TM**8250**
SPECIFICATIONS

tait
communications

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

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

The application of Digital Signal Processor (DSP) technology optimizes RF performance and ensures fast and reliable data processing.

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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	
		Transmit	Receive		
700/800MHz	K5	762–776MHz	762–776MHz	30W (<806MHz)	
		792–825MHz		35W (>806MHz)	
		850–870MHz	850–870MHz		
900MHz	L3	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 (DxWxH)
    25W
    30/35/40/50W
	
	7.3 x 7.2 x 2.8in (185 x 182 x 70mm)
	8.1 x 7.2 x 2.8in (205 x 182 x 70mm)

Weight
    25W
    30/35/40/50W
	
	49.4oz (1.4kg)
	56.4oz (1.6kg)

Operational Temperature	-22°F to +140°F (-30°C to +60°C)
Sealing	IP54
RF Connecter	50 ohm BNC or Mini UHF
Interface Connecters	3 Interface Connecters with Serial Ports
Internal Speaker Output	>3W

TRANSMITTER

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)

Output Power
    25W
    30W
    35W
    40W UHF
    50W VHF
	
	25W, 12W, 5W, 1W
	
	40W, 20W, 15W, 10W
	50W, 25W, 15W, 10W
		
		30W, 15W, 5W, 2W
		35W, 15W, 5W, 2W

Modulation Limiting
    12.5kHz
    20kHz
    25kHz
	
	±2.5kHz
	±4kHz
	±5kHz
		
		±2.5kHz
		±4kHz
		±5kHz

FM Hum and Noise
    12.5kHz
    20kHz
    25kHz
	
	-38dB
	-41dB
	-43dB
		
		-33dB
		-38dB
		-40dB

Conducted/Radiated Emissions	-36dBm < 1GHz -30dBm > 1GHz	<-30dBm to 8GHz
Audio Response Bandwidth	300Hz–3kHz	300Hz–3kHz
Audio Response	Flat or pre-emphazised	Flat or pre-emphazised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	20ms	20ms

Duty Cycle
    25W
    30/35W
    40/50W
	
	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
    20kHz
    25kHz
	
	65dB
	70dB
	75dB
		
		67dB
		75dB
		79dB

Spurious Responses	75dB	> 90dB***

Hum and Noise
    12.5kHz
    20kHz
    25kHz
	
	-40dB
	-41dB
	-43dB
		
		-44dB
		-47dB
		-48dB

Audio Response Bandwidth Audio Response	300Hz–3kHz Flat or de-emphazised	300Hz–3kHz Flat or de-emphazised
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	136-174 216-266 400-470 450-530	CASTMAB1C CASTMAD1C CASTMAH5C CASTMAH6C	737A-TMAB1C 737A-TMAH5C 737A-TMAH6C
35W	806-869	CASTMAK5D	737A-TMAK5D
40W	400-470 450-520	CASTMAH5D CASTMAH7D	
50W	136-174	CASTMAB1D	

Authorized Partners

* 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).

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

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

+Please note that not all frequency bands and power outputs are available in all markets. For further information please check with your nearest Tait office or authorized dealer.

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