

KENWOOD

Listen to the Future



TK-7180(H)/8180(H) MPT

VHF/UHF MPT1327 Trunked Mobile Radios

GENERAL FEATURES

- 30W / 50W (136-174 MHz)
- 30W / 45W (450-520*, 400-470 MHz)
- Remote Control Head Option¹
- Backlit Dot Matrix LCD
- 12 Character Alphanumeric Aliases
- 3-Digit Sub-Display
- Function / Status LCD Icons
- Display Customization
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 6 Backlit PF Keys
- Emergency / AUX Key
- 4 Watt Front Panel Speaker
- Voice Inversion Scrambler Built-in
- Enhanced Kenwood Audio
- Encryption Board Control
- Easy Option Port¹
- VGS-1 Voice Storage Option¹
- DTMF Manual Encode²
- Timed Power Off
- DB-25 Accessory Connector
- 9 Programmable AUX I/Os
- 2 Programmable AUX Outputs
- Ignition Sense³
- Mil-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option

- Windows® Programming & Tuning⁴
- Windows® Firmware Uploading⁴
- Front Panel Test / Tune
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"⁵
- IP-54/55 Water & Dust Intrusion⁵

CONVENTIONAL ZONES⁶

- 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 ZONES⁶

- 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 Calling Features
- Emergency Man-Down Option
- Full Off Air Call Setup
- Network Call Queuing
- Call Prioritization
- Third-Party Diversion
- Queue Incoming Call
- Special Alert Tones⁷
- Electronic Serial Number (ESN)
- Manual Conventional Mode
- 250 Call and Group Address List
- Group Scan
- Home Address
- Direct Address
- Companded Audio⁸
- Network Selector
- KAP-2 PA/Horn Alert Option⁹



Options

KMC-35

Microphone
(supplied microphone)



KMC-36

Keypad Microphone



KMC-32

Keypad Microphone



KMC-9C

Control Station
Desktop Microphone



KRK-10

Control Head
Remote Kit (23ft/7m)



KCT-46

Ignition Sense Cable



KCT-40

Radio Interface Cable
(for KDS-100, KGP-2A/2B)



KCT-23M

DC Cable (Dash
mount / 10 feet)



KCT-23M3

DC Cable (Remote
mount / 23 feet)



KAP-2

Horn Alert/Public
Address Relay Unit



VGS-1

Voice Guide &
Storage Unit



KES-3

External Speaker



KES-5

External Speaker
(requires KAP-2)



KMB-10

Key Lock Adapter



KLF-2

Line Noise Filter



KPS-10A

DC Power Supply



KPS-15

DC Power Supply



Specifications

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
GENERAL				
Frequency Range				
Type 1	136~174 MHz		450~520 MHz	
Type 2	—		400~470 MHz	
Number of Channels*				
Conv. Mode		Max.32 per Radio		
Trunked Network		1023		
Channel Spacing				
Wide	25 kHz, 30 kHz		25 kHz	
Narrow	12.5 kHz, 15 kHz		12.5 kHz	
Operating Voltage		13.6 V DC±15 %		
Current Drain				
Standby	0.4 A	0.4 A	0.4 A	0.4 A
Receive	1.0 A	1.0 A	1.0 A	1.0 A
Transmit	9.0 A	13.0 A	9.0 A	13.0 A
Duty Cycle		Transmit: 20 %		
Operating Temperature Range		-22 °F ~ +140 °F (-30 °C ~ +60 °C)		
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		6-5/16" x 1-3/4" x 6-3/16" (160 mm x 45 mm x 157 mm)		
Weight (net)		3.3 lbs. (1.5 kg)		
FCC ID				
Type 1	K4437303110	K4437303210	K4437313110	K4437313210
Type 2—	—	—	K4437313120	K4437313220
IC Certification				
Type 1	282F-37303110	—	—	—
Type 2—	—	—	282F-37313120	—

*Maximum capability depends on the number of programmed Zone 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, III, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V
International Protection Standard				
Dust & Water Protection	P54: Radio itself P54/55: Remote Head with KRK-10			

*To meet above MIL810 and IP grade, weather proof microphone KMC-35 or KMC-36 has to be connected.

KENWOOD

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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-7180	TK-7180H	TK-8180	TK-8180H
RECEIVER (Measurements made per EIA/TIA-603)				
Sensitivity (12dB SINAD)				
Wide		0.25 μV		
Narrow		0.28 μV		
Selectivity**				
Wide	80 dB			80 dB
Narrow	70 dB			67 dB
Intermodulation Distortion				
Wide/Narrow		75 dB (±50, 100 kHz)		
Spurious Response**	90 dB			85 dB
Audio Output				
(4 Impedance)	4 W with less than 5 % distortion			
TRANSMITTER (Measurements made per EIA/TIA-603)				
RF Output Power				
Type 1	30 to 1 W	50 to 10 W	30 to 1 W (490-520 MHz:25 to 1 W)	45 to 10 W (490-520 MHz:40 to 10 W)
Type 2	—	—	30 to 1 W	45 to 10 W
Spurious Response				
		70 dB		
Type of Emission				
Wide		16K0F3E		
Narrow		11K0F3E		
FM Hum & Noise				
Wide		50 dB		
Narrow		45 dB		
Microphone Impedance				
		600 Ω		
Audio Distortion				
Wide/Narrow		3 %		

** Typical specifications

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

footnotes from Front:

- 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.
- DTMF Manual Encode (DTMF microphone required)
- KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.
- KPG-96D required: Windows®98/ NT/ 2000/ Me/XP compatible.
- MIL-STD "Driven-Rain" and IP-55 Water/Dust Intrusion apply to remote control head only; IP54 applies to radio chassis.
- Conventional Mode: Mode entry by PF key or auto Mode Change. Network/Trunking operations are MPT1327/1343 compatible.
- Special Alert Tone Patterns: enabled for MPT Individual Call, Auto Mode Change.
- Companded Audio can be enabled for "all Channels: in Trunked Mode and per Channel in Conventional Mode.
- KAP-2 required: Public Address & Horn Alert operate in MPT mode only.

* TK-8180K/HK models are derated to 25W/ 40W power from 490-512 MHz