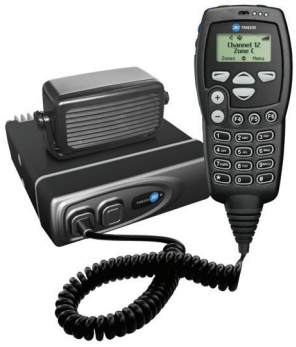
TAIT radio communications

TM8254

SPECIFICATIONS



TM8254 DUAL MODE MOBILE RADIO

With its hand-held control head, the TM8254 saves space and is fast and easy to install. It improves fleet and team effectiveness by placing vehicle communications into the hands of the user.

Intuitive interface

- Large LCD display – four lines of alphanumeric text
- Six programmable function keys and alphanumeric keypad

Flexible communications

- 1,500 conventional channels with built-in CTCSS and DCS
- Data capable – supports 2400 baud FFSK data as standard
- Internal high speed data modem – software option
- All MPT 1327 call types
- Multiple network capability - up to four different trunked networks
- Voice inversion scrambling
- Built-in MAP 27 interface as standard
- Supports short data messages and ANI
- Incoming calls can be queued for future reference and call back

Advanced system integration capabilities

- Multiple auxiliary ports and expansive internal options area
- Direct Connect GPS and GPS display option

Mobile radio in the palm of your hand
The TM8254's hand-held control head allows the angle and distance of the display to be positioned by the user for more accurate communication. Several remote mounting options provide greater installation flexibility; ideal for situations where space is a limiting factor.

Flexible installation
The hand-held control head is ideal for covert installations. The optional break-out box and remote kit mean that the TM8254 can be located in the rear of the vehicle.

Engineered to be tough
The TM8254 and its hand-held control head meet stringent reliability specifications, including MIL-STD 810 C, D, E, F and IP54. These standards ensure performance and reliability are never compromised.

AVL support
The TM8254 supports a standard polling vehicle location format and has a direct connect port for an external GPS receiver – allowing for the development of a complete AVL solution.

Fast switch between modes
Because the automated switch between trunked and conventional modes takes place rapidly, precious time is saved in possible emergency situations.

TM8254 Specifications

General

	Band	Operational Frequency		Transmit Power+
VHF	A4	66–88MHz		25W
	B1	136–174MHz		25W
	B1	136–174MHz		50W
	C0	174–225MHz		25W
	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	
		792–825MHz		35W (>806MHz)
		850–870MHz	850–870MHz	30W (<806MHz)
900MHz+	L3	896–941MHz	935–941MHz	30W

Frequency Stability	±1.5ppm
Channel/Network Capacity	1500 Conventional Channels 300 Scan/Vote Groups 4 MPT 1327 Trunked Networks
Power Supply	10.8–16VDC
Channel Spacing	12.5/20/25kHz
Channel Increment	7.5/12.5/15/20/25/30kHz
Dimensions (DxWxH)	
25W	7.3 x 7.2 x 2.8in (185 x 182 x 70mm)
30/35/40/50W	8.1 x 7.2 x 2.8in (205 x 182 x 70mm)
Weight	
25W	49.4oz (1.4kg)
30/35/40/50W	56.4oz (1.6kg)
Operational Temperature	-22ºF to +140ºF (-30ºC to +60ºC)
Sealing	IP54
RF Connecter	50 ohm BNC or Mini UHF
Interface Connecters	3 Interface Connecters with Serial Ports

Military Standards 810 F*

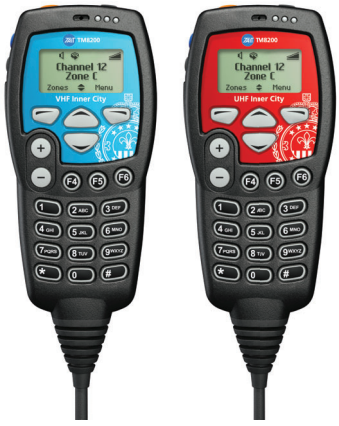
Applicable MIL-STD	Method	Procedure
Low Pressure	500.4	2
High Temperature	501.4	1, 2
Low Temperature	502.4	1, 2
Temperature Shock	503.4	1
Solar Radiation	505.4	1
Rain	506.4	1, 3
Humidity	507.4	1
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1, 6

Transmitter

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Output Power		
25W	25W, 12W, 5W, 1W	
30W		30W, 15W, 5W, 2W
35W		35W, 15W, 5W, 2W
40W UHF	40W, 20W, 15W, 10W	
50W VHF	50W, 25W, 15W, 10W	
Modulation Limiting		
12.5kHz	±2.5kHz	±2.5kHz
20kHz	±4kHz	±4kHz
25kHz	±5kHz	±5kHz
FM Hum and Noise		
12.5kHz	-38dB	-33dB
20kHz	-41dB	-38dB
25kHz	-43dB	-40dB
Conducted/Radiated Emissions	-36dBm < 1GHz -30dBm > 1GHz	<-30dBm to 8GHz
Audio Response Bandwidth	300Hz–3kHz	300Hz–3kHz
Audio Response	Flat or pre-emphasized	Flat or pre-emphasized
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation
Transmit Rise Time	20ms	20ms
Duty Cycle		
25W	33%	
30/35W		20%
40/50W	20%	

Receiver**

	VHF/UHF (TIA/EIA)	700/800MHz (TIA/EIA)
Sensitivity	0.28 µV (<-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 Responses	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-emphazised	Flat or de-emphazised
Audio Distortion	< 3% at 1kHz 60% deviation	< 3% at 1kHz 60% deviation



Custom lenses allow easy identification of multiple radios in the same vehicle++

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	

TELARC ISO 9001 REGISTERED

TELARC CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM

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.

++ Minimum order quantities apply.

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.

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