

# Flexible, reliable and user friendly.

The robust, high performance TM8250 mobile radio is the ideal choice for fast-moving mobile teams who rely on instant voice and data communications.



## KEY FEATURES

- ▶ Large LCD display – 14 characters and four lines of alphanumeric text
- ▶ User-friendly menu structure for easy navigation
- ▶ Four programmable function keys
- ▶ Optional keypad microphone for enhanced dialing capability
- ▶ 1500 conventional channels with built-in CTCSS and DCS
- ▶ Data capable – supports 1200/2400 baud FFSK data as standard
- ▶ Internal high speed data modem (12 kbps on NB channels/19.2 kbps on WB channels) (software option)
- ▶ 300 scanning/voting groups and 26 channel zones
- ▶ Full Selcall functionality
- ▶ Displays and supports short data messages via CCDI (Computer Controlled Data Interface)
- ▶ Voice inversion scrambling
- ▶ MDC 1200 encode (software option)
- ▶ Type 99 (2-tone) decode
- ▶ Lone Worker function to improve worker safety
- ▶ Multiple auxiliary ports and expansive internal options area
- ▶ Direct connect GPS and GPS display option



**FEATURES AND BENEFITS**

**Control head options**

The remote head option allows the user to mount the TM8250 control head away from the radio body, allowing greater vehicle installation flexibility. The TM8250 also supports a dual control head configuration, allowing the radio to be shared with other users.

**Engineered to be tough**

The TM8250 exceeds stringent reliability specifications, including MIL-STD 810 C, D, E, F and IP54.

**Software feature upgrades**

The Software Feature Enabler (SFE) allows system operators to upgrade with additional functionality at any stage by simply purchasing the appropriate software license key.

**Improved data integrity**

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**Ease of integration**

The system integrator has maximum design flexibility with multiple ports for auxiliary connectors and a large options board area. The comprehensive third party developer's kit provides integrators with hardware and software tools to facilitate customization.

## GENERAL

	Band	Operational Frequency		Transmit Power
VHF	A4	66–88MHz		25W
	B1	136–174MHz		25W
	B1	136–174MHz		50W
	D1	216–266MHz		25W
UHF	G2	350–400MHz		40W
	H5	400–470MHz		25W
	H5	400–470MHz		40W
	H6	450–530MHz		25W
	H7	450–520MHz		40W
700/800MHz	K5	762–776MHz	762–776MHz	30W (<806MHz)
		792–825MHz		35W (>806MHz)
900MHz	L3	850–870MHz	850–870MHz	
		896–941MHz	935–941MHz	30W
Frequency Stability	±1.5ppm			
Channel/Network Capacity	1500 Conventional Channels 300 Scan/Vote Groups			
Power Supply	10.8–16VDC			
Channel Spacing	12.5/20/25kHz			
Channel Increment	7.5/12.5/15/20/25/30kHz			
Dimensions (WxDxH)	25W			
	30/35/40/50W			
Weight	25W			
	30/35/40/50W			
Operational Temperature	-22°F to +140°F (-30°C to +60°C)			
Sealing	IP54			
RF Connector	50 ohm BNC or Mini UHF			
Interface Connectors	3 Interface Connectors with Serial Ports			
Internal Speaker Output	>3W			

## TRANSMITTER

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Output Power	25W, 12W, 5W, 1W	
		30W, 15W, 5W, 2W
		35W, 15W, 5W, 2W
	40W UHF	
	50W VHF	
Modulation Limiting	±2.5kHz	±2.5kHz
	±4kHz	±4kHz
	±5kHz	±5kHz
FM Hum and Noise	-38dB	-33dB
	-41dB	-38dB
	-43dB	-40dB
Conducted/Radiated Emissions	-36dBm < 1GHz	< -30dBm to 8GHz
	-30dBm > 1GHz	
Audio Response Bandwidth	300Hz – 3kHz	300Hz–3kHz
Audio Response	Flat or pre-emphasised	Flat or pre-emphasised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	20ms	20ms
Duty Cycle	33%	
		20%
	20%	

**RECEIVER\*\***

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Sensitivity	0.28µV (<-118dBm) for 12dB SINAD	0.22µV (-120dBm) for 12dB SINAD 0.35µV (<-116dBm) for 20dB SINAD
Intermodulation	75dB	82dB
Selectivity		
12.5kHz	65dB	67dB
20kHz	70dB	75dB
25kHz	75dB	79dB
Spurious Response	75dB	> 90dB***
Hum and Noise		
12.5kHz	-40dB	-44dB
20kHz	-41dB	-47dB
25kHz	-43dB	-48dB
Audio Response Bandwidth	300Hz–3kHz	300Hz–3kHz
Audio Response	Flat or de-emphasised	Flat or de-emphasised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation

**MILITARY STANDARDS 810 F\***

Applicable MIL-STD	Method	Procedure
Low pressure	500.4	2
High temperature	501.4	1, 2
Low temperature	502.4	1, 2
Temperature shock	503.4	1
Solar radiation	505.4	1
Rain	506.4	1, 3
Humidity	507.4	1
Salt fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1, 6

**REGULATORY DATA**

	Frequency	FCC Description	IC Description
25W	136-174	CASTMAB1C	737A-TMAB1C
	216-266	CASTMAD1C	
	400-470	CASTMAH5C	737A-TMAH5C
	450-530	CASTMAH6C	737A-TMAH6C
35W	806-869	CASTMAK5D	737A-TMAK5D
40W	400-470	CASTMAH5D	
	450-520	CASTMAH7D	
50W	136-174	CASTMAB1D	



\* Also meets equivalent superseded MIL-STD 810 C, D & E.

\*\* Meets class A except where indicated.

\*\*\* Meets class A except 1/2 IF at bottom 4MHz of 700MHz sub-band (69dB) and top 4MHz of 800MHz sub-band (66dB).

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. All specifications shown are typical.

\*Contact your local Tait representative for more information.

For further information please check with your nearest Tait office or authorized dealer.

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Tait International Limited facilities are certified for ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System) and B: OHSAS 18001:2007 (Occupational Health and Safety Management System) for aspects associated with the design, manufacture and distribution of radio communications and control equipment, systems and services. In addition, all our Regional Head Offices are certified to ISO 9001.

