

# 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 Option<sup>1</sup>
- 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 Port<sup>1</sup>
- VGS-1 Voice Storage Option<sup>1</sup>
- DTMF Manual Encode<sup>2</sup>
- Timed Power Off
- DB-25 Accessory Connector
- 9 Programmable AUX I/Os
- 2 Programmable AUX Outputs
- Ignition Sense<sup>3</sup>
- Mil-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option

- Windows® Programming & Tuning<sup>4</sup>
- Windows® Firmware Uploading<sup>4</sup>
- Front Panel Test / Tune
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"<sup>5</sup>
- IP-54/55 Water & Dust Intrusion<sup>5</sup>

### CONVENTIONAL ZONES<sup>6</sup>

- 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 ZONES<sup>6</sup>

- 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 Intiate 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 Tones<sup>7</sup>
- Electronic Serial Number (ESN)
- Manual Conventional Mode
- 250 Call and Group Address List
- Group Scan
- Home Address
- Direct Address
- Companded Audio<sup>8</sup>
- Network Selector
- KAP-2 PA/Horn Alert Option<sup>9</sup>



# Options

<ul style="list-style-type: none"> <li><b>KMC-35</b> Microphone (supplied microphone)</li> <li><b>KMC-36</b> Keypad Microphone</li> <li><b>KMC-32</b> Keypad Microphone</li> <li><b>KMC-9C</b> Control Station Desktop Microphone</li> <li><b>KRK-10</b> Control Head Remote Kit (23ft/7m)</li> </ul>	<ul style="list-style-type: none"> <li><b>KCT-46</b> Ignition Sense Cable</li> <li><b>KCT-40</b> Radio Interface Cable (for KDS-100, KGP-2A/2B)</li> <li><b>KCT-23M</b> DC Cable (Dash mount / 10 feet)</li> <li><b>KCT-23M3</b> DC Cable (Remote mount / 23 feet)</li> <li><b>KAP-2</b> Horn Alert/Public Address Relay Unit</li> </ul>	<ul style="list-style-type: none"> <li><b>VGS-1</b> Voice Guide &amp; Storage Unit</li> <li><b>KES-3</b> External Speaker</li> <li><b>KES-5</b> External Speaker (requires KAP-2)</li> <li><b>KMB-10</b> Key Lock Adapter</li> <li><b>KLF-2</b> Line Noise Filter</li> </ul>	<ul style="list-style-type: none"> <li><b>KPS-10A</b> DC Power Supply</li> <li><b>KPS-15</b> DC Power Supply</li> </ul>
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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.

# Specifications

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>GENERAL</b>				
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
<b>Low Pressure</b>	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
<b>High Temperature</b>	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
<b>Low Temperature</b>	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
<b>Temperature Shock</b>	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
<b>Solar Radiation</b>	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
<b>Rain</b>	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
<b>Humidity</b>	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure I, III	507.4
<b>Salt Fog</b>	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
<b>Shock</b>	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	
<b>Dust &amp; Water Protection</b>	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.

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
<b>RECEIVER (Measurements made per EIA/TIA-603)</b>				
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 Ω Impedance)	4 W with less than 5 % distortion			
<b>TRANSMITTER (Measurements made per EIA/TIA-603)</b>				
RF Output Power				
Type 1	30 to 1 W	50 to 10 W	30 to 1 W	45 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 MPT1327/1342 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

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