

# Flexible, reliable and user friendly.

The TM8255 is a dual mode MPT 1327 trunked radio with full conventional feature set, ideal for a wide range of voice and data applications where comprehensive trunked services are required.



## 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 kbps on WB channels) (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
- ▶ 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

##### Fast switch between modes

Because the automated switch between trunked and conventional modes takes place in 1.5 seconds, precious time is saved in emergency situations.

##### Control head options

The remote head option allows the user to mount the TM8255 control head away from the radio body, allowing greater vehicle installation flexibility. The TM8255 also supports a dual control head configuration, allowing the radio to be shared with other users.

##### Engineered to be tough

The TM8255 exceeds stringent reliability specifications, including MILSTD 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.

##### AVI support

The TM8255 supports 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.

**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	850–870MHz	35W (>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 (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 Connecters	3 Interface Connecters with Serial Ports			

**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 Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:2007 (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 ISO9001:2008.

