



TWH-100 series Personal Radio



- Simultaneous high quality digital voice and data communication
- Secure encryption and low RF signature
- Full duplex voice conference
- Real-time video streaming
- VOX and whisper modes
- Automatic retransmission mode for range extension
- GPS/Glonass based automatic positioning report (TWH-104)
- Voice prompts and tone audio indications
- Simple user interface and operation
- Rugged and reliable





TWH-100 series Personal Radio

General

TWH-100 Personal Radio family offers a complete range of compact and robust state of the art transceivers that provide extended features to the users such as full duplex audio conference with simultaneous data capability, dual PTT buttons for differentiated voice access, stereo operation (right and left separation), VOX, whisper mode, guided voice prompt menus and automatic network management for transparent and simple operation.

A wide range of accessories such as headsets, antennas, battery pack and wireless PTT fulfill the needs of different tactical operational scenarios and the available gateways insure the integration with wired equipment such as Intercom systems and Radio equipment. All the aforementioned key features and the compliance with Military Standards make the TWH-100 series Personal Radio an effective communication infrastructure for squad teams deployed in battlefield harsh environments.

The TWH-101R and TWH-104R Personal Radios are lightweight and low power transceivers operating on the 2.4GHz ISM band with a very low RF signature modulation scheme based on spread spectrum technology (DSSS) and providing a robust, reliable and low probability of detection TDMA waveform. Complementarily it features AES encryption for a very high security level of the transmitted audio and data streams (with user downloadable keys). A digital vocoder insures crispy and clear voice under all circumstances. The TWH-104R provides increased RF output power and built-in GPS/Glonass receiver for automatic position reporting.

The TWH-100 family provides voice and data communications, enabling the operation as standalone personal radio within squad teams, the integration with Vehicular Intercoms and Combat Net Radios (CNR) in armoured vehicles and patrol vessels and seamless integration with C4I Systems, including video streaming.

Three main types of units are available: the TWH-101R and TWH-104R (transceivers), the TWH-104G (gateways for interfacing with Intercom systems and CNR's) and the TWH-101C (battery chargers for transceiver and battery pack).

TWH-100 family units

- TWH-101R1/104R1 - Radios (voice only)
- TWH-101R2/104R2 - Radios (voice and RS232 data)
- TWH-101R3/104R3 - Radios (voice and USB data)
- TWH-104G1/104G3 - Portable gateways
- TWH-104G2 - Vehicular gateway
- TWH-101C3/101C5 - Battery chargers for either 3 or 5 transceivers

TWH-100 accessories

Headsets, antennas, wireless PTT, battery pack, pouch, belt clip, data and configuration cables

Electrical Specification

Power Supply	9 to 33VDC (MIL-STD1275)
TWH-104G1/104G2/101C	3VDC (2 x LR6 cells or 2 x NiMH LR6 rechargeable batteries)
TWH-101R/104R/104G3	
RF power output	100mW for TWH-101R and 400mW for TWH-104R/104G
Maximum datarate	115kbps
Range	Up to 1.000m (line of sight) for TWH-101R and 2.000m for TWH-104R/104G
Autonomy (TWH-101R, 50% Tx, 50% Rx operation, high power)	15h with LiON LR6 cells 8h with internal NiMH rechargeable batteries
Mic. level	2mV @ 300Ω
Earpiece level	100mW @ 600Ω

Environmental Specification

Temperature Operation	(according to MIL-STD-810G) method 501.5 and 502.5, proc. I and II -30°C to +70°C
Storage	-40°C to +85°C
Vibration	method 514.6
Shock (functional)	method 516.6
Salt Fog	method 509.5
Watertight	method 512.5 1m immersion (TWH-101R/104R/104G) IPX6 according to EN 60529 (TWH-101C)
Humidity	method 507.5
Sand & Dust	method 510.5

EMI / EMC

(according to MIL-STD-461)

Mechanical Specification

Dimensions (W x D x H)	80 x 30 x 130mm (without antenna)
TWH-101R/104R/104G1/104G3	95 x 108 x 52mm
TWH-104G2	410/630 x 99 x 90mm
TWH-101C3/101C5	
Colour	RAL 9005 (Black)
TWH-101R/104R/104G1/104G3	RAL 6014 (Olive green)
TWH-104G2/101C	Other colours available upon request
Weight	225g (batteries included)
TWH-101R/104R/104G1	680g
TWH-104G2	1260/2000g
TWH-101C3/101C5	



This publication is issued to provide outline information only. We reserve the right to alter the specification and design of equipment without previous notice.



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