



TM8110/TM8115 CONVENTIONAL MOBILE RADIOS

The TM8110 and TM8115 are robust, software-flexible radios which are ideal for a wide range of voice and data applications. The TM8110 comes with 10 conventional channels and one-digit display. The TM8115 comes with 100 conventional channels and two-digit display.

Intuitive interface

- Easy-to-read display for fast channel selection
- Four programmable function keys
- Heavy duty microphone and built-in loudspeaker

Flexible communications

- Data capable - supports 1200/2400 baud FFSK as standard
- Internal high speed data modem (12 kbps on NB channels/19.2 kbps on WB channels) - software option
- Type 99 (2-tone) decode
- Four RF power levels
- Full Selcall functionality
- DTMF encoder
- Low stand-by power consumption
- MDC 1200 Encode - software option

Advanced system integration capabilities

- Multiple auxiliary ports
- Expansive internal options area
- Direct Connect GPS

Engineered to be tough

The TM8110 and TM8115 exceeds stringent reliability specifications, including MIL-STD 810 C, D, E, F and IP54.

Software feature upgrades

The Software Feature Enabler (SFE) allows users 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.

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.

AVL support

The TM8110/TM8115 support a standard polling vehicle location format and a direct connect port for an external GPS receiver - allowing for the development of a complete AVL solution.

TM8110 & TM8115 Specifications



General

	Band	Operational Frequency	Transmit Power
VHF	A4	66-88MHz	25W
	B1	136-174MHz	25W
	B1	136-174MHz	50W
	D1	216-266MHz	25W
UHF	H5	400-470MHz	25W
	H5	400-470MHz	40W
	H6	450-530MHz	25W
	H7	450-520MHz	40W
700/800MHz	K5	762-776MHz	30W (<806MHz)
		792-825MHz 850-870MHz	35W (>806MHz)
900MHz ⁺	L3	896-941MHz	935-941MHz 30W
Frequency Stability	±1.5ppm		
Channel/Network Capacity	TM8110: 10 Channels (simplex or semi-duplex) TM8115: 100 Channels (simplex or semi-duplex)		
Power Supply	10.8-16VDC		
Channel Spacing	12.5/20/25kHz		
Channel Increment	7.5/12.5/15/20/25/30kHz		
Dimensions (DxWxH)	25W: 6.9 x 6.3 x 2.0in (175 x 160 x 51mm) 30/35/40/50W: 7.7 x 6.3 x 2.0in (195 x 160 x 51mm)		
Weight	25W: 45.9oz (1.3kg) 30/35/40/50W: 53oz (1.5kg)		
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		

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	3
Humidity	507.4	1
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1, 6

Transmitter

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Output Power	25W, 12W, 5W, 1W	30W, 15W, 5W, 2W 35W, 15W, 5W, 2W
Modulation Limiting	±2.5kHz 12.5kHz 20kHz 25kHz	±2.5kHz ±4kHz ±5kHz
FM Hum and Noise	-38dB 12.5kHz -41dB 20kHz -43dB 25kHz	-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-emphasised	Flat or pre-emphasised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	10ms	10ms
Duty Cycle	25W: 33% 30/35W: 20% 40/50W: 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 20kHz: 70dB 25kHz: 75dB	67dB 75dB 79dB
Spurious Responses	75dB	>90dB***
Hum and Noise	-40dB 12.5kHz -41dB 20kHz -43dB 25kHz	-44dB -47dB -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

Regulatory Data

	Frequency	FCC Description	IC Description
25W	136-174	CASTMAB1A	737A-TMAB1A
	216-266	CASTMAD1A	
	400-470	CASTMAH5A	737A-TMAH5A
	450-530	CASTMAH6A	737A-TMAH6A
35W	806-869	CASTMAK5B	737A-TMAK5B
40W	400-470	CASTMAH5B	
	450-520	CASTMAH7B	
50W	136-174	CASTMAB1B	



Tait North America Inc
1-800-320-4037 USA
1-800-890-8248 CAN

* 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).

+ Pending approval. Please contact Tait for further information.

All values quoted are typical. 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.

The word Tait and the Tait logo are trademarks of Tait Electronics Ltd. Tait is an ISO9001: 2000 and ISO 14001: 2004 certified supplier.

AUTHORIZED DEALER