

KENWOOD

Listen to the Future



TK-2180/3180 MPT

VHF/UHF MPT1327 Trunked Portable Radios



GENERAL FEATURES

- 5 W (136-174 MHz) Models
- 5 W (450-520, 400-470 MHz) Models
- 12 Character Alphanumeric Aliases
- Lighted Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- Display Customization
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 4 Front Panel PF keys
- 2 Side PF Keys
- Orange Emergency / AUX Key
- 12-Key DTMF / PF Keypad¹
- 500 mW Speaker Audio
- Voice Inversion Scrambler Built-in
- Enhanced Kenwood Audio
- Encryption Board Control
- Easy Option Port²
- VGS-1 Voice Guide / Storage Option²
- DTMF Manual Encode³
- LCD Battery Status Indicator
- Low Battery Alert
- Weather-sealed ACC Connector
- MIL-Spec Speaker Mic Option
- Windows[®] Programming & Tuning⁴
- Windows[®] Firmware Uploading⁴
- Front Panel Test/Tune
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"
- IP-54/55 Water & Dust Intrusion
- Factory Mutual I.S. Option

*Two models available:
With or without keypad.*

CONVENTIONAL MODE⁵

- 32 Channels
- 12.5/25 kHz CH Spacing (per CH)
- QT / DQT Encode & Decode
- Normal Scan (No Priority)
- Scan Delete / Add
- Companded Audio (per CH)
- Time Out Timer
- Busy Channel Lockout (per CH)

TRUNKED MODE⁵

- 8 Network Capacity
- Multi-Site Network Trunking
- Single-Site Trunking
- Network Roaming / Registration
- 12.5/25 kHz Spacing (per network)
- Individual Call ("Private Calling")
- Group Call
- Broadcast Call
- Inter-fleet Calling
- Inter-Prefix Calling
- PTT Initiate Call
- PSTN/PABX Call
- Priority Call
- Emergency Call
- Pre-emptive Emergency
- Emergency Man-Down Option
- Full Off Air Call Setup
- Network Call Queuing
- Call Prioritization
- Queue Incoming Calls
- Electronic Serial Number (ESN)
- 250 Call and Group Address List
- Group Scan
- Home Address
- Direct Address
- Companded Audio⁶

Options

- **KNB-31A**
Ni-Cd Rechargeable
Battery Pack (1700 mAh)
- **KNB-32N**
Ni-MH Rechargeable
Battery Pack (2500 mAh)
- **KNB-33L**
Li-ion Rechargeable
Battery Pack (1700 mAh)
- **KNB-41NC**
Ni-MH Rechargeable
Battery Pack (2500 mAh)
Intrinsically Safe
- **KSC-32**
Tri-chemistry
Rapid Charger
- **VGS-1**
Voice Guide &
Storage Unit



- **KRA-22**
VHF Helical Antenna
- **KRA-23**
UHF Helical Antenna
- **KRA-26**
VHF Helical Antenna
- **KRA-27**
UHF Whip Antenna
- **KRA-16**
VHF Stubby Antenna
- **KRA-17**
UHF Stubby Antenna
- **KRA-25**
VHF High Gain Antenna



- **KMC-25**
Speaker Microphone
- **KEP-1**
Heavy Duty Earphone
- **KHS-11**
2-Wire Palm Mic
with Earphone
- **KHS-12**
3-Wire Mini Lapel Mic
with Earphone



- **KHS-14**
Lightweight Single
Muff Headset
- **KHS-15-BH**
Heavy Duty
Behind-the-Head Headset
- **KHS-15-OH**
Heavy Duty
Over-the-Head Headset
- **KBH-10**
Low Profile Belt Clip
- **KBH-11**
Belt Clip (2.5")



Specifications

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.

Model	TK-2180 MPT	TK-3180 MPT
GENERAL		
Frequency Range		
Type 1	136-174 MHz	450-520 MHz
Type 2		400-470 MHz
Number of Channels*		
Conv. Mode	32	
Trunked Network	1023	
	(Max. 1023 [Conv. Ch's + GID's] total per Radio)	
Channel Spacing		
Wide	25, 30 kHz	25 kHz
Narrow	12.5, 15 kHz	12.5 kHz
Battery Voltage	7.5 V DC ± 20 %	
Battery Life (5-5-90 duty cycle, during hi-power)		
with KNB-31A (1700 mAh)	Approx. 9 hours	
with KNB-32N (2500 mAh)	Approx. 14 hours	
with KNB-33L (1700 mAh)	Approx. 10 hours	
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C) [+14 °F ~ +140 °F (-10 °C ~ +60 °C) when KNB-32N/33L in use]	
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)	
Antenna Impedance	50 Ω	
Channel Frequency Spread		
Type 1	38 MHz	70 MHz
Type 2		70 MHz
Dimensions (W x H x D), Projections not included		
Radio Only	2-5/16" x 5-3/8" x 7/8" (58 x 136 x 21.5 mm)	
with KNB-31A	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-32N	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-33L	2-5/16" x 5-3/8" x 1-5/16" (58 x 136 x 33 mm)	
Weight (net)		
Radio Only	9.17 oz. (260 g)	
with KNB-31A	18.70 oz. (530 g)	
with KNB-32N	19.75 oz. (560 g)	
with KNB-33L	14.1 oz. (400 g)	

Model	TK-2180 MPT	TK-3180 MPT
GENERAL		
FCC ID		
Type 1	ALH37323110	ALH37333110
Type 2	-	ALH37333120
IC Certification		
Type 1	282D-37323110	-
Type 2	-	282D-37333120
RECEIVER (Measurements made per TIA/EIA-603)		
Sensitivity (12 dB SINAD)		
Wide		0.25 μV
Narrow		0.28 μV
Selectivity		
Wide	70 dB	70 dB
Narrow	65 dB	63 dB
Intermodulation Distortion		
Wide/Narrow	70 dB (±50, 100 kHz)	
Spurious Response	70 dB	
Audio Output (8 Ω impedance)	500 mW with less than 3 % distortion	
TRANSMITTER (Measurements made per TIA/EIA-603)		
RF Power Output		
High	5 W	5 W
Low	1 W	1 W
Spurious Response	70 dB	
Type of Emission		
Wide	16K0F3E	
Narrow	11K0F3E	
FM Hum & Noise		
Wide	45 dB	
Narrow	40 dB	
Audio Distortion		
Wide/Narrow	3 %	

Kenwood follows a policy of continuous advancement in development.
For this reason specifications may be changed without notice.

*Maximum capability depends on the number of programmed Zones and repeater channels.

Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/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
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV
International Protection Standard				
Dust & Water Protection	IP54/55			

footnotes from Front:

- ¹ Keypad models only.
- ² Easy Option Port: Supports Encryption boards or VGS-1 only; ANI boards are not supported. VGS-1: Auto-Reply only operates in MPT trunked mode. Auto-Record, Voice Memo operates in Conventional & MPT Trunked modes
- ³ DTMF Manual Encode. (keypad models)
- ⁴ KPG-96D required: Windows®98/ NT/ 2000/ Me/XP compatible.
- ⁵ Conventional Mode: Mode entry by PF key or Auto Mode Change; Network/Trunking operations are MPT1327/1343 compatible.
- ⁶ Companded Audio can be enabled for "all channels" in Trunked Mode and per channel in Conventional Mode.

KENWOOD

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ISO9001 Registered

Communications Equipment Division

Kenwood Corporation

ISO9001 certification