Call Interruption

SCANNING (FM & DMR® Conventional)

- Single/Multi-Zone Scan

TKR-D710/D810
VHF/UHF Digital Repeater

- 136-174 MHz, 5-50 W; 400-470 MHz, 5-40 W
- Two-digit LED Display
- 6 Backlit Programmable Function Keys
- DMR Tier II Compatible Air Interface
- Twin 6.25 kHz-equivalent TDMA Slots (12.5 kHz bandwidth)
- Built-in 16-colour Code Repeater Control
- Front Panel PF Key Control
- Digital Conventional & FM Conventional modes
- IP Remote – Future Enhancement