

# TP8100

SPECIFICATIONS



TP8110

TP8115/35

TP8120/40

## 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 one metre of water for 30 minutes
- Light and easy to carry: only 344 grams 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 and voting/scanning
- Trunked MPT features include multiple call types: individual/group/PABX/interfleet and short data messages
- Swipe contacts, battery-only or battery-on-radio charging, desktop fast chargers provide efficient battery management
- Ease of programming enables efficient and rapid customisation

### 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 moulded 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.

### Comprehensive accessory suite

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

# TP8100 Specifications

## General

|                         |   |   |
|-------------------------|---|---|
| Frequency Range         | <b>VHF</b><br>136–174MHz                                  | <b>UHF</b><br>400–470MHz<br>450–530MHz                    |
| Channel Increments      | 2.5kHz, 5kHz, 6.25kHz                                     | 5kHz, 6.25kHz   |
| Channel Spacing         | 12.5kHz, 20kHz, 25kHz                                     | 12.5kHz, 20kHz, 25kHz                                     |
| Frequency Stability     | ±2ppm (-30°C to +60°C/-22°F to 140°F)                     |   |
| Signalling Format       | CTCSS/DCS, Selcall  |   |
| Conventional            | MPT 1327, CTCSS, DCS (Tx only)                            |   |
| Trunked                 |   |   |
| Presets                 |   |   |
| Conventional            | TP8110 16 Channels  | TP8115 128 Channels                                       |
| Trunked                 | TP8120 350 Channels                                       | TP8135 100 Alphanumeric Presets (10 Channel Conventional) |
|                         | TP8140 100 Alphanumeric Presets (10 Channel Conventional) |   |
| Operational Temperature | -30° to 60°C (-22° to 140°F)                              |   |
| 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 & E.

## User Interface

|                     |   |
|---------------------|---|
| Dimensions (WxHxD)  | 62 x 130 x 40mm (2.4 x 5.12 x 1.57in)   |
| Weight              |   |
| with Li-Ion 2000mAh | 344gm (12.13oz)   |
| Interfaces          | Menu driven user interface<br>24 character LCD display<br>Three programmable Function keys - includes emergency button<br>Two rubber knobs (volume & channel selection)<br>Side-mounted accessory connector<br>Large Push-To-Talk button<br>Stainless steel antenna connector |

## Transmitter\*

|  | 136–174MHz                           | 400–470MHz               | 450–530MHz             |
|--|--------------------------------------|--------------------------|------------------------|
| RF Output Power                                  | 5W, 2.5W, 1W                         | 4W, 2.5W, 1W             | 4W, 2.5W, 1W           |
| Modulation Limiting                              |                                      |                          |                        |
| 12.5kHz channel                                  | ±2.5kHz                              | ±2.5kHz                  | ±2.5kHz                |
| 20kHz channel                                    | ±4.0kHz                              | ±4.0kHz                  | ±4.0kHz                |
| 25kHz channel                                    | ±5.0kHz                              | ±5.0kHz                  | ±5.0kHz                |
| FM Hum & Noise (TIA-603-C test method)           |                                      |                          |                        |
| 12.5kHz channel                                  | > 40dB                               | > 36dB                   | > 36dB                 |
| 20kHz channel                                    | > 44dB                               | > 41dB                   | > 41dB                 |
| 25kHz channel                                    | > 46dB                               | > 42dB                   | > 42dB                 |
| Conducted Emissions                              | < -39dBm (<1GHz)<br>< -46dBm (>1GHz) | < -40.6dBm<br>< -40.0dBm | < -39dBm<br>< -40.0dBm |
| Audio Response                                   | +0.5, -2.5dB                         | +0.5, -2.5dB             |                        |
| Audio Distortion at 1kHz with <2% 60% modulation | < 0.3%                               | < 0.5%                   | < 0.5%                 |
| Duty Cycle                                       | 1min Tx, 4min Rx (20%)               |                          |                        |

## Receiver\*

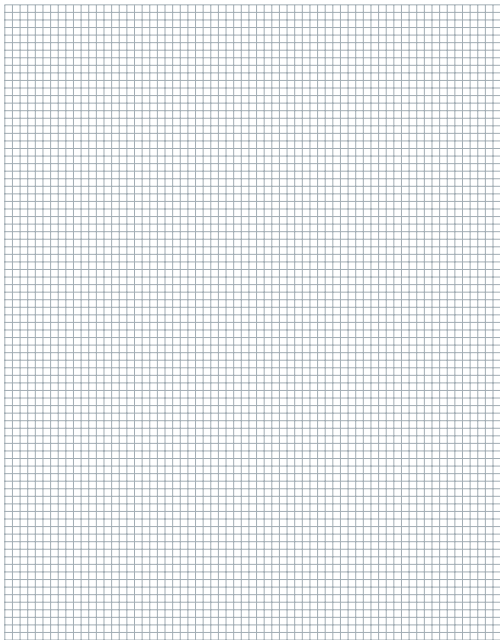
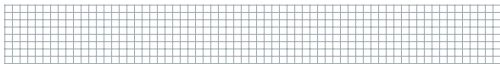
|  | 136–174MHz   | 400–470MHz   | 450–530MHz   |
|--|--------------|--------------|--------------|
| Sensitivity 20dB (Phospho)             |              |              |              |
| NB Channel                             | < -113.5dBm  | < -115.5dBm  | < -115.3dBm  |
| MB Channel                             | < -117.0dBm  | < -117.8dBm  | < -118.0dBm  |
| WB Channel                             | < -117.0dBm  | < -118.4dBm  | < -118.4dBm  |
| Intermodulation Rejection              |              |              |              |
| NB Channel                             | > 67.6dB     | > 67.4dB     | > 67.4dB     |
| MB Channel                             | > 68.6dB     | > 67.9dB     | > 68.3dB     |
| WB Channel                             | > 68.7dB     | > 68.1dB     | > 68.4dB     |
| Adjacent Channel Selectivity           |              |              |              |
| 12.5kHz channel                        | > 67.4dB     | > 67.7dB     | > 65.4dB     |
| 20kHz channel                          | > 72.9dB     | > 73.8dB     | > 72.2dB     |
| 25kHz channel                          | > 76.4dB     | > 76.1dB     | > 75.1dB     |
| Spurious Response Rejection            |              |              |              |
| NB Channel                             | > 71.9dB     | > 71.8dB     | > 71.4dB     |
| WB Channel                             | > 75.9dB     | > 72.7dB     | > 72.5dB     |
| FM Hum & Noise (TIA-603-C test method) |              |              |              |
| 12.5kHz channel                        | >40dB        | >37dB        | >36dB        |
| 20kHz channel                          | >44dB        | >41dB        | >40dB        |
| 25kHz channel                          | >45dB        | >43dB        | >42dB        |
| Audio Response                         | +0.5, -2.5dB | +0.5, -2.5dB | +0.5, -2.5dB |
| Audio Distortion @ Rated Audio         | < 2%         | < 3.2%       | < 3.5%       |

## Battery

|         |  |
|---------|--|
| Battery | Li-Ion 2000 mAh<br>Shift life (5/5/90) >11 hours |
|---------|--|

## Charger

|                 |   |
|-----------------|---|
| Charger Options | Desktop fast charger<br>Multi-way charger |
|-----------------|---|



All measurements use EN 300 086-1 unless stated otherwise.

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 communications 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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