



THR9+ TETRA HANDPORTABLE RADIO

World's best gloves-on access to TETRA



THR9+ TETRA handportable radio

- **Designed for gloves-on operation**
- **Large keys for easy access to all functions**
- **IP65 protection against dust and water**
- **The largest and sharpest QVGA display**
- **Night vision display for working in the dark**
- **Lifeguard - the advanced man-down alarm for user safety**
- **Strong battery performance, two battery alternatives: 1900 mAh and 4600 mAh**
- **Voice feedback**
- **Vibrating alert**



The THR9+ TETRA handheld is designed to meet the strictest requirements of field workers. The radio has a large simplified keypad that can be used even while wearing gloves. The radio's robust construction is built to resist water and dust.

The THR9+ addresses the specific requirements of users such as firemen who work in harsh conditions and who mostly do not need to free-dial numbers or write messages. With the 4-way navigation keys the user have direct access to the radio menu, phonebook and often used functions. If they need to input text, a combination of the large display and the navigation keys enables them to type numbers and letters in a very easy way.



In addition, two freely programmable function keys, F1 and F2, can be assigned to the functions most often needed. The THR9+ also has the fast menu familiar from other CASSIDIAN® TETRA radios. Together with the voice feedback, this makes it possible to use the radio without looking, which is an important benefit when focusing on the task at hand.

The large display is used for viewing the menu and operating the radio, and also provides valuable information for users on changing field situations. For example, a red signal warns the user if the radio battery is running empty or the TETRA network coverage is diminishing. In addition, the selected talk group, profile and the last sent status message are visible. The THR9+ has a specific night vision display colour scheme to provide enhanced visibility and user safety when working in the dark.

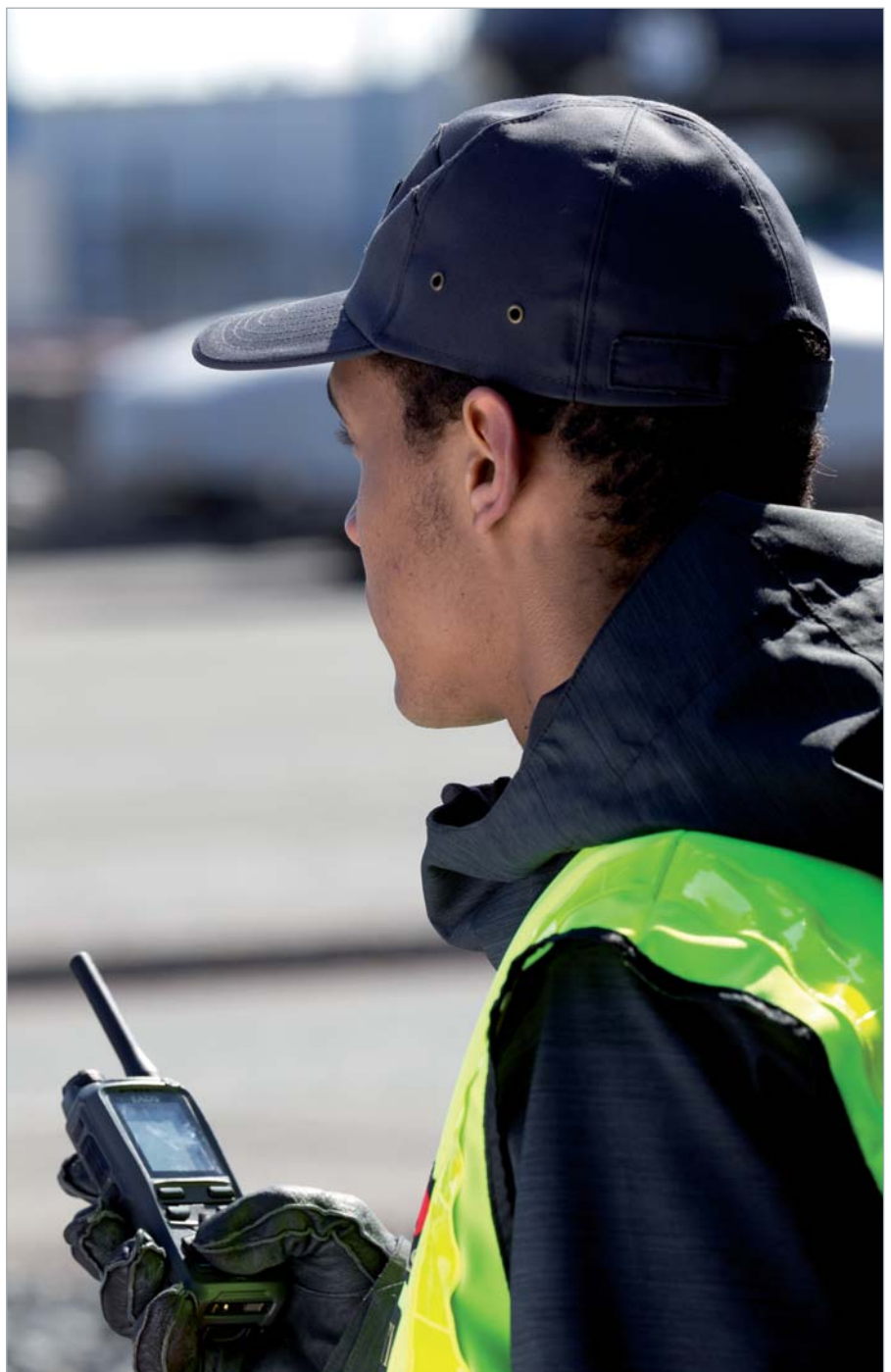
The THR9+ includes the advanced Lifeguard solution as a standard feature. Also known as a man-down alarm, this feature makes sure that help arrives quickly, should the user have for example an accident.

If the radio stops moving or remains horizontal for too long, it triggers a local alert which can be a tone signal, blinking display, vibration, or all three. If the user does not respond to the alert, the radio automatically activates an emergency call and sends its coordinates to a predefined destination which might be the fellow group members, or the dispatcher.

Equipped with a solid belt clip or carrying case, the compact THR9+ is easy to carry on a lapel or belt.

With an easy and reliable battery connection mechanism and two battery options - one with an extended capacity - the radio can keep even the heaviest radio users in contact throughout their shift.

The robust side connector links up with audio accessories such as lightweight headsets or a robust speaker microphone, as well as for data. The radio's bottom connector is used for charging, for data connection and programming.



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Cassidian TETRA Terminals fulfill the following specifications for TETRA radio equipment in the temperature range of -20°C to +55°C:

EN 300 392 V+D Air Interface

EN 300 394 V+D Conformance testing and TETRA Speech codec (ACELP) according to EN 300 395

Frequency Band

- 380 – 430 MHz

Power Class

- Compliant with EN300392-2 power class 4
- Receiver class A
- RF power control, 4 steps of 5 dB

Size

- Weight: 270 g
- Dimensions: 133 x 58 x 31 mm

Durability

- Water, dust and shock resistant according to IP65 classification

Display

- Full-color QVGA display
- Up to 262144 colors with 240 x 320 pixels
- Display backlight off by single key press
- Display reverse (180 degrees by single key press)
- Night vision mode

Keypad / controls

- Alphanumeric keypad
- 4 navigation keys, 3 selection keys
- 2 function keys F1 and F2
- HI/LO key for loudspeaker control
- Power-on key, volume keys, red function key, duty key, fast menu key, group selector, back key

GPS receiver

- Sensitivity -152 dBm
- Simultaneous satellites up to 12
- Cold start accuracy (open sky)*
 - 5 meters (50% confidence level)
 - 10 meters (95% confidence level)
- GPS activity indicator
- Automatic position saving
- Position information sending on request or on triggers (e.g. time, distance, status message)
- Position information sending during red key calls and public emergency calls
- Waypoints, waypoint guidance
- Showing caller's distance and direction during a call ('Where are you' feature)

* measured at -130 dBm

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- Saving own or caller's waypoint with one key press for Waypoint guidance
- NMEA routing to serial port, future SW update required
- Network-based terminal assisted positioning
- Support for ETSI location information protocol for TETRA (LIP)

Call Types

- Phone calls in TETRA networks
- Phone calls to public network
- Express and group calls in TETRA network
- TETRA emergency calls
- Public emergency calls (e.g. to 112)

Group Communication

- Up to 3 000 groups
- Up to 200 group folders
- Up to 400 groups per folder
- Dynamic Group Number Assignment (DGNA), up to 200 DGNA groups
- Up to 10 background groups
- Priority scanning
- Scanning list up to 59 groups
- Voice override in group calls (pre-emption)
- Late entry

Direct Mode Features

- Up to 1500 DMO groups
- 500 DMO channels
- DMO gateway support
- Support for DMO repeater type 1A and 1B
- Scanning
- DMO individual call
- Red key call to DMO group
- Red key call to TMO within TETRA network coverage
- Public emergency call within TETRA network coverage
- DMO SCK encryption, encryption classes 2a and 2b
- DMO status messages
- Re-broadcast of group and emergency groups calls on configured DMO groups

Messaging

- Status messages
- Text messages with concatenation
- Situation indicators to a predefined address
- Flash messages
- Unit alert

Security

- Life guard – an advanced solution for man down alarm
- Authentication

- Mutual authentication
- Air Interface Encryption (AIE) security classes:
 - Class 1: Clear
 - Class 2: SCK
 - Class 3: DCK/CCK
- Phone and Security code
- Temporary disable/enable (Stun)
- Permanent disable (Kill)
- Alert for out of network coverage
- Support for smart card based end-to-end encryption (option)

Wireless Data

- IP packet data
- WAP 2.0 over TETRA
- XHTML color browser
- AT-command interface for applications
- Java MIDP 2.0 platform

Interfaces

- Side connector for audio accessories and data
- Bottom connector for charging, carkit, programming and data
- Internal smart card slot
- Connector for external antenna (for carkit)

Other Features

- Voice feedback
- Configurable main menu
- Configurable fast menu
- Configurable function keys
- Transmission barring (Tx inhibit)
- DTMF tone dialing
- Any key answer
- Duplex call barring
- Multiple network support
- Aliasing
- Clock synchronisation with network and/or GPS time
- Vibration alert

Battery

Li-Ion 1900 mAh (premium battery) and 4600 mAh (heavy duty battery)

Estimated values for 1900 mAh battery:

- Up to 16 h (5/5/90)
- Up to 12,5 h (10/30/60)
- Up to 22,5 h (standby)

Estimated values for 4600 mAh battery:

- Up to 36 h (5/5/90)
- Up to 32,5 h (10/30/60)
- Up to 48 h (standby)

Note: GPS usage affects the above mentioned times.

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