



# TP9400 PORTABLE

## P25 PHASE 2 CAPABLE RADIO

### DESIGNED FOR DEMANDING ENVIRONMENTS

#### KEY FEATURES

Operation in VHF, UHF and 700/800 MHz frequency bands

Minimized risk with multimode operation for staged migration

Efficient operations with encryption, voice and data, simulcast support and pre-set status messages

Security-focused fleet management with over-the-air rekeying and key fill device support

Harris P25 TP9400 portables are compact and feature-rich, delivering reliable mission-critical communications for first responders in demanding environments.

These P25 compliant solutions ease the transition to more spectrally efficient technologies with operating modes that include analog, analog simulcast IP, 12.5kHz P25 Phase 1 FDMA conventional/trunked, P25 Phase 2 TDMA trunked and LSM (CQPSK) decode capability.

Safety and operational effectiveness are enhanced with TP9400 capabilities including internal GPS for location services over conventional or trunked networks, and Bluetooth® wireless technology for accessory connectivity. With additional Man Down, Lone Worker functionality and AES encryption capability, first responders' status is always known and secure communications are assured.

Ruggedized for hazardous scenarios, the TP9400 includes IP67 sealing and shock absorbing impact-protected corners, exceeds MIL-STD-810G standards, and features a water-shedding grille that enhances voice clarity in wet conditions. The TP9400 comes in a variety of colors and includes a premium Li-Ion battery for 12 hours of power.



## FEATURES AND BENEFITS

### Delivers on P25 standards

Benefit from the spectral efficiency, multi-vendor interoperability, security, migration and data capability demanded by P25 standards.

- TIA-102 P25 CAP tested and certified, providing multi-vendor interoperability
- 12.5kHz P25 Phase 1 FDMA and 6.25kHz 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)

### Designed for demanding environments

- Designed with users to ensure effective every-day operation
- Exceeds relevant MIL-STD-810G
- IP67 sealing protects to one meter of water for 30 minutes
- Water-shedding grille assists voice clarity and volume in wet environments
- Shock absorbing impact-protected corners
- Large four-line LCD with icons to display key parameters
- 4 and 16 keypad options
- Four programmable function keys and three-way selector

### High-performing voice communications

Robust design delivers clear, mission-critical voice 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 reduces 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 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, 2-tone decode, PL (CTCSS), DPL (DCS)

### Improve workforce safety

- Programmable emergency key is easily accessible and highly visible on the radio
- Man Down and Lone Worker as standard
- Inbuilt GPS transmits location over your conventional voice network
- Radio inhibit and uninhibited to allow management of misplaced or stolen radios
- Supports end-to-end encryption, including AES encryption

- Trunked failsoft reverts to conventional operation during trunked network failure

### Effective operations with voice and data

- Support for a variety of simulcast modes such as LSM and C4FM
- Pre-set status messages
- P25 data such as emergency
- GPS location
- Conventional and trunked IP data
- Location services over a conventional network

### Efficient, security-focused management

The TP9400 management facilities and applications allow you to efficiently manage your radio fleet.

- OTAR (Over-The-Air Rekeying)
- EnableProtect Key Fill Device (KFD) for quick, reliable encryption key programming
- Programming application for efficient fleet operation
- 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 6-way multi-chargers
- Range of Li-ion battery capacities to match your operational needs

SPECIFICATIONS FOR: TP9400 PORTABLE - P25 PHASE 2 CAPABLE RADIO

GENERAL	
Frequency Stability	±0.5ppm (-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 (D x W x H):	
With Li-Ion standard battery	1.61in x 2.56in x 5.35in (41mm x 65mm x 136mm) excluding knobs
With Li-Ion high-capacity battery	1.77in x 2.56in x 5.35in (45mm x 65mm x 136mm) excluding knobs
Weight:	
With Li-Ion standard battery	11.46oz (325g) – no antenna
With Li-Ion high-capacity battery	13.12oz (372g) – no antenna
Channel Spacing	12.5/15/20/25/30kHz
Frequency Increment	2.5/5/6.25kHz
Operating Temperature	-22°F to 140°F (-30°C to +60°C)
Water and Dust Protection	IP67
Rated Audio	0.5W
Speaker Rating	2W
Signaling Options (Analog)	MDC1200, encode and decode, 2-tone decode, PL (CTCSS), DPL (DCS)

TRANSMITTER			
Frequency Band:	VHF	UHF	700/800MHz
Frequency Ranges	136-174MHz	400-470MHz 450-520MHz	762-870MHz
Output Power	5W, 3W, 2W, 1W	4W, 2.5W, 2W, 1W	3W, 2.5W, 2W, 1W
Modulation Limiting:			
12.5/15kHz channel	±2.5kHz	±2.5kHz	±2.5kHz
25/30kHz channel	±5kHz	±5kHz	±5kHz
FM Hum and Noise (Analog):			
12.5kHz channel	-45dB	-40dB	-40dB
25kHz channel	-48dB	-45dB	-45dB
Conducted/Radiated Emissions	-75dBc	-72dBc	-70dBc
Audio Response (Analog)	+1/-3dB	+1/-3dB	+1/-3dB
Audio Distortion (Analog)	1.5% @ 1kHz, 60% deviation	1.5%	1.5%

RECEIVER			
Frequency Band:	VHF	UHF	700/800MHz
Receive Frequency Ranges	136-174MHz	400-470MHz 450-520MHz	762-776MHz 851-870MHz
Sensitivity (Analog):			
12dB SINAD	-120dBm (0.22µV)	-120dBm (0.22µV)	-118dBm (0.22µV)
Sensitivity (PDMR):			
5% BER	-120dBm (0.22µV)	-120dBm (0.22µV)	-120dBm (0.22µV)
Inter-modulation Rejection (P25) TIA-102	75dB	75dB	75dB
Adjacent Channel Rejection:			
12.5kHz (P25) TIA-102	60dB	60dB	60dB
25kHz TIA-603 (2-tone)	73dB	70dB	70dB
Spurious Response Rejection (P25)	75dB	80dB	70dB
Residual Audio Noise Ratio (P25) TIA-102	45dB	45dB	45dB
Audio Distortion (Rated Audio)	1.5%	1.5%	1.5%
FM Hum and Noise (Analog):			
12.5kHz channel	-45dB	-40dB	-40dB
25kHz channel	-48dB	-45dB	-45dB

## 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
Dust	510.5	1
Immersion	512.5	1
Vibration	514.6	1
Shock	516.6	1, 4, 5, 6

## BATTERY

	Li-Ion Premium	Li-Ion Standard
Shift Life (5/5/90)	12 hours	9 hours

## CHARGER

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

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.

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