Ultrasonic - receiver for Underwater Locating Device (ULD)

Manual for initiation and maintenance
No. 350-17610-A4e
THIS MANUAL IS TO BE READ TO ITS FULL EXTENT PRELIMINARY TO ANY INITIATION OR OPERATION, ANY TESTING OR MAINTENANCE OF THE TAG 2550.

Annotation of the number of this manual:

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350 – 17610 – A2e
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- **key-number**
- **exemplar-number**
- **document-sequence number**
- **language**
- **Revision**

Annotation of the part- and serial number system of TAG 2550:

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350 – 17610 – 00 – XXXX
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- **key-number**
- **exemplar**
- **modification index**
- **part-sequence number**

Type plate:
1. Introduction
This manual consists in the description as well as the operation - and maintenance directive of the TAG 2550 testing kit.

2. Scope of delivery
![TAG 2550 with accessories](image)
- TAG 2550 (350-17610)
- Earphone (350-17606)
- Connection lead (350-17627)

3. Symbols and Abbreviations
- ULD: Underwater Locating Device
- °C: Grad Celsius
- °F: Grad Fahrenheit
- kg: Kilogram
- m: Meter
- ft: Feet
- mm: Millimeter
- min: Minute
- h: Hour
- s: Second
- dB: Decibel
- kHz: Kilo Hertz
- LED: Light emitting Diode
- PC: Personal Computer
- TAG: Test und Auswertegerät

Testing and analysing Unit
Description

3.1. General
The TAG 2550 is a battery powered receiver for ultrasonic signals with a frequency of 25 to 50 kHz. The TAG 2550 receives ultrasonic signals via an integrated microphone. The received signals are optically reflected by a yellow LED and acoustically via an integrated loudspeaker. The output signals can be demonstrated by the earphone or by the connection lead on the PC as well. The TAG 2550 is a sensible instrument. Therefore it is to be protected from moisture and crushes.

3.2. Mode of operation
The front side of the TAG 2550 consists in three elements. The push-button is situated in the middle of the device. The instrument becomes recipient by pressing the push-button, the green LED (“Ready”) glows. The received signals are reflected optically by a yellow LED (“Pulse”) and acoustically by an integrated loudspeaker.

3.3. Specification of the TAG 2550

- Receiver frequency: 25 kHz to 50 kHz
- Power supply: button cell Lithium Type CR1632 350-17609
- Operating voltage: 3 Volt
- Operating temperature range: 0 °C to + 40 °C
- Size: 58mm x 36mm x 20mm (L x B x H)
- Weight: 24 gram
4. Testing

The ULD (e.g. PT9 C-Proof) is activated with the strap (conductive wire) of the TAG 2550 (vide figure 1), or according to the ULD producer’s information. The PT9 C-Proof activation is effected for three seconds after having connected the poles. Hereafter it is activated over a period of 60 seconds.

The TAG 2550 is to be levelled to the ULD with its front side (vide figure 2). The distance measures approx. 10cm. The device becomes recipient by pressing the push - button, the green LED (“Ready”) glows. The received signals are optically reflected by a yellow LED (“Pulse”) and acoustically by an integrated loudspeaker.

In loud environment, there can be used an earphone with a rotund clip (scope of delivery), which can be plugged into the TAG 2550 sideways (vide figure 3). If the signals shall be reflected on a PC (e.g. using an audiorecorder; PC is not included in the scope of delivery), the connection lead (scope of delivery) is to be used (vide figure 4).
5. Maintenance

This item contains instructions for the battery replacement of the TAG 2550 and its cleaning, same as its storage and disposal.

5.1. General

The TAG 2550 battery replacement should be made in a maintenance room under clean conditions, to avoid impurities by dust, dirt or humidity in the interior of the TAG 2550.

Note

Replacement of the TAG 2550 battery is to be done by a qualified technician only.

5.2. Battery replacement

The TAG 2550 works with a button cell Type CR1632 (Novega Order - No.: 350-17609). If the green LED (“Ready”) should not glow any more, or the sound of the loudspeaker should degrade, the battery is to be replaced. For this purpose, the screw on the reverse side of the TAG 2550 is to be removed (vide figure 5).

The covering can now be removed by soft pressing of the clip (vide figure 6).
The electronic unit is extracted by gripping the electronics at the loudspeaker (vide figure 7) and soft tilting. It is to be considered to not touch the circuit board at the braze point, to avoid damages. Please wear gloves to protect the electronic from electrostatic charging. In addition, a grounding wristlet is to be used. The button cell is to be pushed out of the fitting and removed.

**Caution!**

While replacing the battery, attend to the correct polarity!
(+ pole above; vide figure 8)

Shift the button cell into the battery clamp and inlay the circuit board into the box.

IT IS IMPERATIVELY TO BE CONSIDERED, THAT THE CIRCUIT BOARD BEARS ON THE SPIKES.

At closing the TAG 2550, the clip has to lock in place under low pressure. The housing can now be screwed.

**Warning:**

AN INAPPROPRIATE INSTALLATION OF THE BATTERY MIGHT CAUSE A DAMAGE OF THE TAG 2550 ELECTRONICS.
5.3. **Battery disposal**
Dispose the battery in accordance with all local, state and federal regulations. Keep away from children.

5.4. **Cleaning of TAG 2550**
Clean the TAG 2550 with a soft, anti-static and dry cloth.

6. **Warranty**
The warranty period of the TAG 2550 constitutes 2 years from the date of delivery by:

**Novega Produktionssysteme GmbH**
Gewerbepark 2
87477 Sulzberg (See)
**Germany**
Fon: (+49) 8376-92990-0
Fax: (+49) 8376-92990-20
E-Mail: service@novega.de

7. **Reshipment**

7.1. **TAG 2550 return - defective**
- In case of failure, which is determined to be within the warranty terms, the TAG 2550 will be repaired or replaced by Novega to the customer.

7.2. **TAG 2550 return – no defect**
- If a TAG 2550 is returned to Novega and it is found to be functional, the beacon will be returned to the customer, shipping collect. In addition, the customer will be informed, that an analysis fee applies.

7.3. **Return TAG 2550 – out of warranty**
- If the TAG 2550 is returned to Novega out of warranty, the customer will receive an estimate of costs.
7.4. *Annual functional test*

- The annual functional test is made by Novega. Please ship the TAG 2550 inclusive original packaging and documentation.

7.5. *Battery replacement*

- The TAG 2550 can be returned to Novega for battery replacement. (e.g. in case of the annual functional test). Please ship the TAG 2550 inclusive packaging and the original documentation.

7.6. *Packaging of the return*

- Ascertain, that there is provided a proper protection packaging for the Underwater Locating Device, i.e. protection against unintentional breakage, scratches or abrasions.

7.7. *Documents to attach*

- Reason for return
- Serial number of the TAG 2550
- Return Authorisation Number (vide 7.8.)
- Calibration Certificate

7.8. *Return Authorisation Number*

Prior to shipping the TAG 2550 to Novega, a Return Authorisation Number should be required at:

**Novega Produktionssysteme GmbH**

Gewerbepark 2
87477 Sulzberg (See)
Germany

Fon: (+49) 8376-92990-0
Fax: (+49) 8376-92990-20
E-Mail: service@novega.de

[www.novega-sea.com](http://www.novega-sea.com)