

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 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 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

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 |
|-----------------------------------------------------|---------------------------------------------------------|-------------|---------------|-------------|
| GENERAL | | | | |
| Frequency Range | 136~174 MHz | | 450~520 MHz | |
| Type 1 | 136~174 MHz | | 450~520 MHz | |
| Type 2 | - | | 400~470 MHz | |
| Number of Channels* | Max.32 per Radio | | | |
| Conv. Mode | 1023 | | | |
| Trunked Network | - | | | |
| Channel Spacing | 25 kHz, 30 kHz | | 25 kHz | |
| 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 I, 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.

| 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 | 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:

- ¹ 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.
- ² DTMF Manual Encode (DTMF microphone required)
- ³ KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.
- ⁴ KPG-96D required: Windows*98/ NT/ 2000/ Me/XP compatible.
- ⁵ MIL-STD "Driven-Rain" and IP-55 Water/Dust intrusion apply to remote control head only; IP54 applies to radio chassis.
- ⁶ Conventional Mode: Mode entry by PF key or auto Mode Change. Network/Trunking operations are MPT1327/1343 compatible.
- ⁷ Special Alert Tone Patterns: enabled for MPT Individual Call, Auto Mode Change.
- ⁸ Companded Audio can be enabled for "all Channels: in Trunked Mode and per Channel in Conventional Mode.
- ⁹ 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

KENWOOD

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