

# Interoperable, flexible, configurable.

With FIPS validated encryption, certified interoperability, digital audio clarity and superb build quality, the TM9155 is a tough, dependable and sophisticated mobile radio.



## KEY FEATURES

- ▶ Tested in a Department of Homeland Security-recognized P25 Compliance Assessment Program (P25 CAP) laboratory for interoperability and performance
- ▶ Radios can be used on analog, P25 conventional, trunked and simulcast networks
- ▶ FIPS 140-2 certified encryption
- ▶ Tested beyond MIL-STD-810C, D, E and F
- ▶ A range of analog signaling features - MDC1200 encode/decode\* and Two Tone decode with the purchase of software licenses\*\*
- ▶ Comprehensive scanning features including P25 talk group, priority, dual priority and editable scanning
- ▶ High temperature display option optimizes screen visibility in hot environments.

\*MDC1200 decode includes calling identity display and inhibit/uninhibit functionality.

\*\*Software license option(s) available separately.



### Encryption for secure communications

AES encryption certified by the US National Institute of Standards and Technology (NIST) or proven DES encryption can be incorporated into the TM9155 for highly secure communications.

These radios can be encrypted fast in-field with a Tait Key Fill Device (KFD) or via Over-the-air Rekeying (OTAR) with the Tait Key Management Facility (KMF).

### Flexible choices

Optional dual head configuration means the TM9155 can dynamically respond to vehicle and user needs.

### Interoperability assured

The TM9155 is tested on other vendors' networks as part of the P25 Compliance Assessment Program (P25 CAP).

This offers Public Safety and Government agencies a multi-vendor environment.

### Analog operation for phased transition

Protect your current analog investment and migrate to P25 digital at your own pace.

Analog mode allows communication between various partner agencies.

### Configure to suit with software licenses

Software licenses allow a solution that is readily extended as needs change, removing the risk of hardware upgrades and factory returns.

Trunking, P25 CAI, encryption, location transmission/display\*, Application Programming Interfaces (APIs) and OTAR are just some of the software license options available.

\*Please contact your local Tait representative for more information.



Remote mounted standard control head.



Dual head configuration with STN LCD for use in warmer climates.



Dual head configuration with FSTN LCD for use in cooler climates (a Control Head Interface Box (CHIB) is required).



Tait P25 portables, mobiles and the hand-held control head all share the same intuitive interface.

## GENERAL

Frequency ranges	Frequency band*		Transmit power	Transmit current (typical)
VHF	136–174MHz		25W	<5.5A
	136–174MHz*		50W	<10.5A
	136–174MHz		110W	<30A
UHF	350–400MHz*		40W	<8.5A
	380–420MHz*		40W	<8.5A
	400–470MHz		25W	<6.5A
	400–470MHz		40W	<8.5A
	450–530MHz		25W	<6.5A
	450–520MHz		40W	<8.5A
700/800MHz	<b>Transmit</b>	<b>Receive</b>		
	762–776MHz	762–776MHz		
	792–825MHz		30W (<806MHz)	<10A
	850–870MHz	850–870MHz	35W (>806MHz)	<10A
Frequency stability	±1.5ppm (-22°F to 140°F/-30°C to 60°C)			
Channel/zones	1,000 channels/30 zones			
Talk groups	26 talk group lists comprised of up to 50 members each			
Scan groups	300 with up to 50 members each, maximum of 2,000 members total			
Power supply	10.8–16VDC			
Channel spacing	12.5/15/20/25/30kHz			
Frequency increment/channel steps	2.5/5/6.25			
Dimensions (DxWxH) control head	1.38 x 7.24 x 2.8in (35 x 184 x 71mm)			
Dimensions (DxWxH) radio body				
25W	6.9 x 6.3 x 2.1in (175 x 160 x 52mm)			
30/35/40/50W	7.7 x 6.3 x 2.1in (195 x 160 x 52mm)			
110W	14.6 x 9.8 x 5in (370 x 250 x 121mm)			
Weight control head	11.6oz (330g)			
Weight radio body				
25W	42.3oz (1,200g)			
30/35/40/50W	49.4oz (1,400g)			
110W	296oz (8,400g)			
Operational temperature	-22°F to 140°F (-30°C to 60°C)			
Sealing	IP54 dust and rain			
RF connector	50 ohm BNC or Mini UHF			
Interface connectors	3 Interface connectors with serial ports			
Analog signaling options	MDC1200 encode/decode, Two Tone decode, PL (CTCSS), DPL (DCS)			

## TRANSMITTER

	VHF/UHF (TIA/EIA 102 and 603a)	700/800MHz (TIA/EIA 102 and 603a)
Output power		
25W	25W, 12W, 5W, 1W	
30W		30W, 15W, 5W, 2W
35W		35W, 15W, 5W, 2W
40W	40W, 20W, 15W, 10W	
50W	50W, 25W, 15W, 10W	
110W	110W	
Modulation limiting		
25/30kHz channel	±5kHz	±5kHz
12.5kHz channel	±2.5kHz	±2.5kHz
FM hum and noise (typical)		
25/30kHz channel	-43dB	-40dB
12.5kHz channel	-38dB	-33dB
Conducted emissions (typical)	-85dBc	-75dBc
Audio response (analog)	300–3000Hz +1/-3dB	
Audio distortion	< 3% at 1kHz 60% deviation	
Transmit attack time (TIA/EIA 102)	50mS	

## RECEIVER (TYPICAL FIGURES SHOWN)

	VHF/UHF	VHF 50W	VHF 110W	700/800MHz
Analog sensitivity 12dB SINAD	0.28µV (-118dBm)	0.315µV (-117dBm)	0.25µV (-119dBm)	0.28µV (-118dBm)
Digital sensitivity (TIA/EIA-102) 5%BER	0.22µV (-120dBm)	0.233µV (-120dBm)	0.18µV (-122dBm)****	0.18µV (-122dBm)
Intermodulation rejection (TIA/EIA 102)	-75dB	-75dB	-70dB	-75dB
Adjacent channel selectivity 25/30kHz channel (TIA/EIA 603a)	-75dB	-80dB	-75dB	-75dB
12.5kHz channel (TIA/EIA 102)	-65dB	-70dB	-65dB	-65dB
Spurious response rejection	-75dB	-90dB	-70dB	-75dB
FM hum and noise 25/30kHz channel	-43dB	-43dB	-43dB	-43dB
12.5kHz channel	-40dB	-40dB	-40dB	-40dB
Residual audio noise ratio	45dB	45dB	45dB	45dB
Audio distortion @ rated audio (3W)	3% @ 1kHz 60% modulation			
Optional external speaker output	10W (into 4 ohm)			

## MILITARY STANDARDS 810 C,D,E AND F

Applicable MIL-STD	Method	Procedure	Procedure
	25/30/35/50/110W	25/30/35/50W	110W
Low pressure	500.4	2	2
High temperature	501.4	1, 2	2
Low temperature	502.4	1, 2	2
Temperature shock	503.4	1	1
Solar radiation	505.4	1	–
Rain	506.4	1, 3	3
Humidity	507.4	1	–
Salt fog	509.4	1	1
Dust	510.4	1	1
Vibration	514.5	1	1
Shock	516.5	1, 6	6

## REGULATORY DATA

USA	VHF	CFR 47 Parts 22, 74, 90, 95J, 90.210	
	UHF	CFR 47 Parts 22, 74, 90, 95A, 90.210	
	800MHz	CFR 47 Parts 22, 90	
Canada		RSS-119	
Europe		EN300 086, EN300 113, EN301 489, EN60950	
Australia/New Zealand		AS/NZ54295	
Type approval		FCC	Industrie Canada NTIA
25W	VHF	CASTMAB1E	737A-TMAB1E
	UHF	CASTMAH5E	737A-TMAH5E
		CASTMAH6E	737A-TMAH6E
		CASTMAK5F	737A-TMAK5F
30/35W	UHF		
40W	UHF		350-400MHz*** 380-420MHz***
		CASTMAH5F	n/a
		CASTMAH7F	n/a
50W	VHF	CASTMAB1F	n/a 136-174MHz***
110W (ERFPA)	VHF	CASTMAB1Z	n/a
Emission designators		10K0F1D, 10K0F1E, 10K0F7D, 10K0F7E, 11K0F3E, 12K7F1D, 16K0F3E, 6K60F2D, 7K70F1D, 8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 9K60F2D	

### Authorized Partners

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.

\*\*\*Tait confirms that this product model conforms with NTIA requirements.  
\*\*\*\*Receiver preamplifier installed.

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