**TM8250 Specifications**

### General
- **Frequency Range**
  - 66-88MHz
  - 136-174MHz
  - 216-266MHz
  - 400-470MHz
  - 450-530MHz
- **Frequency Stability**
  - +/-1.5ppm Above 100MHz
  - +/-2.5ppm Below 100MHz
- **Channel Capacity**
  - 4000 Conventional Channels
  - 300 Scan/Vote Groups
- **Power Supply**
  - 10.8-16VDC
- **Channel Spacing**
  - 12.5/20/25kHz
- **Dimensions (LxWxH)**
  - Radio body and control head: 228 x 205 x 70mm
  - 8.98 x 8.07 x 2.75 inches
- **Weight**
  - 1.5kg
- **Operational Temperature**
  - -30°C to +60°C (-22°F to +140°F)
- **Sealing**
  - Passes dust and rain testing to IP54
- **RF Connector**
  - 50 Ohm BNC
- **Interface Connectors**
  - 3 Interface Connectors with Serial Ports
- **Military Standards 810 C, D, E & F Method**
  - Low Pressure: 500.4
  - High Temperature: 501.4
  - Low Temperature: 502.4
  - Shock: 503.4
  - Solar Radiation: 505.4
  - Rain: 506.4
  - Humidity: 507.4
  - Salt Fog: 509.4
  - Dust: 510.4
  - Vibration: 514.5
  - Shock: 516.5
- **Transmitter**
  - **Output Power**
    - 1, 5, 10, 25W
  - **Modulation Limiting**
    - <+/-2kHz 12.5kHz
    - <+/-4kHz 20kHz
    - <+/-5kHz 25kHz
  - **FM Hum and Noise**
    - <+/-1kHz 25kHz
    - <+/-4kHz 25kHz
    - <+/-8kHz 25kHz
  - **Conducted/Radiated Emissions**
    - <10dBm to 1GHz
    - <30dBm 1-4GHz below 500MHz
    - <30dBm 1-12.75GHz above 500MHz
  - **Audio Response**
    - Flat or pre-emphasised
  - **Audio Distortion**
    - <3% at 1kHz 60% modulation
  - **Transmit Rise Time**
    - <10ms
  - **Duty Cycle**
    - 33% at 25W
- **Receiver**
  - **Sensitivity**
    - <1.15dBm for 12dB SINAD
  - **Intermodulation**
    - <+/-1dB 1-12.5kHz
    - <+/-2dB 12.5kHz
    - <+/-5dB 25kHz
  - **Selectivity**
    - +50dB 12.5kHz
    - +70dB 25kHz
  - **Spurious Responses**
    - <+/-125Hz
    - <+/-4kHz 25kHz
    - <+/-5kHz 25kHz
  - **Audio Response**
    - Flat or de-emphasised
  - **Audio Distortion**
    - <3% at 1kHz 60% modulation

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The Tait 8000 Series of innovative and high-performing products sets a standard of excellence for analogue radio communications technology. With advanced software-flexible features, 8000 Series products lead their class.

- 25W, 1500 Channel Conventional Mobile Radio
- Large Alphanumeric Display
- 26 Zones/Channel Banks
- Intuitive and Easy-To-Use Menu Structure
- Robust RF Performance
- Rugged Construction to Strict Standards
- Digital Signal Processor Design
- Remote Control Head Option
- Keypad Microphone Option

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Tait is your complete supplier of radio communications equipment, with mobile, portable and infrastructure solutions. Tait is renowned for its flexibility, responsiveness and commitment to producing innovative world-class mobile radio communications products.

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www.taitworld.com
When rugged, reliable and easy-to-use communications are essential to your business and you need to respond clearly and immediately in mission-critical situations, the Tait TM8250 conventional mobile radio is the ideal solution.

The robust, high performance TM8250 mobile radio is the ultimate choice for fast-moving mobile teams such as emergency services or transport fleets, who rely on instant voice and data communications to keep in touch.

The easy-to-use alphanumeric display and keypad, and intuitive menu structure mean users can quickly view information and access the radio’s functions in fast-changing situations – whether you’re a police officer in a high-speed pursuit or a truck driver responding to an urgent despatch job.

With excellent RF performance, rugged design and advanced Digital Signal Processor (DSP) technology, you can trust the TM8250 mobile radio to perform in any situation.

Easy-to-Use Display and User Interface

The powerful TM8250 control head features a large LCD display, providing a high level of information for users such as emergency response teams who need dependable communications to stay in control in demanding situations.

Users can clearly and concisely view channel information, including text and icons, through this enhanced user display. Industry-standard 14 character alphanumeric labels can be programmed and viewed, and up to four lines of message text can be displayed, with icons including a signal strength indicator and power output indicator.

The TM8250 control head also features four function keys that can be programmed for fast one-touch access to commonly used features.

Intuitive Menu Structure

The TM8250 offers a comprehensive user-friendly menu to allow easy navigation to all the radio functions such as channel access, zones and display settings.

1500 Conventional Channels

Greater channel capacity in the TM8250 makes the radio suitable for large radio system applications such as wide area transport services, where many channels are used to provide signal coverage.

Enhanced Dialling Capabilities

An optional keypad microphone is offered with the TM8250, allowing the user to easily select channels, and make Selcall and DTMF calls. Calls can be made quickly without needing to scroll through preset call strings to find the required number. The keypad microphone is IP54 rated, so it is extremely well protected against harsh environments.

Remote Control Head Option

This option enables the user to mount the TM8250 control head away from the radio body, allowing greater vehicle installation flexibility, particularly where there are space constraints. The remote control head can be mounted up to six metres away from the radio and like all TM8000 radios, maintains ingress protection to the IP54 standard.

Robust RF Performance

The TM8250 has been developed using innovative RF design and includes a number of innovative features to maintain operation, even under harsh conditions. For example, when unusually high transmitter temperatures are detected, the radio reduces the power output so operation can be maintained.

Rugged Construction

Engineered with a strong diecast metal chassis and almost entirely constructed using Surface Mount Technology (SMT), the TM8250 meets stringent specifications for reliability including MIL-STD-810 C, D, E & F specs and IP54.

High Speed Data Capability

Suited to the latest mobile data applications, the TM8250 supports 1200 baud FFSK data out-of-the-box. An internal high speed data modem can be activated with a software key, or external high speed modems can be connected using one of three interface points into the radio.

Advanced System Integration Capabilities

The TM8250 has been designed with customisation in mind. System integrators have maximum design flexibility with multiple ports for auxiliary connectors and a large options board area. The comprehensive 3DK Hardware Developer’s Kit provides hardware and software tools for customisation.

Standard Features:

- 1500 Conventional Channels
- 300 Scanning/Voting Groups
- 26 Channel Zones/Banks
- Built-in CTCSS/DCS
- Enhanced Selcall Functionality
- Fast Voting
- Emergency Mode, Stun and Revive
- Numeric ANI
- AVL Software Support
- DTMF Encode
- Two Tone Decode
- Built-in Loudspeaker
- VOX Operation as Standard
- Voice Inversion Scrambling

Optional Features:

- Keypad Microphone
- Remote Control Head Installation
- Hands Free/Remote PTT
- Locking Security Cradle
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The easy-to-use alphanumeric display and keypad, and intuitive menu structure mean users can quickly view information and access the radio’s functions in fast-changing situations – whether you’re a police officer in a high-speed pursuit or a truck driver responding to an urgent despatch job.

With excellent RF performance, rugged design and advanced Digital Signal Processor (DSP) technology, you can trust the TM8250 mobile radio to perform in any situation.

### Features

#### Easy-to-Use Display and User Interface

The powerful TM8250 control head features a large LCD display, providing a high level of information for users such as emergency response teams who need dependable communications to stay in control in demanding situations.

Users can clearly and concisely view channel information, including text and icons, through this enhanced user display. Industry-standard 14 character alphanumeric labels can be programmed and viewed, and up to four lines of message text can be displayed, with icons including a signal strength indicator and power output indicator.

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- **RF Connector**
  - 50 Ohm BNC
- **Interface Connectors**
  - 3 Interface Connectors with Serial Ports

### Military Standards 810 C, D, E & F
- **Applicable MIL-STD Method**
- **Procedure**
- Low Pressure
  - 500.4
  - 1
- High Temperature
  - 501.4
  - 1 & 2
- Low Temperature
  - 502.4
  - 1 & 2
- Shock and Vibration
  - 503.4
  - 1
- Solar Radiation
  - 505.4
  - 1
- Rain
  - 506.4
  - 3
- Humidity
  - 507.4
  - 1
- Salt Spray
  - 509.4
  - 1
- Dust
  - 510.4
  - 1
- Vibration
  - 511.4
  - 1
- Shock
  - 516.5
  - 1 & 5

### Transmitter
- **Output Power**
  - 1, 5, 10, 25W
- **Modulation Limiting**
  - <+/-2kHz 12.5kHz
  - <+/-4kHz 20kHz
  - <+/-5kHz 25kHz
- **FM Hum and Noise**
  - <+/-15Hz 1kHz
  - <+/-2kHz 25kHz
- **Conducted/Radiated Emissions**
  - <+/-10dBm to 5kHz
  - <+/-30dBm 1-4GHz below 500MHz
  - <+/-30dBm 1-12.75GHz above 500MHz
- **Audio Response**
  - FLAT
  - Pre-emphasised
- **Audio Distortion**
  - <3% at 1kHz 60% modulation
- **Transmit Rise Time**
  - <50ns
- **Duty Cycle**
  - 50% at 25W

### Receiver
- **Sensitivity**
  - <+/-110dBm for 12dB SINAD
- **Intermodulation**
  - <+/-15dB 1-6kHz
  - <+/-20dB 1-12.75kHz
- **Selectivity**
  - 25dB 25kHz
- **Spurious Responses**
  - 25dB 475kHz
- **Hum and Noise**
  - <+/-4kHz 675kHz
  - <+/-5kHz 25kHz
- **Audio Response**
  - FLAT
  - De-emphasised
- **Audio Distortion**
  - <3% at 1kHz 60% modulation

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Rugged • High Speed Data • Integrator Friendly

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