TP9600
SPECIFICATIONS

Instant, reliable communications is just the beginning.

First responders around the world trust Tait for multi-agency coordination in the most challenging environments. TP9600 portables enhance the user experience with a color screen, louder, clearer audio, and more ergonomic controls, all built Tait Tough for critical communications. WiFi connectivity can be used for easy, advanced fleet management.

KEY FEATURES

Exceptional Audio
• P25 AMBE+2 enhanced digital vocoder
• Digital noise suppression software
• Dual-mic active noise cancellation
• Large, powerful 3W speaker

Connectivity Options
• Conventional Analog
• P25 Conventional Digital
• P25 Phase 1 Digital Trunking
• P25 Phase 2 Digital Trunking
• WiFi OTAP capability
• Bluetooth audio

Enhanced Worker Safety
• Programmable Emergency Key
• Man Down and Lone Worker modes
• Integrated GPS
• Location Services and GeoFencing options

Enhanced User Experience
• Large high resolution color screen
• Ergonomic design, user friendly controls
• Fleet management software

Built Tait Tough
• IP65 & IP68 Dust and Waterproof
• Shock absorbing corner protection
• Drop test exceeds MIL-STD-810G
• Water shedding grille

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FEATURES AND BENEFITS

Enhanced user experience

The TP9600 is designed for easy use in emergency situations
- Large, color screen for increased clarity of messaging
- Loud, powerful 3W speaker to hear over background noise
- Dual mic active noise cancellation removes background noise in analog and digital modes
- Digital noise suppression software enhances voice
- Accessory Active Noise cancellation to enhance transmit audio clarity
- Bluetooth® connectivity for wireless voice accessories
- Ergonomic, user friendly design and easy to use controls
- Four programmable function keys and three-way selector
- Tailor your experience with wide range of accessory options

P25 choice and interoperability

Benefit from the spectral efficiency, multi-agency response, multi-vendor interoperability, security, migration and data capability demanded by the P25 standards
- TIA-102 P25 CAP tested and certified, providing multi-vendor interoperability
- P25 Phase 1 and Phase 2 Options

Extensive network capabilities

- Future proof multi-mode flexibility
- Automatic dual mode between analog and P25 Phase 1 conventional
- Support for a variety of analog and digital simulcast modes, including LSM and C4FM
- Voting ensures priority selection of the channel with optimum receive quality
- Dynamic regrouping and supergroup operation for mission critical workforce management
- Increased channel capacity with up to 2,000 channels
- Scanning modes include: priority, dual priority, editable, zone, and background scan
- Range of analog signaling functionality, i.e. MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS), S-Tone Selcall
- Trunked failsoft: reverts to conventional operation during trunked network failure
- Pre-set status messages
- Conventional and trunked IP data

Personalization Options

- Custom label printing tools
- Black, red, yellow, orange, and hi-visibility green color options for easy identification in the field

Improve workforce safety

- Programmable emergency key is easily accessible and highly visible
- Man Down and Lone Worker
- Integrated GPS option for Location Services
- Tait GeoFencing option for automated location based behavior

Tait EnableFleet industry leading configuration management system

- Total visibility of your fleet from a secure, central point of control
- Wired connection or Over-the-air-programming (OTAP) to update configuration and software files
- OTAP via P25 trunked networks
- WiFi OTAP capability, independent of LMR mode (analog or digital, conventional or trunked)

Secure Communications

- Radio inhibit and uninhibit to allow management of misplaced or stolen radios
- Supports end-to-end encryption, including AES and DES algorithms
- FIPS 140-2 certified encryption module
- Tait EnableProtect KeyFill Device, Key Management Facility, and Over The Air Rekeying
- Tait EnableProtect Advanced System Key ensures only authorized personnel can access radio software & configuration

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Not all features are supported in all models or modes of operation. Contact Tait or an authorized channel partner for more details.
### General

- **Frequency stability**: ±0.5 ppm (-22°F to -140°F/ -30°C to +60°C)
- **Channels/zones**: 2,000 channels/700 zones
- **Talk groups**: 1,000 talk groups, up to 2,000 members total
- **Scan groups**: 300 with up to 10 members each, maximum of 2,000 members total
- **Encryption (via Key-Fill Device or OTAR)**
  - FIPS Certified 256-bit AES: Supported (P25 Operation)
  - DES: Supported (P25 Operation)
  - ARC4: Supported (P25 Operation)
  - OTAP*: Supported (P25 Trunking)
- **Dimensions (DxWxH)**
  - With Li-Ion Slimline battery: 161 x 256 x 57.1 mm (6.3 x 10 x 2.2 inches) excluding knobs
  - With Li-Ion Performance battery: 177 x 256 x 57.1 mm (7 x 10 x 2.2 inches) excluding knobs
- **Weight**
  - With Li-Ion Slimline battery: 11.75 oz (333 g) – no antenna
  - With Li-Ion Performance battery: 13.02 oz (369 g) – no antenna
- **Channel Spacing**: 2.5 kHz/125 kHz/ 25/30 kHz
- **Frequency increment**: 1 kHz/ 2.5 kHz
- **Radio Operating temperature**: -22°F to +140°F (-30°C to +60°C)
- **Water and dust protection**: IP68 & IP65
- **Audio Output**: 3W
- **Signaling options (analog)**: MDC1200 encode and decode, Two Tone decode, PL (CTCSS), DPL (DCS), 5-Tone Select
- **Vocoder type**: AMBE +2™

### Transmitter

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
<th>700/800MHz*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>136-174 MHz (B1)</td>
<td>378-470 MHz (B1)</td>
<td>757-870 MHz (K5)</td>
</tr>
<tr>
<td><strong>Output power</strong></td>
<td>5W, 3W, 2W, 1W</td>
<td>4W, 2.5W, 2W, 1W</td>
<td>3W, 2.5W, 2W, 1W</td>
</tr>
<tr>
<td><strong>Modulation limiting</strong></td>
<td>±2.5 kHz</td>
<td>±2.5 kHz</td>
<td>±2.5 kHz</td>
</tr>
<tr>
<td><strong>FM hum and noise</strong></td>
<td>±5 kHz</td>
<td>±5 kHz</td>
<td>±5 kHz</td>
</tr>
<tr>
<td><strong>12.5 kHz channel</strong></td>
<td>-45 dB</td>
<td>-45 dB</td>
<td>-40 dB</td>
</tr>
<tr>
<td><strong>25 kHz channel</strong></td>
<td>-48 dB</td>
<td>-48 dB</td>
<td>-45 dB</td>
</tr>
<tr>
<td><strong>Radiated and conducted emissions</strong></td>
<td>-76 dB</td>
<td>-78 dB</td>
<td>-75 dB</td>
</tr>
<tr>
<td><strong>Audio response (analog)</strong></td>
<td>+1/-3 dB</td>
<td>+1/-3 dB</td>
<td>+1/-3 dB</td>
</tr>
<tr>
<td><strong>Audio distortion (analog @1KHz, 60% mod)</strong></td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Receiver**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
<th>700/800MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>136-174 MHz (B1)</td>
<td>378-470 MHz (B1)</td>
<td>757-770 MHz, 851-870 MHz (K5)</td>
</tr>
<tr>
<td><strong>Sensitivity (analog)</strong></td>
<td>0.22 μV (-120 dBm)</td>
<td>0.22 μV (-120 dBm)</td>
<td>0.22 μV (-120 dBm)</td>
</tr>
<tr>
<td><strong>Sensitivity (P25)</strong></td>
<td>0.2 μV (-121 dBm)</td>
<td>0.2 μV (-121 dBm)</td>
<td>0.2 μV (-121 dBm)</td>
</tr>
<tr>
<td><strong>Intermodulation rejection (P25) TIA-102</strong></td>
<td>75 dB</td>
<td>75 dB</td>
<td>75 dB</td>
</tr>
<tr>
<td><strong>Adjacent channel rejection</strong></td>
<td>60 dB</td>
<td>60 dB</td>
<td>60 dB</td>
</tr>
<tr>
<td><strong>25 kHz TIA-603 (2-tone)</strong></td>
<td>70 dB</td>
<td>70 dB</td>
<td>65 dB</td>
</tr>
<tr>
<td><strong>Spurious response rejection (P25) TIA-102</strong></td>
<td>75 dB</td>
<td>80 dB</td>
<td>70 dB</td>
</tr>
<tr>
<td><strong>Residual audio noise ratio (P25) TIA-102</strong></td>
<td>45 dB</td>
<td>45 dB</td>
<td>45 dB</td>
</tr>
<tr>
<td><strong>Audio distortion (rated audio)</strong></td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>FM hum and noise (analog)</strong></td>
<td>-45 dB</td>
<td>-40 dB</td>
<td>-40 dB</td>
</tr>
<tr>
<td><strong>12.5 kHz channel</strong></td>
<td>-48 dB</td>
<td>-45 dB</td>
<td>-45 dB</td>
</tr>
</tbody>
</table>

*Contact Tait for advice on WiFi OTAP capability

**Rated audio (for performance testing) 0.5W

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TP9600
SPECIFICATIONS

MILITARY STANDARDS 810G

<table>
<thead>
<tr>
<th>Applicable MIL-STD</th>
<th>Method</th>
<th>Procedure</th>
<th>Applicable MIL-STD</th>
<th>Method</th>
<th>Procedure</th>
</tr>
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<tbody>
<tr>
<td>Low pressure</td>
<td>5005</td>
<td>2</td>
<td>Humidity</td>
<td>5075</td>
<td>2</td>
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<tr>
<td>High temperature</td>
<td>5015</td>
<td>1.2</td>
<td>Salt fog</td>
<td>5095</td>
<td>1</td>
</tr>
<tr>
<td>Low temperature</td>
<td>5025</td>
<td>1.2</td>
<td>Sand &amp; Dust</td>
<td>5105</td>
<td>1, 2</td>
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<tr>
<td>Temperature shock</td>
<td>5085</td>
<td>1</td>
<td>Immersion</td>
<td>5125</td>
<td>1</td>
</tr>
<tr>
<td>Solar radiation</td>
<td>5055</td>
<td>1</td>
<td>Vibration</td>
<td>5145</td>
<td>1</td>
</tr>
<tr>
<td>Rain</td>
<td>5065</td>
<td>1.3</td>
<td>Shock</td>
<td>5166</td>
<td>1, 4, 5, 6</td>
</tr>
</tbody>
</table>

BATTERY

P25 Phase 2 / TDMA Mode Shift Life (5/5/90)
- Li-ion Performance: 18 hours
- Li-ion Slimline: 14 hours

Analogue and P25 Phase 1 / FDMA Mode Shift Life (5/5/90)
- Li-ion Performance: 14 hours
- Li-ion Slimline: 11 hours

CHARGER

Charger options (Li-ion) Fast desktop single charger, 6-way multi charger, vehicle charger and battery only vehicle charger

REGULATORY DATA

<table>
<thead>
<tr>
<th>USA</th>
<th>CANADA</th>
<th>EUROPE</th>
<th>AUSTRALIA/NEW ZEALAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHF (136-174MHz)</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>2014/53/EU</td>
</tr>
<tr>
<td>UHF (370-470MHz)</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>2014/53/EU</td>
</tr>
<tr>
<td>UHF (650-520MHz)</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>2014/53/EU</td>
</tr>
<tr>
<td>700/800 MHz</td>
<td>CFR 47</td>
<td>RSS-119</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Designators</td>
<td>11KOF3E, 16KOF3E, 8K60F2D, 7K80F2D, 9K60F2D, 10K8F2D, 7K60FXW, 8K10F1E, 8K10F1D, 8K10F1W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Wideband operation is not available in the USA in some bands
2. The UHF band radios are approved for use in Citizen Band in Australia and New Zealand when programmed to meet the requirements of AS/NZ5438S
3. Operational shift life is dependent on model, frequency, temperature and use. Rated audio for shift-life testing is 0.5W
4. Intended compliance data

TAIT P25 PHASE 2 SOLUTION

Backed up by our proven radio network expertise, the TP9600 portable is part of our larger P25 Phase 2 offering. This solution consists of radios, infrastructure, applications, services and integration with third party interfaces to ensure that your organization can reap all the benefits of the spectrally-efficient P25 standard.

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

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

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Environmental Management ISO 14001
Occupational Health & Safety Management ISO 45001