



## DESIGNED FOR DEMANDING ENVIRONMENTS

### KEY FEATURES

Ruggedized to exceed MIL-STD 810G specifications and IP68 full protection against immersion and harsh environments

Multi-mode operation supports analog and digital modes, simplifying migration from analog technologies

Man Down, Lone Worker function and GPS location services enhance personnel safety and effectiveness

Over-The-Air-Programming and Over-The-Air-Rekeying capabilities support advanced and efficient fleet management

# TP9400 PORTABLE P25 PHASE 2 CAPABLE RADIO

The Harris TP9400 is a compact and feature-rich portable, delivering reliable mission-critical communications for First Responders in demanding environments.

Equipped with an internal GPS for location services, this P25 radio also features Bluetooth® wireless technology for accessory connectivity. Additional Man Down, Lone Worker and AES encryption ensure emergency responders' status is always known and communications stay secure.

Ruggedized to exceed MIL-STD-810G standards for hazardous environments, the TP9400 includes IP68 sealing protection from immersion and

shock-absorbing, impact-protected corners. The radio's water-shedding grille preserves voice clarity in wet conditions.

This P25 radio eases the transition from analog technologies to more spectrally efficient digital technologies including P25 Phase 2 TDMA trunking.

The TP9400 comes in a variety of colors and includes a premium Li-Ion battery for 12 hours of shift life.

\*Not all features are supported in all models or modes of operation. Contact Harris or an authorized channel partner for more details.



## FEATURES AND BENEFITS

### Ruggedized, reliable performance

- Exceeds MIL-STD-810G
- IP68 sealing protects to a depth of two meters for 30 minutes and a depth of one meter for 2 hours
- Water-shedding grille assists voice clarity and volume in wet environments
- Shock-absorbing, impact-protected corners

### Enhanced workforce safety

- Highly visible and easily accessible programmable emergency key
- Man Down and Lone Worker come standard
- Embedded GPS transmits location\*
- Radio inhibit and uninhibited manage misplaced or stolen radios
- Supports end-to-end encryption, including AES
- Trunked failsoft reverts to conventional operation during network failure

### Designed for ease of use

- Large four-line LCD with icons to display key parameters
- Full and partial keypad options
- Four programmable function keys and three-way zone (ABC) selector

### Delivers on P25 standards

- TIA-102 P25 CAP tested and certified for multi-vendor interoperability
- 12.5 kHz P25 Phase 1 FDMA and 6.25 kHz equivalent P25 Phase 2 TDMA capable
- Product compliances satisfy FCC 2015 and 2017 ultra narrow-banding mandates
- FCC and IC compliances include P25 Phase 2 emission designator (8K10F1W)

### Reliable mission-critical communications

- Analog, P25 Phase 1 conventional/trunked and P25 Phase 2 trunked
- Automatic dual mode between analog and P25 Phase 1 conventional
- Unique microphone design, coupled with AMBE+2™ enhanced vocoder, reduce background noise in demanding environments
- Voting ensures priority selection of the channel with optimum receive quality
- Dynamic regrouping and super-group operation for mission-critical workforce management
- Increased capacity with up to 2,000 channels
- Bluetooth®
- Scanning modes include priority, dual priority, editable, zone and background scan
- Range of analog signaling functionality, i.e., MDC1200 encode and decode, 2-tone decode,
- PL (CTCSS), DPL (DCS)

### Enhanced voice and data

- Simulcast mode support includes LSM and C4FM
- Pre-set status messages
- P25 emergency data
- GPS location
- Conventional and trunked IP data
- Location services\*

### Efficient, security-focused fleet management

- Over-the-Air-Rekeying capabilities coupled with Harris EnableProtect Key Fill Device simplify encryption process
- Over-the-Air-Programming supported by Harris EnableFleet delivers software and firmware changes over a P25 trunked network for faster, easier, more affordable optimization of fleet radio performance
- Harris EnableProtect Advanced System Key allows administrators to authorize and restrict subscriber units on their network

### TP9400 accessories

- Audio: speaker-microphones, earpieces and surveillance kits
- Chargers: in-vehicle, single fast and six-way multi-chargers
- Range of Li-Ion battery capacities to match operational needs

\*Not all features are supported in all models or modes of operation. Contact Harris or an authorized channel partner for more details.

**SPECIFICATIONS FOR: TP9400 PORTABLE - P25 PHASE 2 CAPABLE RADIO**

**GENERAL**

Frequency Stability (ppm)	±0.5 (-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)
Talkgroups	50 talkgroups, 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
Dimensions (W x H x D):	
With Li-Ion standard battery (in)	2.56 x 5.35 x 1.61 (65 x 136 x 41 mm) excluding knobs
With Li-Ion high-capacity battery (in)	2.56 x 5.35 x 1.77 (65 x 136 x 45 mm) excluding knobs
Weight (oz):	
With Li-Ion standard battery	11.46 (325 g) – no antenna
With Li-Ion high-capacity battery	13.12 (372 g) – no antenna
Channel Spacing (kHz)	12.5, 15, 20, 25, 30
Frequency Increment (kHz)	2.5, 5, 6.25
Operating Temperature	-22°F to 140°F (-30°C to +60°C)
Water and Dust Protection	IP68 & IP65
Rated Audio (W)	0.5
Speaker Rating (W)	2
Signaling Options (Analog)	MDC1200, encode and decode, 2-tone decode, PL (CTCSS), DPL (DCS)

**TRANSMITTER**

Frequency Bands	VHF	UHF	700/800 MHz
Frequency Ranges (MHz)	136-174	400-470 450-520	762-870
Output Power (W)	5, 3, 2, 1	4, 2.5, 2, 1	3, 2.5, 2, 1
Modulation Limiting (kHz):			
12.5/15 kHz channel	±2.5	±2.5	±2.5
25/30 kHz channel	±5	±5	±5
FM Hum and Noise (Analog) dB:			
12.5 kHz channel	-45	-45	-40
25 kHz channel	-48	-50	-45
Conducted/Radiated Emissions (dBc)	-75	-72	-75
Audio Response (Analog) dB	+1/-3	+1/-3	+1/-3
Audio Distortion (Analog)	1.5% @ 1 kHz, 60% deviation	1.5%	1.5%

**RECEIVER**

Frequency Bands	VHF	UHF	700/800 MHz
Receive Frequency Ranges (MHz)	136-174	400-470 450-520	762-776 851-870
Sensitivity (Analog):			
12 dB SINAD (dBm/μV)	-120/0.22	-120/0.22	-121/0.22
Sensitivity (PDMR):			
5% BER (dBm/μV)	-120/0.22	-120/0.22	-121/0.22
Inter-modulation Rejection (P25) TIA-102 (dB)	75	75	75
Adjacent Channel Rejection (dB):			
12.5 kHz (P25) TIA-102	60	60	60
25 kHz (2-tone) TIA-603	73	70	70
Spurious Response Rejection (P25) dB	75	80	70
Residual Audio Noise Ratio (P25) TIA-102 (dB)	45	45	45
Audio Distortion (Rated Audio) %	1.5	1.5	1.5
FM Hum and Noise (Analog) dB:			
12.5 kHz channel	-45	-40	-40
25 kHz channel	-48	-45	-45

## MILITARY STANDARDS 810C, D, E, F AND G

Applicable MIL-STD:	Method	Procedure
Low Pressure	500.5	2
High Temperature	501.5	1, 2
Low Temperature	502.5	1, 2
Temperature Shock	503.5	1
Solar Radiation	505.5	1
Rain	506.5	1, 3
Humidity	507.5	2
Salt Fog	509.5	1
Sand & Dust	510.5	1, 2
Immersion	512.5	1
Vibration	514.6	1
Shock	516.6	1, 4, 5, 6

## BATTERY

	136-174 MHz	378-470 MHz	450-520 MHz	700/800 MHz
<b>P25 Phase 2/TDMA Mode Shift Life (5/5/90)</b>				
Li-Ion Premium	19 hours	19 hours	18 hours	18 hours
Li-Ion Standard	15 hours	15 hours	14 hours	14 hours
<b>Analog and P25 Phase 1/FDMA Mode Shift Life (5/5/90)**</b>				
Li-Ion Premium	15 hours	15 hours	14 hours	14 hours
Li-Ion Standard	12 hours	12 hours	11 hours	11 hours

\*\* Operational shift life is dependent on model, frequency and use.

## CHARGER

**Charger Options (Li-Ion)** Fast desktop single charger, 6-way multi-chargers, vehicle charger

Harris 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](http://www.taitradio.com).

Specifications are subject to change without notice and shall not form part of any contract. They are issued for guidance purposes only. All specifications shown are typical.

### About Harris Corporation:

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world.

Learn more at [harris.com](http://harris.com)

### Non-Export Controlled Information

Harris is a registered trademark of Harris Corporation.  
© 2018 Harris Corporation 10/18 CS-PSPC DS1605F



The word "Tait" and the Tait logo are trademarks of Tait Limited.



Tait Limited facilities are certified for ISO9001:2008 (Quality Management System), ISO14001:2004 (Environmental Management System) and ISO18001:2007 (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 ISO9001:2008.