TP8100
SPECIFICATIONS

Tough, reliable and waterproof.

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.

KEY FEATURES

- 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

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FEATURES AND BENEFITS

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 2400mAh 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 and Lone Worker capabilities offer peace of mind for workers in isolated or hazardous situations.

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GENERAL

	VHF	UHF	800/900MHz
Frequency Range	136-174MHz 174-225MHz	350-400MHz 400-470MHz 450-530MHz	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 (-22º to 140ºF/-30º to 60ºC)		
Signalling Format Conventional Trunked	CTCSS/DCS, Two Tone Encode (Type 99), Selcall, MDC1200, G-Star (Encode) MPT 1327, CTCSS, DCS (Tx only)		
Presets	**Conventional** TP8110 16 channels TP8115 128 channels TP8120 350 channels	**Trunked** TP8135 100 Alphanumeric Presets TP8140 100 Alphanumeric Presets	
Operational Temperature	-22º to 140ºF (-30º to 60ºC)		
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

TRANSMITTER

	136-174Mhz	174-255MHz	350-400MHz	400-470MHz
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	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**	
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%)			

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BATTERY AND CHARGERS

Battery	Li-Ion 1880mAh	Shift life (5/5/90) > 11 hours
	Li-Ion 2400mAh	Shift life (5/5/90) > 14 hours
Charger Options	Desktop fast charger	
	Multi-way charger	

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**	
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%	

USER INTERFACE

	with Li-ion 1880mAh battery	with Li-ion 2400mAh battery
Dimensions (WxHxD) with Li-Ion 1880mAh 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 1880mAh 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	

Authorized Partners

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For further information please check with your nearest Tait office or authorized dealer.

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Tait Limited facilities are certified for ISO 9001:2008 (Quality Management System), ISO 14001:2004 (Environmental Management System) and ISO 18001:2007 (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 ISO 9001:2008.

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