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 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 packs and wireless PTT fulfill the needs of different tactical operational scenarios and the available gateways ensure 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. Complementarity 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 accessories
Headsets, antennas, wireless PTT, battery pack, pouch, belt clip, data and configuration cables

Electrical Specification
Power Supply
TWH-104G1/104G2/101C
TWH-101R/104R/104G3
3VDC (2 x 1R6 cells or 2 x NiMH LR6 rechargeable batteries)
9 to 33VDC (MIL-STD-1275)
RF power output
100mW for TWH-101R and 400mW for TWH-104R/104G
Maximum datarate
115kbs
Range
Up to 1.000m (line of sight) for TWH-101R and 2.000m for TWH-104R/104G
Autonomy
15h with LiON LR6 cells
50% Rx operation, high power
Mic. level
8h with internal NiMH rechargeable batteries
Earpiece level
2mV @ 300Ω
Environmental Specification
Temperature
-40°C to +85°C
Operation
Storage
method 514.6
method 516.6
method 509.5
method 512.5
Shock (functional)
Vibration
Salt Fog
Humidity
method 512.5
method 507.5
method 510.5
Watertight
IPX6 according to EN 60529 (TWH-101C)
EMI / EMC
(method according to MIL-STD-461)
Mechanical Specification
Dimensions (W x D x H)
TWH-101R/104R/104G1/104G3
TWH-104G2/101C
TWH-101C3/101C5
80 x 30 x 130mm (without antenna)
95 x 118 x 52mm
410 x 630 x 99 x 90mm
Colour
TWH-101R/104R/104G1/104G3
TWH-104G2/101C
RAL 9005 (Black)
RAL 6014 (Nile green)
Other colours available upon request
Weight
TWH-101R/104R/104G1
TWH-104G2
TWH-101C3/101C5
225g (batteries included)
680g
1260/2000g