



TP8100

SPECIFICATIONS



TP8100 TRUNKED AND CONVENTIONAL PORTABLE RADIOS

Uncompromising build quality and sleek mechanical design make this reliable and waterproof portable radio ideal for situations when only the toughest will do. Available in either trunked or conventional, the TP8100 is sure to suit as a standalone portable or within a wider system solution.

Tough, reliable and waterproof

- Tough enough to withstand the harshest environments; engineered to exceed IP67 sealing: zero dust ingress and immersible in 3.28 feet (one metre) of water for 30 minutes
- Light and easy to carry: only 12 ounces with Li-Ion battery
- Top-mounted, easy-to-find programmable emergency key and Lone Worker capability improves worker safety
- Up to 350 conventional channels with CTCSS/DCS, Selcall, Two Tone Decode (Type 99), MDC1200, G-Star (Encode) and voting/scanning
- Trunked MPT features include multiple call types: individual/group/PABX/interfleet and short data messages, including MPT Talker Identification
- Swipe contacts, battery-only or battery-on-radio charging, desktop fast chargers provide efficient battery management
- Ease of programming enables efficient and rapid customization
- All models are available with red, yellow or orange front panels, in addition to the standard black.

Engineered to be tough

Exceeds MIL-STD 810 C, D, E and F and rated waterproof to IP67, delivering communications you can trust.

High quality manufacture

Two-shot molded construction lengthens product life and lowers cost of ownership.

Superb mechanical design

Ergonomic design contributes to a positive user experience.

Messaging capabilities

Stay in touch with 16 character user defined messages (TP8120/TP8140) or predefined status messaging on all display models.

Long shift life

Powerful Li-Ion battery comes as standard delivering over eleven hours shift life. An optional high performance 2500mAh Li-Ion battery is available.

Comprehensive accessory suite

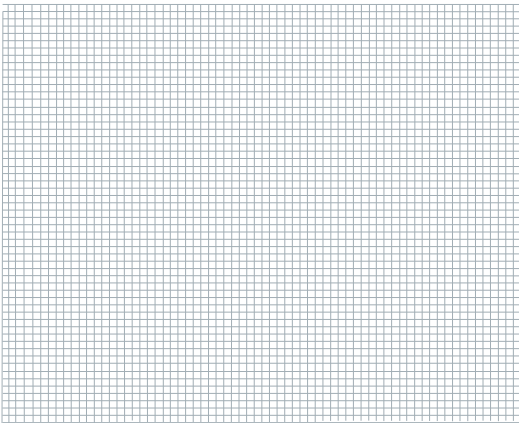
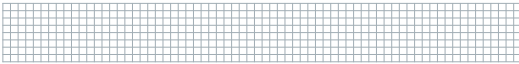
Complement your Tait radio with a range of high performance accessories.

Voice security

Secure your voice communications with software voice inversion as standard, or the high security encryption options board.

Worker Safety

Man Down, Lone Worker and Intrinsically Safe capabilities offer peace of mind for workers in isolated or hazardous situations.



ISO 9001
ISO 14001

All measurements conducted using TIA-603-C-1 testing method except those marked † which use EN 300 086-1 testing method.

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 communication products.

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.

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AUTHORIZED DEALER

TP8100 Specifications

General

Frequency Range	VHF 136-174MHz 174-225MHz	UHF 350-400MHz 400-470MHz 450-530MHz	800/900MHz 806-870MHz 896-941MHz
Frequency Increments	2.5kHz, 5kHz, 6.25kHz	5kHz, 6.25kHz	
Channel Spacing	12.5kHz, 20kHz, 25kHz	12.5kHz, 20kHz, 25kHz	
Frequency Stability	±2ppm (-22° to 140°F/-30° to 60°C)		
Signalling Format	Conventional Conventional Trunked		
Presets	CTCSS/DCS, Two Tone Encode (Type 99), Selcall, MDC1200, G-Star (Encode) MPT 1327, CTCSS, DCS (Tx only)		
Operational Temperature	-22° to 140°F (-30° to 60°C)		
Sealing	IP67		

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, 4

* ALSO MEETS EQUIVALENT SUPERSEDED MIL-STD 810 C, D, AND E

User Interface

	with Li-Ion 2000mAh battery	with Li-Ion 2500mAh battery
Dimensions (WxHxD) with Li-Ion 2000mAh battery	2.4 x 5.12 x 1.57in (61 x 130 x 40mm)	2.4 x 5.12 x 1.77in (61 x 130 x 45mm)
Weight (with Li-Ion 2000mAh battery)	12.13oz (344g)	12.87oz (365g)
Interfaces	Menu driven user interface 24 character LCD display Three programmable function keys - includes emergency button Two rubber knobs (volume and channel selection) Side-mounted accessory connector Large Push-To-Talk button Stainless steel antenna connector	

Transmitter

	136-174Mhz	174-255MHz	350-400MHz	400-470MHz
RF Output Power	5W, 2.5W, 1W	5W, 2.5W, 1W	4W, 2.5W, 1W	4W, 2.5W, 1W
Modulation Limiting 12.5/20/25kHz channel	±2.2/±3.8/±4.4kHz	±2.2/±3.8/±4.4kHz	±2.2/±3.8/±4.4kHz	±2.2/±3.8/±4.4kHz
FM Hum and Noise 12.5/20/25kHz channel	40/44/46dB	42/45/47dB	42/44/46dB	37/41/43dB
Conducted Emissions	-39dBm	-40dBm	-40dBm	-38dBm
Audio response	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB
Audio Distortion at 1kHz with 60% modulation	0.3%	0.3%	0.6%	0.5%

450-530MHz 806-870MHz 896-941MHz

	450-530MHz	806-870MHz	896-941MHz
RF Output	4W, 2.5W, 1W	3W, 2W, 1W	3W, 2W, 1W
Modulation Limiting 12.5/20/25kHz channel	±2.2/±3.8/±4.4kHz	±2.2/±3.8/±4.4kHz	±2.2/±3.8/±4.4kHz
FM Hum and Noise 12.5/20/25kHz channel	37/41/43dB	39/44/45dB	40/44/46dB
Conducted Emissions	-38dBm	-33dBm	-33dBm
Audio Response	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB
Audio Distortion at 1kHz with 60% modulation	0.5%	0.5%	0.5%
Duty Cycle (all bands)	1min Tx, 4min Rx (20%)		

Receiver

	136-174MHz	174-255MHz	350-400MHz	400-470MHz
Sensitivity (Specification) NB/WB channel	(12dB SINAD) -119.5/-119.5dBm	(12dB SINAD) -119.3/-119.2dBm	(12dB SINAD) -120.4/-120.3dBm	(12dB SINAD) -119.4/-119.4dBm
Intermodulation Rejection NB/MB/WB channel	74.3/75.4/75.4dB	72.8/71.2/74.1dB	74.9/75.1/75.4dB	73.5/74.8/75.1dB
Adjacent Channel Selectivity 12.5/20/25kHz channel	68.0/73.5/76.4dB	68.4/70.6/72.5dB	66.7/70.7/74.6dB	67.0/73.1/73.5dB
Spurious Response Rejection NB/WB channel	71.9/75.9dB†	75.5/72.2dB†	77.4/77.8dB†	71.8/72.7dB†
FM Hum and Noise† 12.5/20/25kHz channel	40/44/45dB	40.4/41.6/46.1dB	41/43/46dB	37/41/43dB
Audio Response	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB
Audio Distortion at Rated Audio	2%	2.3%	1.5%	3.2%

450-530MHz 851-870MHz 935-941MHz

	450-530MHz	851-870MHz	935-941MHz
Sensitivity (Specification) NB/WB channel	(12dB SINAD) -119.7/-119.6dBm	(12dB SINAD) -120.1/-120.5dBm	(12dB SINAD) -119.3/-119.3dBm
Intermodulation Rejection NB/MB/WB channel	74.3/75.4/75.8dB	75.3/75.8/78.2dB	75.4/76/77.1dB
Adjacent Channel Selectivity 12.5/20/25kHz channel	65.2/71.9/74.5dB	64.6/72.2/75.8dB	64.3/72.4/73.3dB
Spurious Response Rejection NB/WB channel	71.4/72.5dB†	66.1/66.9dB	76.7/76.7dB
FM Hum and Noise† 12.5/20/25kHz channel	36/40/42dB	37/40.3/43dB	37/40.6/43dB
Audio Response	+0.5, -2.5dB	+0.5, -2.5dB	+0.5, -2.5dB
Audio Distortion at Rated Audio	3.5%	1.5%	2.2%

Battery and Charger

Battery	Li-Ion 2000mAh Li-Ion 2500mAh Li-Ion 2000mAh Intrinsically Safe**	Shift life (5/5/90) > 11 hours Shift life (5/5/90) > 14 hours Shift life (5/5/90) > 11 hours
Charger Options	Desktop fast charger Multi-way charger	

**Must be used on an Intrinsically Safe TP8100 portable and is Factory Mutual approved. Please see the TP8100 Intrinsically Safe Specification Sheet for details.

