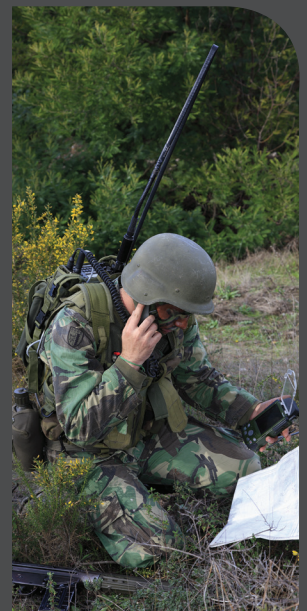


shaping the future ...in TACTICAL COMMUNICATIONS

TWH-100 series Personal Radio



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

TWH-100 series Personal Radio

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. Multiple PTT buttons for differentiated voice access, stereo operation (right and left separation), VOX, whisper mode, guided voice prompt menus and automatic network management guarantee 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. 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) providing a robust, reliable and low probability of detection TDMA waveform. Additionally it features AES encryption for a very high security level of transmitted audio and data streams (with user downloadable keys). A digital vocoder insures clear voice under all circumstances. The TWH-104R provides increased RF output power and built-in GPS and Glonass receiver for automatic position reporting.

The TWH-100 series 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.



Technical Characteristics

TWH-100 series 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-104C(1/3/5) | NiMH and Li-Ion Battery chargers (1,3 or 5 radios) |

TWH-100 accessories

Headsets, antennas, wireless PTT, batteries, pouch, belt clip, data cables

Electrical Specifications

| | |
|-------------------------------------------------------|------------------------------------------------|
| Power Supply | |
| TWH-104G1/104G2/104C | 9 to 33VDC (MIL-STD1275) |
| TWH-101R/104R/104G3 | 2 x LR6 cells |
| | 2 x NiMH LR6 rechargeable cells |
| | 2 x Li-Ion 18500 rechargeable cells |
| RF power output | 100mW for TWH-101R |
| | 400mW for TWH-104R/104G |
| Maximum data rate | 115kbps |
| Range | Up to 1.000m (line of sight) for TWH-101R |
| | Up to 2.000m (line of sight) for TWH-104R/104G |
| Autonomy (TWH-101R, 50% TX, 50% RX, high power) | 16h with internal Li-Ion rechargeable cells |
| | 8h with internal NiMH rechargeable cells |
| Microphone level | 2mv @ 300Ω |
| Earpiece level | 100mW @ 600Ω |

Environmental Specifications according to MIL-STD-810G

| | |
|--------------------|--------------------------------------------------|
| Temperature | method 501.5 and 502.5, proc.I and II |
| Operation | -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 |
| Watertightness | method 512.5 1m immersion for TWH-101R/104R/104G |
| | IPX6 according to EN 60529 for TWH-104C |
| Humidity | method 507.5 |
| Sand & Dust | method 510.5 |

EMI/EMC according to MIL-STD-461F

Mechanical Specification

| | |
|---------------------------|-----------------------------------|
| | Dimensions (W x D x H) |
| TWH-101R/104R/104G1/104G3 | 80 x 30 x 144mm (without antenna) |
| TWH-104G2 | 95 x 108 x 52mm |
| TWH-104C1 | 154 x 77 x 120mm |
| TWH-104C(3/5) | 410/630 x 99 x 90mm |
| Colour | |
| TWH-101R/104R/104G (1/3) | RAL 9005 (Black) |
| TWH-104G2/104C(1/3/5) | RAL 6014 (Olive green) |
| Weight | |
| TWH-101R/104R/104G(1/3) | 300g (batteries included) |
| TWH-104G2 | 680g |
| TWH-104C1 | 600g |
| TWH-104C3 | 1260g |
| TWH-104C5 | 2000g |



P.O. Box 535
2821-901 Charneca da Caparica · Portugal
Tel.: (+351) 21 294 86 00 · Fax: (+351) 21 294 87 00
E-mail: eid@eid.pt · www.eid.pt

