

RECG

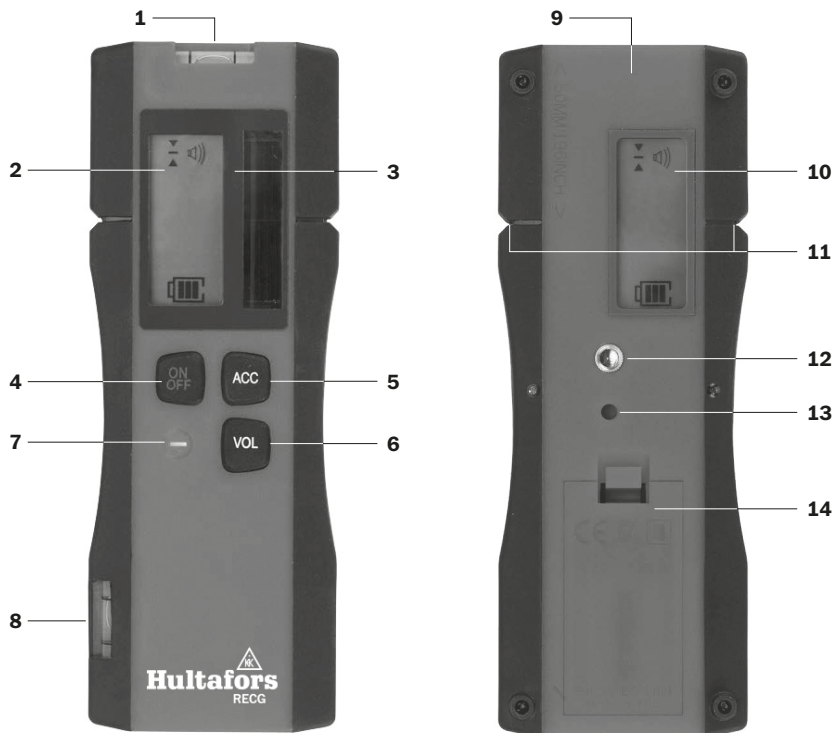

Hultafors



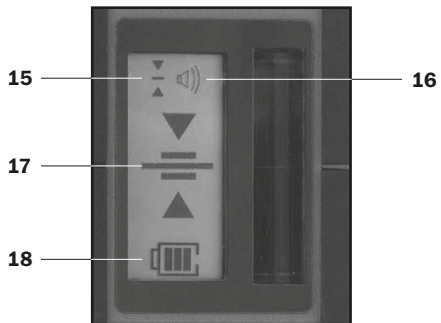
Operating instructions

EN

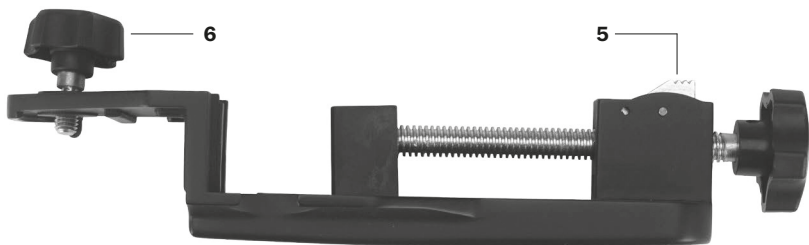
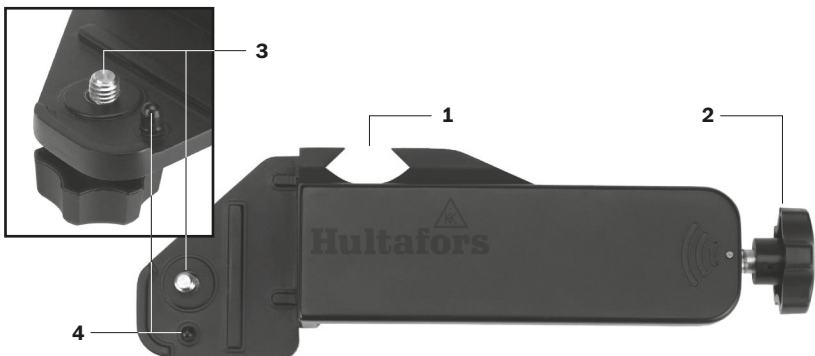
2.1 RECG



2.1 RECG



2.2 Holder



Operating manual

RECG hand-held receiver

About this manual

Congratulations on the purchase of your new Receiver RECG! You have acquired a Hultafors measurement instrument, which can make your work easier, faster and more precise. To utilize the complete functionality range of this measurement instrument, and to ensure a safe operation, please observe the following instructions:

- Please read these operating manual before starting to use the device.
- Always keep the operating manual near the device.
- Only hand over the device to other persons together with the operating manual.
- Never render the attached warning signs unreadable.

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1. General information

1.1 Signal words and their meaning

DANGER

For an imminent danger that could lead to serious injury or death.

WARNING

For a possibly dangerous situation that could lead to serious injury or death.

CAUTION

For a possibly dangerous situation that could lead to slight injury or property damage.

NOTE

For application notes and other useful information

1.2 Pictograms and other information

1.2.1 WARNING SIGNS



Warning of dangers in general

1.2.2 SYMBOLE



Read instructions before use



Batteries and devices must not be disposed of with household waste



Do not throw batteries into a fire



Warning signs on battery Do not heat the battery above 60°C.

2. Description

2.1 RECG

1. Horizontal spirit level vial
2. Front display
3. Detection window for laser beam
4. «ON/OFF» button; Display light
5. «ACC» button; Fine/rough accuracy setting
6. «VOL» button; Signal sound setting
7. Loudspeaker
8. Vertical spirit level vial
9. Magnet
10. Rear display
11. Marking point
12. ¼" thread
13. Guide sleeve
14. Battery compartment
15. Accuracy status
16. Signal sound status
only loudspeaker: moderately loud;
loudspeaker with three bars: very loud;
no loudspeaker: silent
17. Reference laser beam centred
18. Battery status

2.2 Holder

1. Marking point
2. Fixing screw
3. ¼" screw
4. Guide pin
5. Rapid clamping device
6. Fixing screw

2.3 Intended use

The RECG is a hand-held receiver, which a person can use single handed to receive a horizontal and vertical line laser beam.

The device is preferably designed to be used indoors. For outdoor applications, it must be ensured that the ambient conditions are similar to those indoors.

Follow the instructions contained in this manual.

The device and accessory equipment may be a source of danger if they are utilised improperly or inappropriately by persons who are not instructed as required.

3. Technical data

Operation range	r = 1 - 80 m*
Large detection window	50 mm
Max. measurement tolerance	
- Fine	± 0.5 mm / m
- Rough	± 2.0 mm / m
Protection class	IP54
Power supply	1 x 9V 6F22 (E-Block) Battery
Battery life (at 20°C)	40 h
Operating temperature	-15°C to +60°C
Thread for holder	1/4"
Weight without batteries	210 g
Dimensions	195 x 70 x 30 mm

*... depending on the environmental conditions at the workplace. | Changes (drawings, descriptions and technical data) are reserved.

4. Safety instructions


4.1 AREA OF RESPONSIBILITY

4.1.1 MANUFACTURER

Hultafors is responsible for delivering a safe and perfect quality product, including the operating manual and original accessory equipment.

4.1.2 OPERATOR

The operator is responsible for the correct use of the product, the deployment of its employees, training for its employees and the operational safety of the product.

- The operator understands the safety information on the product and the instructions in the operating manual. 
- The operator complies with any current local regulations pertaining to operational safety and accident prevention and/or employee protection legislation and regulations.
- The operator informs Hultafors immediately if safety defects arise in this product or in the use of this product.
- The operator ensures that the product can no longer be operated if defects do arise and sends the product to be repaired by a specialist.

4.2 Improper Use

- Use of the device and the accessory equipment without instruction.
- Use of accessory or auxiliary equipment belonging to third parties.
- Use outside of the limits of use (see Chap. 3/Technical Data).
- Use under extreme fluctuations in temperature without sufficient acclimatisation.
- Disabling safety devices and removing instruction signs and warning signs.
- Unauthorised opening of the device.
- Implementation of alterations or modifications to the device or its accessory equipment.

4.3 Limits of use

The RECG hand-held receiver is suitable for use in ambient conditions that are continuously suitable for human habitation.

- Do not use the product in areas that are at risk of explosion or in a hostile environment.
- Contact local safety authorities and the people responsible for safety before carrying out work in hazardous atmospheres, close to electrical equipment or in similar situations.

4.4 Usage Hazards

4.4.1 GENERAL



CAUTION

A fall, longer storage, transportation or other mechanical effects can lead to erroneous measurement results. Check the unit for damage before use. Do not use damaged equipment.

- Repairs have to be exclusively performed by Hultafors
- Before use, check the accuracy of the device (see Chapter 7 / Checking the accuracy)

4.4.2 BATTERIES/RECHARGEABLE BATTERIES



DANGER

Strong mechanical influences can lead to leakage, fire or explosion of batteries and rechargeable batteries or toxic substances may be released.

- Do not open batteries or rechargeable batteries and do not expose to mechanical pressure.
- Repair work may only be carried out by Hultafors.



WARNING

High ambient temperatures and immersion into liquids can cause a leakage, fire or explosion of the batteries or trigger the release of toxic substances.

- Protect batteries and rechargeable batteries from mechanical influences during transport.
- Do not overheat batteries and rechargeable batteries or expose them to fire.
- Avoid the ingress of moisture into batteries and rechargeable batteries.
- Do not use damaged batteries or rechargeable batteries. Perform a proper disposal (see Chapter 9 / Disposal).



WARNING

A short-circuiting or unintended use can cause batteries to overheat and create an injury or fire hazard.

- Do not transport or store batteries in the pockets of garments.
- Do not bring the battery contacts in contact with jewelry, keys, or other electrically conductive objects.
- Do not charge the batteries.
- Do not discharge the batteries through short-circuiting.
- Do not solder the batteries within the device.
- Do not mix old and new batteries, and do not mix batteries from different manufacturers or with a differing type designation.



WARNING

If disposed of improperly third parties can possibly be seriously injured and the environment polluted. The burning of plastic components generates toxic fumes which may impair health of people. Batteries / rechargeable batteries may explode if they are damaged or heated excessively, and thereby cause poisoning, burning, corrosion or environmental contamination.

If disposed of negligently unauthorized persons are able to use the product improperly.

- The product may not be disposed of together with household waste. Perform a proper disposal of the device and the accessories (see Chapter 9/ Disposal).
- Protect the product at all times from access through unauthorized persons, and especially children.

4.5 Electromagnetic compatibility (EMC)

The electromagnetic compatibility is the ability of the product to function in an environment with electromagnetic radiation and electrostatic discharges were are present, without causing an electromagnetic interference for other devices.

4.5.1 MALFUNCTION OF OTHER DEVICES AS A RESULT OF THE RECG HAND-HELD RECEIVER

Although the product meets the strict requirements of the relevant directives and standards, Hultafors can not completely exclude the possibility of interference with other devices (for example, when using the product in combination with third-party devices, such as field computers, personal computers, wireless devices, mobile phones, certain cables or external batteries).

- When using computers and radio equipment make sure to observe to the vendor-specific information about electromagnetic compatibility.
- Only use original Hultafors equipment and accessories.

4.5.2 MALFUNCTION OF THE RECG HAND-HELD RECEIVER AS A RESULT OF OTHER DEVICES

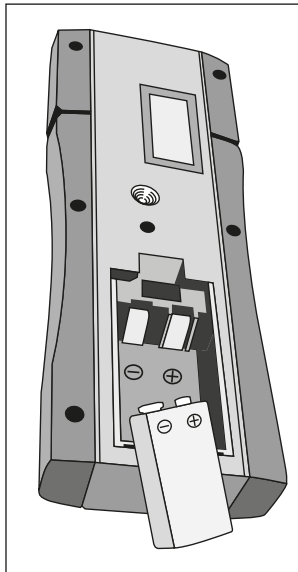
Although the product meets the strict requirements of the relevant directives and standards, Hultafors can not entirely exclude the possibility that an intense electromagnetic radiation in the immediate vicinity of radio transmitters, two-way radios, diesel generators, etc. can distort the measurement results.

- When performing measurements under these conditions check the plausibility of the results.

5. Start-up

1. Open the battery compartment cover on the rear side of the device.
2. Insert batteries with the correct polarity into the RECG hand-held receiver.
3. Close the battery compartment (audible click of the cover).

Only use 9V 6F22 (E-Block) batteries! If the device is not used for a long period, remove the batteries.



6. Operation

6.1 Turning the device on/off

On:

- Press «ON/OFF» button.

Off:

- Hold the «ON/OFF» button down for 3 seconds (the hand-held receiver will turn itself off automatically after 7 minutes if it is not actively being used).
- Turn the front face of the receiver towards the laser device and ensure that the receiver window is vertical to the line plane.
- Move the receiver up and down until a signal sounds and/or until direction arrows become visible on the display.

If the marking point on the receiver is above the laser beam, a fast, pulsing signal sound is audible and an arrow pointing downwards appears on the display.

- Move the receiver downwards in the direction of the arrow shown on the display.

If the marking point on the receiver is below the laser beam, a slow, pulsing signal sound is audible and an arrow pointing upwards appears on the display.

- Move the receiver upwards in the direction of the arrow shown on the display.

If an unbroken signal sound is audible and/or if only the central bar is still visible, the marking point is exactly on the laser beam.

- Mark the height of the laser beam on the marking points using a pen. The spirit level vial can be used to align the receiver vertically in order to ensure that the marking points on the left and right sides are at the same height.

6.2 Accuracy

The RECG hand-held receiver has two levels of accuracy. The „Fine“ level with an accuracy of 0.5 mm and the „Rough“ level with an accuracy of 2.0 mm.

- Turn the RECG hand-held receiver on.
- Press the «ACC» button to switch between the two levels of accuracy.

6.3 Signal sound

The signal sound on the RECG hand-held receiver can be adjusted. There are three levels.

Only loudspeaker: moderately loud; loudspeaker with three bars: very loud; no loudspeaker: silent.

- Turn the RECG hand-held receiver on.
- Press the «VOL» button to switch between the variants.

6.4 Display light

The RECG hand-held receiver has a background light for the front and rear display.

7. Testing the accuracy of the device

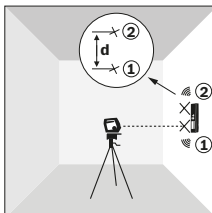
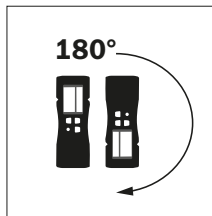
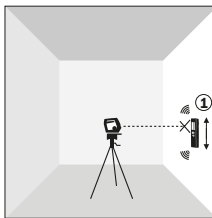
Test the accuracy of the RECG hand-held receiver before carrying out every measurement.

- Before starting the test, allow the device to acclimatise to the environmental conditions.
1. Place line laser on a stable surface, e.g. tripod, adjust this and turn it on (pulse mode).
 2. Turn the front face of the receiver towards the laser device and ensure that the receiver window is vertical to the line plane.
 - Move the receiver up and down until a signal sounds and/or until direction arrows become visible on the display.
 - Align the receiver to the marking point (if an unbroken signal sound is audible and/or if only the central bar is still visible, the marking point is exactly on the laser beam).
 - Mark height ① of the laser beam using a pen at the marking points.
 3. Turn the receiver 180° and ensure that the receiver window is vertical to the line plane.
 - Move the receiver up and down until a signal sounds and/or until direction arrows become visible on the display.
 - Align the receiver to the marking point (if an unbroken signal sound is audible and/or if only the central bar is still visible, the marking point is exactly on the laser beam).
 - Mark height ② of the laser beam using a pen at the marking points.

The vertical distance, 'd' between marking points ① and ② may be a max. of 0.5 mm in the „Fine“

level of accuracy or 2.0 mm in the „Rough“ level of accuracy.

If the result is more than 0.5 mm or 2.0 mm, the device must be readjusted. Please contact your dealer.



8. Maintenance, storage and transportation

8.1 Cleaning

- Wipe away any dirt with a soft, damp cloth.
- Do not use any abrasive cleaning agents or solvents.
- Do not immerse the device in water!
- Clean and dry soiled and wet devices, auxiliary parts and transport containers before packaging these.
- Only repack equipment once it is completely dry.

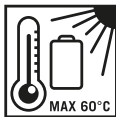
8.2 Storage

8.2.1 GENERAL

- Only store the equipment within the stipulated temperature limits (see Chap. 3/Technical Data).
- Check the accuracy of the measurement instrument before use if it has been stored for a long period of time.

8.2.2 BATTERIES/RECHARGEABLE BATTERIES

- Remove any batteries and rechargeable batteries from the device before storage.
- Store at room temperature in a dry area wherever possible (see Chap. 3/Technical Data).
- Keep away from moisture and humidity. Dry wet or moist batteries out prior to storage or before use.



8.3 Transport

8.3.1 GENERAL

The device may become damaged if it is heavily shaken or dropped.

- Never transport the product loose. Always use the original packaging or an equivalent transport container.
- Turn off the measuring equipment before transporting it.
- Check the device for any damage before using it.

8.3.2 BATTERIES/RECHARGEABLE BATTERIES

The operator is responsible for adhering to the regulations and requirements in force on a national and international level when transporting or sending batteries and rechargeable batteries.

- Remove the batteries from the device before dispatch.

9. Disposal

If disposed of improperly third parties can possibly be seriously injured and the environment polluted.

The burning of plastic components generates toxic fumes which may impair health of people. Batteries / rechargeable batteries may explode if they are damaged or heated excessively, and thereby cause poisoning, burning, corrosion or environmental contamination.

If disposed of negligently unauthorized persons are able to use the product improperly.

Measuring tools, accessories and packaging must be recycled in an environmentally-friendly manner.



The product as well as the accessories - especially the batteries and rechargeable batteries - may not be disposed of with household waste.

- Perform a proper disposal of the device and the accessories.
- Observe the country-specific disposal requirements.

Only for EU countries



Electric tools may not be disposed of with household waste! According to the European Directive 2002 / 96 / EC on Waste Electrical and Electronic Equipment and its implementation in national law, no longer usable electrical and electronic equipment must be collected separately and recycled in an environmentally friendly manner.

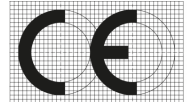
10. Manufacturer's Guarantee

„The manufacturer warrants to the original purchaser who is stated on the guarantee card, the freedom from defects for the device for a period of two years, with the exception of batteries, as of the point in time the device is handed over. The guarantee is limited to repairs and / or replacements at manufacturer's discretion. Defects which are caused through improper handling by the purchaser or third parties, natural wear and optical flaws that do not affect the usability of the equipment, are not covered by this guarantee. Claims under this guarantee can only be invoked if the device is submitted along with the guarantee card, completely filled out by the dealer, dated and provided with the company stamp. If the guarantee claim is justified, the manufacturer shall bear the transport costs. The duration of the guarantee will not be extended through repair or spare parts work which is carried out within the scope of the guarantee. Further claims are excluded, unless there are provided by the respective national legislation. In particular the manufacturer shall not be liable for any direct, indirect, incidental or consequential damages, losses or expenses in connection with the use or because of the inability to use the tool for any purpose whatsoever. Implied warranties for the usage or suitability for a particular purpose are expressly excluded.“

11. EC conformity declaration



Declaration of Conformity



We **Hultafors Group AB, Hultaforsvägen 21, Hultafors**

declare under our sole responsibility that the Product(s)

RECG

to which this declarations relates is in conformity with the following standards.

RECG:

- EN 61326-1:2013

Following the provisions of Directive(s)

Electromagnetic compatibility 2004/108/EC

Low Voltage Directive 2006/95/EC

