

# TK-D240/D340

VHF/UHF DIGITAL TRANSCEIVER







Ergonomically styled yet tough enough to comply with both MIL-STD and IP54/55 environmental standards, these portables provide the features and performance needed for a wide range of workplaces - from warehouses and stations to shops and hotels. As well as handling both analogue and digital communications, these user-friendly DMR radios can even operatie in direct mode, without a repeater. They also offer such KENWOOD added value as Call Interrupt and 1-watt audio output. These truly resourceful team members will enable you to make the most of your legacy analogue equipment while also benefitting from digital communications.

# Two-slot TDMA

Belonging to the DMR Tier II category, which covers licensed conventional systems, these radios are specified for 2-slot Time Division Multiple Access (TDMA) operation in 12.5 kHz channels. This means they can offer greater spectrum efficiency.

# Two-in-One - Digital & Analogue

These DMR radios can operate in both digital and FM analogue modes, switching automatically as needed. Interoperability with legacy analogue radios allows organizations to migrate to full digital at their own pace.

# **Dual-slot Direct Mode**

Up to two simultaneous subscriber calls can be supported in a 12.5 kHz channel, without requiring a base station or repeater, thus doubling channel capacity.

### Call Interruption

In an emergency or whenever a user needs to interrupt a call, Call Interruption is available in both direct and repeater modes, while encoding or decoding. There is also a Lone Worker function to protect employees working alone.

#### **Tough All-terrain**

These portable radios conform to MIL-STD C/D/E/F/G standards for ruggedness, and are IP54/55 rated for water & dust intrusion, making them more than capable of withstanding harsh operating conditions.

#### Slim Styling

Compact form with ergonomically stylish design make these radios easy to grip and operate.

# **Long Battery Life**

Battery life is always important for radio users. Both Lithium- Ion and Mi-MH rechargeable batteries are available. Regardless of battery type, operating hours are longer in digital mode.

#### Clear, Powerful Audio

A radio's most important quality is clarity - being able to hear, loud and clear, what the other party is saying. And these portables deliver just that. For a start, there is 1 W of audio output power, while the AMBE+2TM VOCODER technology accurately replicates natural human speech nuances for superior voice quality, even with high levels of ambient noise. Additionally, Voice Announcement can confirm the channel number, so there is no need to look at the display. English is the default language, but Spanish, French, German, Italien, Dutch and Russian are also available.

## 5-Tone Signalling

A series of programmed audio tones are used to specify one or more radios to initiate a conversation; all other radios will remain muted. Several standard signalling formats are available.

#### Other features

 Max. 32 channels in 2 zones (16 channels per zone) Wide 70 MHz UHF coverage • Selectable 8- or 16-channel using channel stopper • 5/1 W (VHF), 4/1 W (UHF) output • Audio output power 1 W at 12 Ohm • Scanning functions • Password protection (read/overwrite) • Minimum volume setting • Embedded message • Selective call alert LED • Key lock • Late entry • Analogue signalling: QT/DQT, FleetSync, 5-tone signalling • Compander per channel • Squelch level





**SPECIFICATIONS** 

Adjacent channel selectivity

Intermodulation Distortion - Analogue

Superious Response - Analogue

Audio distortion

TRANSMITTER

RF power output

Spurious Response

FM hum & noise

Audio distortion

Emission designator

Audio output

**RECEIVER** 

Sensitivity

TK-D240

Digital 1 % BER

Digital 5 % BER

Analogue (20 dB SINAD)

Analogue @ 25 / 20 / 12.5 kHz

Analogue @ 25 / 20 / 12.5 kHz

@ 25 / 20 / 12.5 kHz

TK-D340

-1 dB μV (0.45 μV)

-4.5 dB μV (0.3 μV)

-3 dB μV (0.35 μV) / -3 dB μV (0.35 μV) / -1 dB

μV (0.45 μV)

74 / 72 / 67 dB

65 dB

70 dB

Less than 10 %

1 W / 12 Ohm (internal speaker) 500 mW / 8 Ohm (external speaker)

< 1 GHz ≤ -36 dBm, 1 GHz - 4 GHz ≤ -30 dBm

45 / 45 / 40 dB

Less than 2 %
16K0F3E, 14K0F2D, 14K0F3E, 12K0F2D,

8K50F3E, 7K50F2D, 7K60FXD, 7K60FXE

4 /1 W

5 / 1 W

| SPECIFICATIONS                    |  |   |                   |  |  |
|-----------------------------------|--|---|-------------------|--|--|
| GENERAL                           |  | TK-D240   | TK-D340           |  |  |
| Frequency range                   | requency range                               |   | 400 - 470 MHz     |  |  |
| Number of channels                |  | 32 ch / 2 zones   |                   |  |  |
| Channels spacing                  | Analogue<br>Digital                          | 25 / 20 / 12.5 kHz<br>12.5 kHz  |                   |  |  |
| Operating voltage                 |  | 7.5 V DC ± 20%  |                   |  |  |
| Battery life (5-5-90, battery sav | ver off)                                     |   |                   |  |  |
| Analogue / Digital                |  | ± 11.5 / 13.5 hrs with KNB-45L<br>± 14.0 / 17.0 hrs with KNB-69L<br>± 8.0 / 10.0 hrs with KNB-53N |                   |  |  |
| Operating Temperature Range       |  | -30°C to +60°C<br>(with KNB-45L/69L: -10°C to +60°C)  |                   |  |  |
| Frequency Stability               |  | $\pm$ 2.0 / $\pm$ 1.0 ppm   |                   |  |  |
| Antenna Impedance                 |  | 50 Ohm  |                   |  |  |
| Dimensions<br>(W x H x D)         | with KNB-45L<br>with KNB-69L<br>with KNB-53N | 54 x 121.4 x 33.8 mm<br>54 x 121.4 x 37.8 mm<br>54 x 121.4 x 33.8 mm                              |                   |  |  |
| Weight                            | with KNB-45L<br>with KNB-69L<br>with KNB-53N | 31  | 5 g<br>0 g<br>0 g |  |  |

Specifications shown are typical. Analogue measurements accord with TIA 603, EN 300 086 & 219. Digital measurements accord with EN 300 113. R&TTE & Safety Standards: EN300 086-2, EN 300 113-2, EN 300 219-2, EN 301 489-5, EN 60065, EN 60950-1, EN 60215, EN 62209 (SAR).

Details and timing of firmware and software updates are subject to change without notice. Specifications are subject to change without notice due to advancements in technology. FleetSync® is a registrated trademark of JVCKENWOOD Corporation. AMBE+2<sup>™</sup> is a trademark of Digital Voice Systems Inc. All other trademarks are the property of their respective holders.

| MIL-STD                        |                 | METHOD / PROCEDURES     |                |               |               |  |  |
|--------------------------------|-----------------|-------------------------|----------------|---------------|---------------|--|--|
|                                | 810C            | 810D                    | 810E           | 810F          | 810G          |  |  |
| Low Pressure                   | 500.1/ I        | 500.2 / I, II           | 500.3/ I, II   | 500.4/ I, II  | 500.5/ I, II  |  |  |
| High Temperature               | 501.1/ I, II    | 501.2/ I, II            | 501.3/ I, II   | 501.4/ I, II  | 501.5/ I, II  |  |  |
| Low Temperature                | 502.1/ I        | 502.2/ I, II            | 502.3/ I, II   | 502.4/ I, II  | 502.5/ I, II  |  |  |
| Temperature Shock              | 503.1/ I        | 503.2/ I                | 503.3/1        | 503.4/ I, II  | 503.5/ I      |  |  |
| Solar Radiation                | 505.1/ I        | 505.2/                  | 505.3/ I       | 505.4/ I      | 505.5/ I      |  |  |
| Rain*1                         | 506.1/ I, II    | 506.2/ I, II            | 506.3/ I, III  | 506.4/ I, III | 506.5/ I, III |  |  |
| Humidity                       | 507.1/ I, II    | 507.2/ II, III          | 507.3/ II, III | 507.4         | 507.5/ II     |  |  |
| Salt Fog*1                     | 509.1/ I        | 509.2/ I                | 509.3/ I       | 509.4         | 509.5         |  |  |
| Dust*1                         | 510.1/ I        | 510.2/ I                | 510.3/ I       | 510.4/ I, III | 510.5/ I      |  |  |
| Vibration                      | 514.2/ VIII, X  | 514.3/ I                | 514.4/ I       | 514.5/ I      | 514.6/ I      |  |  |
| Shock                          | 516.2/ I, II, V | 516.3/ I, IV            | 516.4/ I, IV   | 516.5/ I, IV  | 516.6/ I, IV  |  |  |
| International Protection Stand | dard            |                         | ·              | ·             | ·             |  |  |
| Dust & Water Protection        |                 | IP54 / 55" <sup>1</sup> |                |               |               |  |  |

\*1 The 2-pin connector cover has te be connected to the radio, or the locking bracket has to be attached to the KMC-45 external speaker microphone.



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