

TP9300 PORTABLE

Digital Mobile Radio (DMR)

The latest technologies embedded in TP9300 DMR portables help organizations ease the path of migration to digital while improving worker safety, operational efficiencies and multi-agency interoperability.



Ruggedized for extreme conditions, these portables meet MIL-STD 810C, D, E, F and G, and are proven for IP68-level protection from dust and water. A water-shedding grille and enhanced vocoder support clear communications in noisy environments.

Lone Worker, Man Down, integrated GPS and Bluetooth® capabilities provide command centers real-time worker status and location within the network to enhance worker safety.

This single device offers quad mode functionality, supporting communications for legacy, current and new standard radios. TP9300 portables support operations for emergency and First Responders in VHF, 220 MHz, UHF, 700/800 or 900 MHz frequency bands.

Security is advanced through optional DES and ARC4 encryption and, if a portable is lost or stolen, Stun and Revive features can temporarily deny the radio access to the network.



FUTURE-PROOF, RUGGEDIZED, MULTI- MODE CONNECTIVITY

KEY BENEFITS

- > Minimized migration risk with a portable that operates in four modes: trunked DMR (Tier 3), conventional DMR (Tier 2), full MPT 1327 and conventional FM
- > Operates in VHF, 220 MHz, UHF, 700/800 or 900 MHz frequencies
- > Ruggedized to meet 810C, D, E, F and G standards and IP68 protection rating
- > Man Down, Lone Worker, GPS and Bluetooth technologies enhance worker safety



FEATURES AND BENEFITS*

ENHANCED WORKER SAFETY

- > Man Down and Lone Worker are standard
- > Integrated GPS ensures real-time workforce status and location
- > Bluetooth wireless technology supports hands-free accessories
- > Emergency calls have priority access to the network
- > Text messaging for fast status reports

RUGGEDIZED FOR RELIABLE PERFORMANCE IN HARSH ENVIRONMENTS

- > Exceeds MIL-STD 810C, D, E, F and G
- > IP68 level sealing protects against dust and immersion to a depth of two meters for 30 minutes
- > Water-shedding grille and enhanced vocoder assist voice clarity and volume in wet environments
- > Shock-absorbing impact-protected corners
- > Recessed lens provides screen protection
- > Programmable functions include emergency key
- > Intrinsically Safe options available

EXPANDED CAPABILITIES

- > Quad-mode operation supports trunked DMR, conventional DMR, MPT 1327 and analog conventional FM
- > Increased capacity with up to 2,000 channels
- > Analog capability includes priority and dual priority, editable, zone and background scan
- > PSTN dialing allows a user to make phone calls on DMR systems supporting telephone interconnect
- > Over-the-Air-Programming (OTAP) with EnableFleet configuration management system delivers quick and easy software and firmware changes over the DMR Tier 3 network
- > Shared menu structure between all 9300 terminals

ENHANCED SECURITY AND PRIVACY

- > DMR trunked mode requires terminal network authentication before access is given
- > Stun and Revive can temporarily deny lost or stolen radios from accessing the network
- > Optional AES and DES encryption ensures privacy of conversations
- > Group calls allow team communications while bypassing irrelevant chatter
- > Trunked operation allows individual and private calls within designated groups

DATA SERVICES

- > Embedded data for location
- > Short data messages for location, status and text
- > Packet data over traffic channels for workforce management, Telemetry, SCADA and customer specific applications

TP9300 ACCESSORIES

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

COLOR OPTIONS

- > Black, red, yellow, orange and high-visibility green for easy in-field identification

* Not all features are supported in all modes of operation.

SPECIFICATIONS FOR: TP9300 PORTABLE DMR

GENERAL	
Frequency Stability (ppm)	±0.5 (-22° to 140°F/-30° to 60°C)
Channels / Zones	1,000-2,000 channels / 50-100 zones
Talkgroups	26 talkgroup lists of up to 1,000 – 2,000 members each
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 (in) With Li-Ion high-capacity battery (in)	1.61 x 2.56 x 5.35 (41 x 65 x 136 mm) excluding knobs 1.77 x 2.56 x 5.35 (45 x 65 x 136 mm) excluding knobs
Weight (oz): With Li-Ion standard battery With Li-Ion high-capacity battery	11.46 (325 g) – no antenna 13.12 (372 g) – no antenna
Options	Black keypad, 3-way zone selector
Channel Spacing (kHz)	6.25 e, 12.5, 15, 20, 25, 30
Frequency Increment/Channel Step (kHz)	2.5, 3.125, 5, 6.25
Operating Temperature	-22°F to 140°F (-30° to 60°C)
Water and Dust Protection	IP68
ESD Rating (kV)	+/-4 contact discharge and +/-8 air discharge
Rated Audio (W)	0.5
Speaker Rating (W)	2
Air Interface Standard (DMR)	ETSI TS 102 361
Signaling Options (Analog)	MDC1200, encode and decode, 2-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	700/800 MHz	900 MHz
Frequency Ranges (MHz)	136-174 217-225	320-380 (G1) 400-470 (H5) 450-520 (H7)	757-870	896-941
Output Power (W)	5, 3, 2, 1	4, 2.5, 2, 1	3, 2.5, 2, 1	3, 2.5, 2, 1
FM Hum and Noise (Analog): 12.5 kHz Channel (dB) 25 kHz Channel (dB)	-40 -45	-40 -45	-40 -45	-40 NA
Conducted/Radiated Emissions (dBc)	-36	-36	-36	-36
Audio Response (dB)	+1/-3	+1/-3	+1/-3	+1/-3
Audio Distortion (Analog)	2.5% @ 1 kHz 60% deviation	2.5% @ 1 kHz 60% deviation	2.5% @ 1 kHz 60% deviation	2.5% @ 1 kHz 60% deviation
Modulation Limiting (kHz): 12.5/15 kHz Channel 25/30 kHz Channel	±2.5 ±5	±2.5 ±5	±2.5 ±5	±2.5 ±5

RECEIVER				
Frequency Bands	VHF	UHF	700/800 MHz	900 MHz
Frequency Ranges (MHz)	136-174 217-225	320-380 (G1) 400-470 (H5) 450-520 (H7)	757-776 850-870	935-941
Sensitivity (Analog): 12 dB SINAD (dBm/μV)	-120/0.22	-120/0.22	-120/0.22	-120/0.22
Sensitivity (PDMR): 5% BER (dBm/μV)	-119/0.25	-119/0.25	-119/0.25	-119/0.25
Intermodulation Rejection (dB): EIA603D ETS 300-113	75 70	75 70	75 70	75 70
FM Hum and Noise (Analog) dB: 12.5 kHz Channel 25 kHz Channel	-40 -45	-40 -45	-40 -45	-40 NA
Selectivity (Analog) dB: 12.5 kHz EIA603D (2 Tone) 25 kHz EIA603D (2 Tone) 12.5 kHz ETS 300-086 25 kHz ETS 300-086	52 73 62 73	50 70 62 73	50 70 60 70	50 NA 60 NA
Optional External Speaker Output (W)	0.5 (16 ohm balanced speaker)	0.5 (16 ohm balanced speaker)	0.5 (16 ohm balanced speaker)	0.5 (16 ohm balanced speaker)
Audio Distortion (Rated Audio) %	2	2	2	2

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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 and Dust	510.5	1,2
Immersion	512.5	1
Vibration	514.6	1
Shock	516.6	1, 4, 5, 6

BATTERY					
DMR Mode Shift Life (5/5/90)	136-174 MHz	378-470 MHz	450-520 MHz	700/800 MHz	900 MHz
DMR Mode Shift Life (5/5/90)					
Li-Ion Premium	19 hours	19 hours	18 hours	18 hours	18 hours
Li-Ion Standard	15 hours	15 hours	14 hours	14 hours	14 hours
Analog Mode Shift Life (5/5/90)					
Li-Ion Premium	15 hours	15 hours	14 hours	14 hours	14 hours
Li-Ion Standard	12 hours	12 hours	11 hours	11 hours	11 hours

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

REGULATORY DATA				
	USA	Canada	Europe	Australia / New Zealand
VHF (136-174 MHz) (217-225 MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	AS/NZS4295
UHF (320-380 MHz)	N/A	N/A	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	N/A
UHF (400-470 MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	N/A
UHF (450-520 MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219 EN301-489, EN60950	AS/NZS4295, AS/NZS4365
700/800 MHz	CFR 47	RSS-119	N/A	N/A
900 MHz	CFR 47	RSS-119	N/A	N/A
Emission Designators	11K0F3E, 16K0F3E1, 6K60F2D, 7K80F2D, 9K60F2D1, 10K8F2D1, 7K60FXW, 7K60FXD			

Technical specifications are subject to change without notice.
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