

TP9500

DMR Portable Radio

The L3Harris TP9500 powered by Tait, eases the migration path to digital while improving worker safety, operational efficiencies and multi-agency interoperability.



Designed for ease of use, this DMR Portable features intuitive controls and a color screen for enhanced usability. Active noise cancellation and suppression technologies reduce background sounds while enhancing voice transmissions, ensuring users have loud and clear audio.

The TP9500 streamlines asset management with Wi-Fi® Over-The-Air-Programming capabilities, and color cover options and labeling for more efficient identification of team members. The portable is equipped with Bluetooth® wireless technology for accessory connectivity. Additional Man Down, Lone Worker and end-to-end encryption ensure emergency responders' status is always known and communications stay secure.

Ruggedized for extreme conditions, this portable meets MIL-STD 810C, D, E, F and G, and IP68-level protection from dust and water. A water-shedding grille and enhanced vocoder support clear communications in noisy environments. This single device offers quad mode functionality, supporting communications for legacy, current and new standard radios.

The TP9500 radios are designed to meet the diverse needs of a variety of organizations. They can be customized with a choice of cover colors and keypad options (4 or 16-key), and can be personalized with labels for fast identification of user, workgroup and organization.



RUGGED AND RELIABLE DMR COMMUNICATIONS

KEY BENEFITS

- > User-friendly, large LCD screen with color user interface
- > Clearer voice in loud environments through active noise cancellation and suppression technologies
- > Multi-mode, analog and digital capabilities simplifying migration path
- > Man Down, Lone Worker function and GPS location services improve personnel safety and effectiveness
- > Wireless Over-The-Air-Programming streamlines asset management



FEATURES AND BENEFITS*

ENHANCED USER EXPERIENCE

The TP9500 is designed for ease of use in tough environments

- > Large, high resolution 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
- > Accessory Active Noise cancellation to enhance transmit audio clarity
- > Ergonomic, user friendly-design and easy-to-use controls
- > Bluetooth® connectivity for wireless voice accessories
- > Four programmable function keys and three-way selector
- > Tailor your experience with a wide range of accessory options

DMR SMART VOICE AND DATA

Benefit from the spectral efficiency, multi-vendor interoperability, security, migration and data capability of DMR open standards

- > Text messaging for enhanced and unambiguous communications
- > Short data messages for location, status and text
- > Packet data over traffic channels for workforce management and customer specific applications

EXTENSIVE NETWORK CAPABILITIES

- > Future-ready quad mode radio offering Trunked DMR, Conventional DMR, MPT 1327 and analog conventional FM in one device
- > Roaming between MPT 1327 and DMR Tier 3 trunked networks
- > Roaming between Conventional FM and DMR Tier 2 Conventional networks
- > Individual calls for private discussions
- > A range of call types for individual and group communication without the distraction of irrelevant traffic
- > Increased channel capacity with up to 1,500 channels
- > Scanning modes include: priority, dual priority, editable, zone and background scan
- > PSTN dialling allows a user to make phone calls on DMR systems that support telephone interconnect
- > Trunked operation allows for individual and private calls within designated groups
- > Pre-set status messages
- > Conventional and trunked IP data

PERSONALIZATION OPTIONS

- > Designated spaces for custom labels enables personalization and quick identification of radios.
- > Colored radio front panels for easy identification

IMPROVE WORKFORCE SAFETY

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

L3HARRIS ENABLE FLEET 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 DMR trunked networks
- > Wi-Fi 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
- > DMR trunked networks authenticate all radios before they are given access
- > Supports end-to-end encryption, including DES, ARC4 or AES
- > L3Harris EnableProtect Advanced System Key ensures only authorized personnel can access radio software and configuration

*Not all features are supported in all models or modes of operation. Contact L3Harris or an authorized channel partner for more details.

SPECIFICATIONS FOR: TP9500 DMR PORTABLE RADIO

GENERAL INFORMATION	
Conventional Mode:	
Networks	26
Channels/zones	1,500 channels/26 zones
Scan groups	300 with up to 50 members each
Trunked Mode:	
Networks	4
Talk groups	512 talk group lists
Zone and work groups	1,000 zones, 1,000 work groups
Channels/zones	1,500 channels/26 zones
Bluetooth®	Supported
Encryption:	
ARC4	Supported (DMR Tier 2)
DES	Supported (DMR Tier 2 and Tier 3)
AES	Supported (DMR Tier 2 and Tier 3)
OTAP**	Supported (DMR Tier 3 and Wi-Fi)
Dimensions (H x W x D):	
With Li-Ion slim-line battery	5.71 x 2.56 x 1.61 in (145 x 65 x 41 mm) excluding knobs
With Li-Ion standard battery	5.71 x 2.56 x 1.77 in (145 x 65 x 45 mm) excluding knobs
Weight:	
With Li-Ion slim-line battery	11.75 oz (333 g) — no antenna
With Li-Ion standard battery	13.02 oz (369 g) — no antenna
Water and dust protection	IP68 & IP65
Channel spacing ¹	6.25/12.5/15/20/25/30 kHz
Frequency increment/channel step	2.5/3.125/5/6.25 kHz
Frequency stability	±0.5 ppm -22°F to 140°F (-30°C to 60°C)
Radio operating temperature	-22°F to 140°F (-30°C to 60°C)
Audio output	3W
Air interface standard	DMR: ETSI TS 102 361
Signaling options (analog)	MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL (DCS), Selcall
Vocoder type	AMBE+2™
Packet data	½ Rate, ¾ Rate, Full rate, Single Slot

TRANSMITTER			
Frequency bands	VHF	UHF	700/800MHZ ²
Frequency range	136–174 MHz (B1)	378–470 MHz (HK) 450–520 MHz (H7)	757–870 MHz (K5)
Output power	5W, 3W, 2W, 1W	4W, 2.5W, 2W, 1W	3W, 2.5W, 2W, 1W
FM hum and noise (analog):			
12.5 kHz channel	-40 dB	-40 dB	-40 dB
25 kHz¹	-45 dB	-45 dB	-45 dBm
Conducted/radiated emissions	-36 dBm	-36 dBm	-36 dBm
Audio response	+1/-3 dB	+1/-3 dB	+1/-3 dB
Audio distortion (analog@1 kHz, 60% mod)	2%	2%	2%
Modulation limiting:			
12.5/15 kHz channel	±2.5 kHz	±2.5 kHz	±2.5 kHz
25/30 kHz channel	±5 kHz	±5 kHz	±5 kHz

**Contact L3Harris for information on Wi-Fi OTAP

SPECIFICATIONS FOR: TP9500 DMR PORTABLE RADIO

RECEIVER**			
Frequency bands	VHF	UHF	700/800 MHz ²
Frequency range	136–174 MHz (B1)	378–470 MHz (HK) 450–520 MHz (H7)	757–776 MHz and 850–870 MHz (K5)
Sensitivity Analog 12 dB SINAD (TA-603) DMR 5% BER (ETS300-113)	-120 dBm (0.22 µV) -119 dBm (0.25 µV)	-120 dBm (0.22 µV) -119 dBm (0.25 µV)	-120 dBm (0.22 µV) -119 dBm (0.25 µV)
Audio distortion (rated audio)	1.5%	1.5%	1.5%
FM hum and noise (analog): 12.5 kHz channel 25 kHz channel	-45 dB -48 dB	-40 dB -45 dB	-40 dB -45 dB
Intermodulation rejection: Analog EIA603D DMR ETS 300-113	75 dB 70 dB	75 dB 70 dB	75 dB 70 dB
Adjacent channel rejection: 12.5 kHz (DMR) 25 kHz TIA-603 (2-tone)	60 dB 73 dB	60 dB 73 dB	60 dB 73 dB

**Rated audio (for performance testing) 0.5W

MILITARY STANDARDS 810 G					
Applicable MIL-STD	Method	Procedure	Applicable MIL-STD	Method	Procedure
Low pressure	500.5	2	Humidity	507.5	2
High temperature	501.5	1, 2	Salt fog	509.5	1
Low temperature	502.5	1, 2	Sand & dust	510.5	1, 2
Temperature shock	503.5	1	Immersion	512.5	1
Solar radiation	505.5	1	Vibration	514.6	1
Rain	506.5	1, 3	Shock	516.6	1, 4, 5, 6

BATTERY ³			
DMR Mode Shift Life (5/5/90): Li-Ion Standard Li-Ion Slimline	18 hours 14 hours	Analog Mode Shift Life (5/5/90): Li-Ion Standard Li-Ion Slimline	14 hours 11 hours

REGULATORY DATA ⁴				
	USA	Canada	Europe	Australia/New Zealand
VHF (136–174 MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295
UHF (378–470 MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295 AS/NZS4365
UHF (450–520 MHz)	CFR 47	RSS-119	RED: 2014-53-EU	AS/NZS4295 AS/NZS4365
700/800 MHz	CFR 47	RSS-119	NA	NA

¹ Wideband operation is not available in the USA in some bands

² Supports 700 A-Block frequencies (757–758 MHz Tx & Rx, 787–788 MHz Tx)

³ Battery performance is dependant on temperature and operational configuration

⁴ Intended compliance data

Technical specifications are subject to change without notice.
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1025 W. NASA Boulevard
Melbourne, FL 32919