

# TM840

## DMR MOBILE RADIO

A DMR product with ergonomic design and all-round digital functions, TM840 helps to improve management efficiency and responsiveness in emergency situations.

The Kirisun DMR series is a cost effective migration solution from analog to digital which you can do at your own pace.



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### KEY FEATURES AND BENEFITS

- **1.8" Graphic Dot-matrix True Color Display**

The large-sized, full color display enables easy viewing of information even under bright sunlight.

- **Multiple Languages**

TM840 supports multiple languages including English, German, French, Turkish, Spanish, Nederland, Italian, Arabic, Polish.

- **Single Frequency Repeater Mode(Optional)**

Support single-frequency repeater mode under digital mode, greatly saving frequency resources and extending communication range in DMO mode.

- **One Touch Operation Usage**

TM840 provides four programming keys, providing one touch operation such as Text Message or Voice Calls.

- **Versatile Voice Calls & Data Services**

The Intelligent TM840 supports various voice call types, including Private Call, Group Call, All Call and Emergency Call, as well as data services, e.g. Text Message and Data Transfer.

- **Voice Privacy**

Enhanced digital encryption, including ARC4, DES and 256 bits AES encryption algorithm and scrambled analog call feature facilitate the management of the calls between team members and ensure the privacy of communications in any chosen mode .

- **GPS(Optional)**

Integrated LIP (Location Information Protocol) enables the real time tracking of the mobile radio.

- **Multiple Analog Signaling Modes**

Multiple analog signalings, including MDC1200, DTMF, 2-Tone and 5-Tone, provides compatibility with existing analog communication systems.

- **Supplementary Services**

TM840 supports supplementary services such as Radio Check, Remote Monitor, Call Alert, Monitor Channel, Permanent Monitoring, Kill, Stun and Revive, Transmit Interrupt.

- **Accessory Expansion**

TM840 is designed with an accessory port. It allows an external connection of a variety of accessories, like PTT foot pedal.

- **Scan**

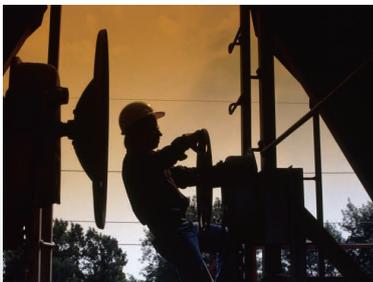
TM840 supports scanning of analog voice and signaling, digital voice and data, and mixed mode scan including analog and digital signals.

- **Integrated Bluetooth(Optional)**

Built-in Bluetooth for connecting with variety of accessories like PTT button, Earphones and more.

- **DMR Tier3 and MPT Working Mode (Optional)**

It supports DMR Tier3 and MPT1327 working mode .This option need license.



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### GPS

Accuracy specs are for long-term tracking(5 satellites visible at nominal-130dBm)

|                                    |            |
|------------------------------------|------------|
| TTFF(Time To First Fix)-Cold Start | <1 minute  |
| TTFF(Time To First Fix)-Hot Start  | 10 seconds |
| Horizontal Accuracy                | 10 m       |

### ENVIRONMENTAL SPECIFICATIONS

|                            |  |
|----------------------------|--|
| Operating Temperature      | -30 °C ~+60 °C                                   |
| Storage Temperature        | -40 °C ~+85 °C                                   |
| ESD                        | IEC610000-4-2(Level4)<br>±4kV(Contact) ±8kV(air) |
| American Military Standard | MIL-STD-810-C/D/E/F/G                            |
| Dust & Water Protection    | IP54 Standard                                    |
| Humidity                   | Per MIL-STD-810 C/D/E/F/G Standard               |
| Shock & Vibration          | Per MIL-STD-810 C/D/E/F/G Standard               |

### MILITARY STANDARDS 810

| 810C               |         | 810D          |         | 810E         |         | 810F         |         | 810G         |         |                       |
|--------------------|---------|---------------|---------|--------------|---------|--------------|---------|--------------|---------|-----------------------|
| APPLICABLE MIL-STD | METHODS | PROC/CAT      | METHODS | PROC/CAT     | METHODS | PROC/CAT     | METHODS | PROC/CAT     | METHODS | PROC/CAT              |
| Low Pressure       | 500.1   | I             | 500.2   | I            | 500.3   | II           | 500.4   | II           | 500.4   | II                    |
| High Temperature   | 501.1   | I,II          | 501.2   | I/A I,II/A I | 501.3   | I/A I,II/A I | 501.4   | I/Hot,II/Hot | 501.5   | I/Hot A I,II/Hot(A I) |
| Low Temperature    | 502.1   | I             | 502.2   | I/C3,II/C1   | 502.3   | I/C3,II/C1   | 502.4   | I/C3,II/C1   | 502.5   | I/C3,II/C1            |
| Temperature Shock  | 503.1   | -             | 503.2   | I/A I C3     | 503.3   | I/C I A3     | 503.4   | I            | 503.5   | I/C                   |
| Solar Radiation    | 505.1   | II            | 505.2   | I            | 505.3   | I            | 505.4   | I            | 505.5   | I                     |
| Rain               | 506.1   | I,II          | 506.2   | I,II         | 506.3   | I,II         | 506.4   | I,III        | 506.5   | I,III                 |
| Humidity           | 507.1   | II            | 507.2   | II           | 507.3   | II           | 507.4   | -            | 507.5   | II                    |
| Salt fog           | 509.1   | -             | 509.2   | -            | 509.3   | -            | 509.4   | -            | 509.5   | -                     |
| Dust               | 510.1   | I             | 510.2   | I            | 510.3   | I            | 510.4   | I            | 510.5   | I                     |
| Vibration          | 514.2   | VII/F,CURVE-W | 514.3   | I/10,II/3    | 514.4   | I/10,II/3    | 514.5   | I/24         | 514.6   | I/24                  |
| Shock              | 516.2   | I,II          | 516.3   | I,IV         | 516.4   | I,IV         | 516.5   | I,IV         | 516.6   | I,IV                  |

### STANDARD ACCESSORIES



Hand Microphone

Mounting Bracket

Power Cord

### OPTIONAL ACCESSORIES



Hand Microphone  
(with keypad)

Vehicle Antenna

GPS Antenna

# TM840 DMR MOBILE RADIO

## TM840 SPECIFICATIONS

### General

|                        |   |
|------------------------|---|
| Frequency Range        | 136~174MHz, 350~400MHz 400~470MHz, 450~520MHz |
| Channel Capacity       | 1024  |
| Zone Capacity          | 248   |
| Channel Spacing        | 20kHz/25kHz/12.5kHz                           |
| Operating Voltage      | 13.6±15%                                      |
| Current Drain Standby  | <0.6A   |
| Current Drain Receive  | <2.0A   |
| Current Drain Transmit | <8A(25W), <14A(40W/45W)                       |
| Frequency Stability    | 0.5ppm  |
| Antenna Impedance      | 50Ω   |
| Dimensions(H·W·D)      | 59mm×176mm×183mm                              |
| Weight                 | 1.5Kg   |
| LCD Display            | 1.77inch, 5 rows                              |

### Receiver

|                             |   |
|-----------------------------|---|
| Sensitivity Analog          | 0.22μV(12dB SINAD)  |
| Sensitivity Digital         | 0.22μV/BER5%  |
| Selectivity                 | 60dB@12.5kHz, 70dB@20/25kHz(TIA-603); 60dB@12.5kHz, 70dB@20/25kHz(ETSI) |
| Spurious Response Rejection | 70dB@12.5/20/25kHz(TIA-603), 70dB@12.5/20/25kHz(ETSI)                   |
| Inter-modulation            | 70dB@12.5kHz/25kHz(TIA-603), 65dB@12.5kHz/25kHz(ETSI)                   |
| Hum and Noise               | -40dB@12.5kHz, -45dB@20/25kHz   |
| Rated Audio Power Output    | 3W  |
| Rated Audio Distortion      | 3% (Typical)  |
| Audio Response              | +1~-3dB   |
| Conducted Spurious Emission | -57dBm@ < 1GHz, -47dBm @>1GHz   |

### Transmitter

|                                       |   |
|---------------------------------------|---|
| RF Power Output                       | Low Power:25W, High Power: 40W(UHF)/45W(VHF)  |
| FM Modulation                         | 11K0F3E@12.5kHz, 14K0F3E@20kHz, 16K0F3E@25kHz   |
| 4FSK Digital Modulation               | 12.5kHz Data: 7K60F1D&7K60FXD, 12.5kHz Voice: 7K60F1E&7K60FXE<br>Combination of 12.5kHz Voice and Data: 7K60F1W |
| Modulation Limiting                   | ±2.5kHz@12.5kHz, ±4.0kHz@20kHz, ±5.0kHz@25kHz   |
| Conducted/Radiated Emissions(TIA603D) | -36dBm<1GHz, -30dBm>1GHz  |
| FM Hum & Noise                        | -40dB@12.5kHz, -45dB@20kHz/25kHz  |
| Adjacent Channel Power                | 60dB@12.5kHz, 70dB@20kHz/25kHz  |
| Audio Response                        | +1~-3dB   |
| Audio Distortion                      | ≤3%   |
| Digital Vocoder Type                  | AMBE+2™   |
| Digital Protocol                      | ETSI-TS 102 361-1,-2,-3,-4  |

All specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

For more information, please visit [www.kirisun.com](http://www.kirisun.com) or contact [marketing.os@kirisun.com](mailto:marketing.os@kirisun.com)



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