PT580H Plus S

TETRA handheld radio

Packed with functionality in an ergonomic design, the Hytera PT580H Plus S handheld radio offers unbeatable TETRA communication in every situation.

The PT580H Plus S highlights include a high IP67 rating of ingress protection, up to 3 Watt output, clear digital voice quality, man down functionality and GPS location services, delivering mission ciritcal communications, instantly.

Radio

PT580H PLUS S

TETRA handheld radio

Highlights

Versatile operating modes
Besides Direct Mode (DMO) and Trunked Radio Mode (TMO), the PT580H Plus S supports ETSI type 1A DMO Repeater operation. By using this operating mode, the PT580H Plus S can boost the area of operation for other TETRA users.

Exceptional audio
The PT580H Plus S features an advanced audio chip with new noice cancelling capability. Users working in noisy environments can continue to communicate with good audio quality.

Patented antenna
The integrated radio and GPS antenna provides a neat design and advanced GPS based features. The two controls on the PT580H Plus S are separated by the antenna to prevent operating errors, even when wearing gloves, or in poor light conditions.

Dustproof and waterproof
The device complies with all the requirements of IP67 degree of protection, withstanding submersion in 1 metre of water for a duration of up to 30 minutes. The device meets the requirements of the MIL-STD-810 C/D/E/F/G standard and has passed the HALT tests (Highly Accelerated Life Test). These rigorous testing procedures ensure the radio will continue to perform even under harsh operating conditions.

Versatile services
With a full line-up of TETRA voice and data services, the PT580H Plus S also offers additional functions including advanced encryption and voice-recording. The accessory port ensures both audio and data accessories can be connected with the radio to improve the user experience.

Immediate and direct communication
The PT580H Plus S provides rapid access to the TETRA radio network and to its services. It was developed according to the regulations of the ETSI TETRA standard, and is therefore compatible with infrastructures and terminals from various manufacturers.

Extensive accessories
A vast range of optional accessories are available to tailor the user experience depening on the job role and environment. These accessories include wirless audio options, noise protection headsets, charging options and car kits.

The features marked with * are available in future versions of the PT580H Plus S.
Encryption features are optional and have to be configured separately.
They are also subject to European export regulations.

Functions

Operating mode

— Trunked radio mode (TMO): communication via the TETRA radio network (semi-duplex and duplex mode)
— Direct mode (DMO): direct communication between the radios (semi-duplex)
— ETSI type 1A DMO Repeater operation

Voice services
Group calls

— Group call with defined priority (incl. pre-emptive priority)
— Dynamic Group Number Assignment (DGNA)
— Broadcast call (group, TMO)
— Subscriber identification (Talking Party Indification, TPI)
— Late Entry
— Open group call
— Priority group scanning

Individual call

— Individual call, half-duplex and duplex (TMO)
— Individual call with defined priority (also pre-emptive priority)
— Calling Line Identification Presentation (CLIP)

Emergency call

— Emergency call to selected group / to predefined group
— Emergency individual call & emergency PABX/PSTN call
— Hot Mic & emergency cycle
— Silent alert (TMO)

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

— PSTN/PABX individual call, full-duplex
— PSTN/PABX individual call, half-duplex
— DTMF
— Calling Line Identification Presentation (CLIP)

Additional call services

— Callout
— Gateway call (DMO) / repeater call (DMO)

Security services

— Authentication & mutual authentication
— Air interface encryption (TEA1, TEA2*, TEA3, TEA4)
— End-to-end encryption (E2EE): by software (AES128 / AES256), by SIM card, encryption of voice and SDS
— Access control with PIN/PUK code
— TETRA security class 1, 2, 3: non-encrypted, static encryption (SCK), dynamic encryption (CCK/DCK)
— Key distribution via air interface (OTAR)
— Static encryption in DMO (SCK)
— Attachment/deactivation via air interface (Enable/Disable)
— Ambience Listening

Safety functions for the user

— Emergency button
— Lone worker function / man-down alarm
— Tilt alarm
— Silent alarm
— Call barring
— Programmable key lock (dedicated keys can be excluded from locking)
— Configuration protection / configuration password
— TX Inhibit (TXI)

Functions of the user interface

— 20 programmable keys for direct access to individual functions (shortcut keys)
— 4-ways navigation key
— Separate rotary switches for call groups and audio volume
— Call log: Missed/answered calls, dialed numbers
— Flexible dialing (e.g. direct dialing, redialing, dialing lists etc.)
— Special microphone
  — Upper microphone for half-duplex calls
  — Lower microphone for duplex calls
— Adjustable display brightness & screen saver
— Many international languages are already available, installation of several selectable languages on radio
— Positioning based on ETSI LIP or NMEA protocol
  — Completely integrated GPS/GLONASS/Beidou receiver
  — Completely programmable position updates
  — Display the calling party's relative direction and position
  — Location information sending (TMO) on emergency call
— Integrated BT
  — Wireless BT connection to various audio and PTT devices
  — Automatic scanning and identification of compatible BT devices
— PEI interface
— Clock synchronisation via GPS/SAT, radio network or local time
— Energy saving mode
— Automatic cell re-selection without call interruption (handover)
— Programming several selectable network identifications (TMO, DMO)
— Programming several selectable PSTN/PABX gateways
— Customizable alarm tones
— Radio User Assignment (RUA)
— Over the air programming (OTAP)

Data / message services

— Short data service (SDS) – types 1, 2, 3, 4 and TL
— Concatenated SDS (Long SDS) and Flash SDS
— Status message/text message
— Notification on new messages during calls
— Packet data service (packet data, single-slot, multi-slot)
— Java™ platform MIDP 2.0, WAP

User-friendly interface, simple menu guidance.

Distinct two-colour PTT

Unique, concealed and compact speaker design for better audio quality.

Unique antenna design with built-in GPS antenna, Hytera patent.

Special orange emergency key.

Device interface for audio and data accessories, Plug & Play, with captive sealing plug.

Special labeling area, convenient for user identification.

Technical Data

General data

General data	
Frequency ranges	380 – 430 MHz / 405 – 475 MHz* 806 – 870 MHz*
Dimensions (H × W × D)	127.5 × 54.5 × 36.5 mm
Weight (without battery, without antenna)	237 g
Operating voltage	7.4 V
Battery (lithium-ion battery)	1800 mAh (standard battery) 2500 mAh (opt. high-capacity battery)
Battery life (lithium-ion battery) (5-5-90 duty cycle)	> 16 hours (standard battery) > 22 hours (opt. high-capacity battery)
LCD color display	160 × 128 Pixel, 65,000 colors
Call group number – TMO	3000
Call group number – DMO	2000
Phone book	1000 entries
Group lists – TMO (used for scanning, scan lists)	200 (200 groups per list)
Group lists – DMO	50 (200 groups per list)
Number of short messages (SDS) (inbox, outbox, drafts)	400 / 50 / 50
Number of status messages	200

Ambient data

Ambient data	
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
Relative humidity	ETS 300 019 (95 %)
Dust and water protection	IEC60529 IP67
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G

Radio characteristics

Radio characteristics	
Channel spacing	25 kHz
Transmitting power	Up to 3 W (adjustable) / max. 1.8 W at 806 – 870 MHz
RF power level accuracy	±2 dB
RF power control	5 steps of 5 dB
Receiver class	ETSI EN 392-2 / 396-2 class A & class B
Static receiver sensitivity	-112 dBm (typical -116 dBm)
Dynamic receiver sensitivity	-103 dBm (typical -105 dBm)

GPS data

GPS data	
GPS accuracy	≤ 2.5 m
Sensitivity	≤ -148 dBm receiving sensitivity; ≤ -162 dBm signal tracking sensitivity
Time to first position recognition (TTFF) cold start	< 27 seconds
Time to first position recognition (TTFF) warm start	< 1 seconds

The features marked with * are available in future versions of the PT580H Plus S.

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.

The illustrations below are solely for reference.
The products might differ from these illustrations.

In the box

Antenna (GPS integrated)	Lithium-ion battery 1800 mAh BL1806	Universal Standard Switching Power Adapter PS1044	Charger CH10A07	Belt clip BC19	Hand strap RO04

Your Hytera partner:

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