TM9800 MULTIBAND MOBILES

FLEXIBLE, RELIABLE, MULTI-AGENCY COOPERATION

Multiple bands. One mobile. Customized for you. Increase worker safety and productivity across multiple radio networks and frequency bands with the TM9800 Multiband Mobile Radio, designed for maximum versatility, reliability and interoperability.

tait communications

Tait TM9000 mobile radios have a wide range of control heads, microphones, speakers and installation kits to suit avariety of different vehicles and types of operation. Refer to the TM9000 Control Heads Datasheet for all options.

The Hand Held Control Head (HHCH) option puts all functions in the palm of your hand with easy, flexible installation and is available in a range of colors..

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SEAMLESS MULTIBAND PERFORMANCE

The TM9800 Multiband Mobile is configurable to operate on any combination of 136-174MHz or 378-520MHz. Flexible and simple ordering and deployment of single band or multiband operation at time of purchase, or subsequently over the air. Bands are not locked and can be reconfigured.

MAXIMUM CONNECTIVITY

Connect to the range of networks in current operations or future technology migrations: Conventional Analog, P25 Conventional Digital, P25 Trunking Phase 1 and Phase 2.

Broadband data options boost operational performance with edge computing, applications, WiFi vehicle area networks and LTE connectivity.

Analog signaling options include Two Tone decode, MDC1200, PL (CTCSS), DPL (DCS), and Selcall.

PROVEN P25 INTEROPERABILITY

Enable multi-agency response and multi-vendor compatibility for voice, data and encryption methods – the TM9800 is designed to meet TIA-102 P25 Compliance Assessment Program requirements.

ENHANCED WORKER SAFETY

Lone Worker feature included as standard to send automated safety alerts and can combine with location data and Tait GeoFencing software options to guide an effective response. The programmable Emergency key can also send these safety alerts manually.

- The LCH supports covert microphone operation.
- Supports end-to end encryption, including AES encryption.
- Blast Alarms and Audible Alerts on P25 conventional and Selcall channel.

EFFECTIVE OPERATIONS WITH VOICE AND DATA

- Pre-set status messages
- Supports conventional and trunked IP data and P25 data such as GNSS location.
- Location services over conventional and trunked networks. Internal and external GNSS options available (refer to product catalog).

DESIGNED FOR DEMANDING ENVIRONMENTS

IP54 rated for protection against dust and splashing water, exceeds MIL-STD-810G for reliable operation in a range of environmental conditions such as the vibrations of a vehicle installation and low/high temperature extremes.

EFFICIENT, SECURITY-FOCUSED MANAGEMENT

Over-the-air-programming (OTAP) with Tait EnableFleet configuration management system delivers software and firmware changes over the Tait P25 Trunked radio network or WiFi, (when WiFi OTAP option is fitted) making it faster, easier and more affordable to update and optimize the performance of radios in your fleet.

Compatible with Tait EnableProtect Advanced System Key to allow administrators to authorize and restrict subscriber units on their network.

Encryption Management options include Tait EnableProtect Key Management Facility (KMF) supporting OTAR (Over-the-air Rekeying) and Tait EnableProtect Key Fill Device (KFD) for quick, reliable encryption key programming.

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TECHNICAL SPECIFICATIONS

TAIT TOUGH

GENERAL	
Frequency stability	±0.5ppm (-22°F to +140°F/-30°C to +60°C)
Channels/zones	1,000 channels/50 zones (2,000 channels/100 zones optional enhancement with software license)
Talk groups	1000 talk groups, up to 1,000 members total (2,000 members optional enhancement with software license)
Scan groups	300 with up to 50 members each, maximum of 2,000 members total
Power supply	10.8-16VDC
Active standby current	0.15A
Channel spacing	12.5/15/20/25/30kHz
Frequency increment	2.5/3.125/5/6.25
Dimensions (DxWxH) - Large Control Head	1.38 x 7.24 x 2.8in (35x 184 x 71mm)
- Radio Body	6.9 x 6.3x 2.1in (175x 160 x 52mm)
Weight - Large Control Head	0.73lb (0.33kg)
- Radio Body	2.6lb (1.2kg)
Supported Languages	English, German, French, Spanish, Portuguese, Czech, Polish, Bulgarian
Operating temperature	-22°F to +140°F (-30°C to +60°C)
Water and dust protection	IP54
RF connector	50 ohm BNC
Interface connectors	3 programmable interface connectors providing serial ports and GPIO lines for radio and accessory control, and audio connectivity
Signaling options (analog)	MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS), Selcall

TRANSMITTER	VHF	UHF
(Note – Radio can be configured to operate on any combination of the supported bands)		
Frequency range	136-174MHz	378-520MHz
Transmit power	25W, 10W, 5W, 1W	25W, 10W, 5W, 1W
Transmit current	4.5A max	4.5A max
Modulation limiting		
12.5/15kHz channel	±2.5kHz	2.5kHz
25/30kHz channel	±5kHz	±5kHz
FM hum and noise (Analog)		
12.5kHz channel	-45dB	-40dB
25kHz channel	-48dB	-45dB
Radiated and conducted emissions	-80dBc	-80dBc
Audio response (Analog)	+1/-3dB	+1/-3dB
Audio distortion (Analog)	1 .5% @ 1kHz, 60% deviation	
Duty cycle	25W: 2min Tx, 4min Rx for 8 hrs @ +140°F (+60°C) 5W: continuous @ +104°F (+40°C)	

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TECHNICAL SPECIFICATIONS continued

RECEIVER	VHF	UHF
(Note – Radio can be configured to operate on any combination of the supported bands)		
Frequency range	136-174MHz	378-520MHz
Sensitivity (analog) 12dB SINAD (TA-603I)	0.22uV (-121dBm)	0.22uV (-120dBm)
Sensitivity (P25) 5% BER	0.22uV (-121dBm)	0.22uV (-120dBm)
Intermodulation rejection (P25) TIA-102	78dB	75dB
Adjacent channel rejection		
12.5kHz (P25) TIA-102	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB
Spurious response rejection (P25) TIA-102	80dB	80dB
Residual audio noise ratio (P25) TIA-102	45dB	45dB
FM hum and noise (Analog)		
12.5kHz channel	-45dB	-40dB
25kHz channel	-48dB	-45dB
Audio distortion (3W rated audio)	1.5%at 1kHz 60%modulation	
Optional external speaker output	10W (into 4 ohm)	

MILITARY STANDARDS 810C, D, E, F, and G#					
Applicable MIL-STD	Method	Procedure	Applicable MIL-STD	Method	Procedure
Low pressure	500.5	2	Humidity	507.5	2
High temperature	501.5	1, 2	Salt fog	509.5	1
Low temperature	502.5	1, 2	Sand & Dust	510.5	1, 2
Temperature shock	503.5	1	Vibration	514.5	1
Solar radiation	505.5	1	Shock	516.5	1, 4, 5, 6
Rain	506.5	1, 3			

REGULATORY DATA	AUSTRALIA/NEW ZEALAND (AS/NZ)
VHF (136-174MHz)	✔
UHF (378-520MHz)	✔ *

* The 25W UHF band radios areapproved for use in Citizen Band in Australia and New Zealand when programmed to meet the requirements of AS/NZS4365.
# Designed to meet MIL Standards. Compliance pending.

QUALIFICATIONS

Quality Management ISO 9001

Environment Management ISO 14001:2015

Occupational Health & Safety Management ISO 45001:2018

Tait has taken every care in compiling this brochure, but we're always innovating and therefore changes to our models, designs, technical specifications, visuals and other information included in this brochure could occur. For the most up-to-date information and for a copy of our terms and conditions please visit our website www.taitcommunications.com

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