



# PT580H

TETRA hand-held radio

Full functionality and ergonomic design. With degree of protection IP67, high-resolution colour display, output rating of up to 3W, clear digital voice quality, man down function and GPS-localization the portable radio PT580H offers best TETRA communication in any situation.



# Radio

## PT580H

TETRA hand-held radio



### Highlights

#### Compact design and easy operation

PT580H stands out for its compact design and large keys offering an excellent handling. More over, the portable radio PT580H has a high-resolution, transreflective 1.8-inch-colour display which even under exposure to the sun features an outstanding readability.

#### Patented antenna

The integrated radio and GPS antenna provides high comfort and optimum features. Both operating buttons of PT580H are separated from each other via the antenna so that even with gloves or under bad light conditions operating errors are hardly possible.

#### Dust and waterproof

The device meets the requirements according to degree of protection IP67 with an immersion test at a water depth of 1 m for a duration of up to 30 minutes. The device meets the requirements of the MILSTD-810-F standard and passed the HALT tests (Highly Accelerated Life Test). Thus, even under rough operating conditions it offers excellent features.

#### Versatile services

Apart from voice and data communication, additional functions can be added: GPS, encryption, voice recording etc. Moreover, the hand-held radio features a connector for expansions.

#### Prompt and seamless communication

PT580H provides quick access to the TETRA radio network and to the services. It was developed according to the regulations of the ETSI TETRA standards and is therefore compatible with infrastructures and mobile stations of several manufacturers.



## Functions

### Operating mode

- Trunked radio mode (TMO): Communication via the TETRA radio network (semi-duplex or duplex mode)
- Direct mode (DMO): Direct communication between radios (semi-duplex)

### Voice services

#### Group calls

- Group call
- Group call with defined priority
- Emergency group call
- Dynamic Group Number Assignment (DGNA)
- Broadcast call (TMO)
- Broadcasting
- Talking Party Identification (TPI)

#### Individual call

- Individual call (semi-duplex)
- Individual call duplex (TMO)
- Individual call with defined priority
- Display of the identification of the calling party
- Calls with pre-emptive priority – PPC

#### Calls to telephone networks (PSTN/PABX) (TMO)

- Full duplex operation
- DTMF
- Display of the identification of the calling party
- Calls with pre-emptive priority – PPC

### Security services

- Authentication
- Sleep mode/monitoring mode
- Air interface encryption (TEA1, TEA2\*, TEA3, TEA4)
- End-to-end encryption (E2EE)\*
- Access with PIN-/PUK-code
- Safety class 1, 2 (3\*)

### Safety functions for the user

- Emergency key
- Man Down (optional)
- Call barring
- Key Lock
- Configuration protection

### Functions of the user interface

- 20 programmable keys for direct access to the individual functions
- 4-ways navigation key
- Emergency button
- Call log: missed/answered calls, dialed numbers
- Flexible dialing (e.g. direct dialing, redialing etc.)
- Special microphone
  - upper microphone for semi-duplex calls
  - lower microphone for duplex calls
- Adjustable display brightness
- 7 languages available (German, English, French, Spanish, Russian, Simplified Chinese, Korean)
- Several profiles
- GPS location
  - Completely integrated single-chip GPS receiver
  - Completely programmable position updating
  - Transmission of the position data on emergency call
  - Time synchronization and calibration
- Bluetooth (optional)\*
  - Wireless connection to several audio and PTT devices
  - Automatic search and recognition of compatible devices

### Data/message services

- Short data service (SDS) – 1, 2, 3, 4, TL
- Status message/Text message
- Notification on new messages during calls
- Packet data service\*



The features marked by \* will be available in future versions of the PT580H. Encryption features are optional and have to be configured separately. They also are subject to German and European export regulations.



## Technical Data

General data	
Dimensions (H x W x D) (with battery, without antenna)	127.5 mm x 54.5 mm x 35.5 mm
Weight (with battery, without antenna)	295 g
Battery	1800 mAh (Lithium-ion battery)
Battery service life (5-5-90 operating cycle)	> 16 hours
Operating voltage	7.4 V
Call group number – TMO	2048
Call group number – DMO	1024
Address book	512 entries
Lists for active groups (Scan lists)	64 (200 groups per list)
LCD display	160 x 128 Pixel, 65,000 colours

Ambient data	
Operating temperature range	-25 °C to +65 °C
Storage temperature range	-40 °C to +85 °C
Relative humidity	ETS 300 019 (95 %)
Protection against dust and moisture	IEC60529 IP67
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G

RF data	
Frequency ranges	350 – 400 MHz / 380 – 430 MHz 410 – 470 MHz / 806 – 870 MHz
Channel spacing	25 kHz
RF transmitting power	up to 3 W (adjustable) / max. 1.8 W at 806 – 870 MHz
Receiver class	ETSI EN 392-2 / 396-2 class A
RX static sensitivity	-112 dBm (typical -116 dBm)
RX dynamic sensitivity	-103 dBm (typical -105 dBm)

GPS	
Sensitivity	≤ -138 dBm receiving sensitivity; ≤ -154 dBm signal tracking sensitivity
Precision	≤ 10 m
Time to first fix (TTFF) cold start-up	< 50 seconds
Time to first fix (TTFF) warm start-up	< 10 seconds

All technical indications were tested according to the corresponding standards. Subject to change on the basis of continuous development.

The illustrations shown below are only for reference purposes. The products themselves may vary from these representations.

## Standard accessories

					
Antenna (GPS integrated)	Lithium-ion battery 1800 mAh BL1805	Network adapter (country-specific)	Dual charging station CH10L13	Belt clip BC12	Hand strap RO04

## Optional accessories (excerpt)

						
Diverse hand microphone and headsets	6-unit power supply (for charging stations) PS7002	Vehicle power adapter CHV09	Lithium-ion battery 3200 mAh BL3201	Leather bag LCY002	Programming cable (USB/Serial) PC36	Charging station for 6 terminals (MCA06)

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Encryption features are optional and require a separate configuration, subject to German and European export regulations.

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