

# KENWOOD

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

VHF/UHF FM Mobile Radios

FleetSync®

### GENERAL FEATURES

- 30/50 W (136-174 MHz)
- 30/45 W (450-520, 400-470 MHz)
- Conventional & LTR® Zones
- MPT1327 Trunking Option
- Remote Control Head Option<sup>1</sup>
- 12 Character Alphanumeric Aliases
- Backlit Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 6 Backlit PF Keys
- Emergency / AUX Key
- Enhanced Kenwood Audio
- Front Panel Speaker
- Companded Audio
- Voice Inversion Scrambler Built-in
- Easy Option Port
- Encryption / ANI Board Control
- VGS-1 Voice Guide / Storage Option
- Emergency Call Features
- DTMF Encode / Decode<sup>2</sup>
- Special Alert Tone Patterns<sup>3</sup>
- Call Key<sup>4</sup>
- Time Out Timer
- Busy Channel Lockout
- Timed Power Off

- DB-25 Accessory Connector<sup>5</sup>
- 9 Programmable AUX I/Os<sup>5</sup>
- 2 Programmable AUX Outputs<sup>5</sup>
- Ignition Sense<sup>6</sup>
- Public Address / Horn Alert Option<sup>7</sup>
- MIL-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option
- Windows® Programming & Tuning<sup>8</sup>
- Windows® Firmware Uploading<sup>8</sup>
- Front Panel Test / Tune
- Cloning
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"<sup>9</sup>
- IP-54/55 Water & Dust Intrusion<sup>9</sup>

### CONVENTIONAL ZONES

- 512 Channels / 128 Zones<sup>10</sup>
- QT / DQT
- Two-Tone Decode<sup>11</sup>
- Single / Two-Tone Encode<sup>11</sup>
- Operator Selectable Tone<sup>11</sup>
- Dual Priority Scan
- Single & Multi-Zone Scan
- List Scan

### TRUNKED ZONES

- 512 GID / 128 Zones<sup>10</sup>
- Kenwood LTR® Features<sup>12</sup>

### FleetSync®

- FleetSync® or FleetSync® II<sup>13</sup>
- PTT ID Digital ANI
- Selective Call & Group Call
- Status Messaging
- Emergency Status
- Caller ID Display
- Short & Long Text Messages<sup>14</sup>
- Power On/Off Status Messages
- Input / Output Status Messages
- FleetSync® GPS Ready<sup>15</sup>
- Send GPS PF Key<sup>15</sup>
- PTT ID & Emergency GPS Reporting<sup>15</sup>
- Status Message Block GPS Reporting<sup>15</sup>
- Ignition On/Off GPS Reporting<sup>6, 15</sup>
- VGS-1 GPS Data Storage<sup>15, 16</sup>
- PC Serial Interface

### MDC-1200<sup>17</sup>

- PTT ID Digital ANI
- Caller ID Display
- Emergency Status
- Radio Check
- Radio Inhibit



# Options

|  |   |   |   |
|--|---|---|---|
| <ul style="list-style-type: none"> <li><b>KMC-35</b><br/>Microphone<br/>(supplied microphone)</li> <li><b>KMC-36</b><br/>Keypad Microphone</li> <li><b>KMC-9C</b><br/>Control Station<br/>Desktop Microphone</li> <li><b>KRK-10</b><br/>Control Head<br/>Remote Kit (23ft/7m)</li> <li><b>KCT-46</b><br/>Ignition Sense Cable</li> </ul> | <ul style="list-style-type: none"> <li><b>KCT-40</b><br/>Radio Interface Cable<br/>(for KDS-100, KGP-2A/2B)</li> <li><b>KCT-23M</b><br/>DC Cable (Dash<br/>mount / 10 feet)</li> <li><b>KCT-23M3</b><br/>DC Cable (Remote<br/>mount / 23 feet)</li> <li><b>KAP-2</b><br/>Horn Alert/Public<br/>Address Relay Unit</li> <li><b>VGS-1</b><br/>Voice Guide &amp;<br/>Storage Unit</li> </ul> | <ul style="list-style-type: none"> <li><b>KES-3</b><br/>External Speaker</li> <li><b>KES-5</b><br/>External Speaker<br/>(requires KAP-2)</li> <li><b>KMB-10</b><br/>Key Lock Adapter</li> <li><b>KLF-2</b><br/>Line Noise Filter</li> <li><b>KPS-10A</b><br/>DC Power Supply</li> </ul> | <ul style="list-style-type: none"> <li><b>KPS-15</b><br/>DC Power Supply</li> <li><b>KDS-100</b><br/>Mobile Data Terminal</li> <li><b>KGP-2A/2B</b><br/>GPS Receiver /<br/>Modem Unit<br/>(requires KCT-39 option)</li> </ul> |
|--|---|---|---|

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   | 450~512 MHz |
| Type 2  | -                |   | 400~470 MHz   |             |
| Number of Channels*                                 |                  |   |               |             |
| Zone  |                  | Max.128 per Radio                                       |               |             |
| Ch/GID  |                  | Max.250 per Zones                                       |               |             |
|   |                  | (Max.512 [Conv.Ch's +GID's] total per Radio)            |               |             |
| 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),<br>Projections not included |                  | 6-5/16" x 1-3/4" x 6-3/16"<br>(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<br>Methods/Procedures | MIL 810D<br>Methods/Procedures | MIL 810E<br>Methods/Procedures | MIL 810F<br>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 II, 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<br>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<br>(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   | -         | -                    | (490-520 MHz:25 to 1 W) (490-512 MHz:40 to 10 W) | 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  
Specifications are subject to change without notice, due to advancements in technology.  
FleetSync™ is a registered trademark of JVCKENWOOD Corporation.  
LTR™ is a registered trademark of Transcrypt International.  
All other trademarks are property of their respective owners.

footnotes from Front:

- 1 KRK-10 remote control kit required.
- 2 DTMF includes PTT ID, Emergency ANI, Manual Encode (KMC-36), Auto-Dial (9 numbers) & Stun.
- 3 Special Alert Tone Patterns operate for 2-Tone, DTMF, FleetSync™ selective call decode.
- 4 Call Key: 6 keys max.; operates for 2-Tone, DTMF and FleetSync status encode.
- 5 DB-25 ACC supports 15 Remote Zone/CH/GID selections, KGP-2A/B (KCT-40 required), KDS-100 (KCT-40 required), data modem, MDT, interconnect.
- 6 KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.
- 7 KAP-2 required: Horn Alert operates for FleetSync™, 2-Tone or DTMF selective call decode.
- 8 KPG-89D required: Windows®98/ NT/ 2000/ Me/XP compatible; English/Spanish screen languages.
- 9 MIL-STD "Driven-Rain" and IP-55 Water/Dust Intrusion apply to remote control head only; IP54 applies to radio chassis.
- 10 Conventional Zones: 512 Channels /128 Zones max. per radio; 250 CH max. per Zone Trunked Zones: 512 GID / 128 Zones max. per radio; 250 GID max. per Zone.
- 11 Two-Tone Decode (4 sets x 4 pairs each); Single / Two-Tone Encode (32 tones), Operator Selectable Tone (40 QT.DQT code pairs).
- 12 Kenwood LTR™ Features include: GID Delete/Add, LTR™ Talk Around /Scan Revert Group Display, System Scan, Group Scan, Auto Search.
- 13 FleetSync™ & FleetSync™ II are not compatible.
- 14 Short Text Messages are radio stored & LCD displayed; Long Text Messages require a KDS-100 and KCT-40.
- 15 FleetSync™ GPS features require an internal GPS board or externally wired GPS receiver with NMEA TTL level serial data output to the internal COM 1 or 2 set to "GPS".
- 16 Requires a VGS-1 option.
- 17 Either MDC-1200 or FleetSync™ can be activated per radio.

# KENWOOD

JVCKENWOOD USA Corporation

Communications Sector Headquarters

3970 Johns Creek Court, Suite 100, Suwanee, GA 30024-1265

Order Administration/Distribution

P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745

[www.kenwood.com/usa](http://www.kenwood.com/usa)

JVCKENWOOD Canada Inc.

Canadian Headquarters and Distribution

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

[www.kenwood.ca](http://www.kenwood.ca)



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