Remote Control

Operating instructions

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1   Introduction

1.1   About these operating instructions

These operating instructions are an integral part of the product and the overall documentation of the Remote Control.

Carefully read and follow the instructions given in this document. Keep this information and all product-related documents in a safe and easily accessible place to allow all relevant persons access to it as a reference guide at any time. Hand the operating instructions and any other product related documentation to each person using the product. Failing to do so will result in voiding the warranty and losing the entitlement to warranty claims. Service and repair work of the system must only be carried out by an authorised service technician or a staff member of Hexagon AICON ETALON GmbH.

The operating instructions must always be at hand and available at the system in a readable condition.

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Biberweg 30C, 38114 Braunschweig, Germany

E-Mail: mi-etalon-info@hexagon.com

Internet: www.hexagon.com

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2   Safety instructions and general remarks

2.1   Symbols and descriptions of the used hazard levels

The following directions enable the person responsible for the product, and the person who actually uses the equipment, to anticipate and avoid operational hazards.

The person responsible for the product must ensure that all users understand these directions and adhere to them.

Warning messages are an essential part of the safety concept of the instrument. They appear wherever hazards or hazardous situations can occur and they enable the user to detect and thus avoid dangers of use at an early stage.

Warning messages...

make the user alert about direct and indirect hazards concerning the use of the product.

contain general rules of behaviour.

For the users' safety, all safety instructions and safety messages shall be strictly observed and followed! Therefore, the operating instructions must always be available to all persons performing any tasks described here.

DANGER, **WARNING**, **CAUTION** and **NOTICE** are standardised signal words for identifying levels of hazards and risks related to personal injury and property damage. For your safety, it is important to read and fully understand the following table with the different signal words and their definitions! Supplementary safety information symbols may be placed within a warning message as well as supplementary text.

Type	Description
⚠ **DANGER**	The symbol indicates an imminent hazard which leads to serious injury or death.
⚠ **WARNING**	The symbol indicates a potentially hazardous situation. If not avoided, it could result in serious injury or death.
⚠ **CAUTION**	The symbol indicates a potentially hazardous situation. If not avoided, it may result in minor or moderate injury.
NOTICE	The symbol indicates a potentially hazardous situation. If not avoided, it may result in material damage.
INFO	The symbol indicates important information for an efficient, technically correct work with the products.

Table 1: Significance of the used signal words

2.2   Hazard warnings and safety measures

You are responsible for familiarising yourself with the safety instructions in this operating instructions. These instructions prohibit certain methods or procedures that could lead to physical injury, damage to property or unsafe operation. Consider the fact that most accidents are a result of disregard of basic safety precautions.

⚠ **WARNING**

Danger due to crushing

Using the Remote Control with LASERTRACER can cause the LASERTRACER to perform motion. Ensure that any motion does not harm any individual.

Safety measure:

⇨ Only use the Remote Control when the system to operate is in view and it is ensured that any motion is wanted and has no potential to harm anyone!

⚠ **CAUTION**

Danger due to incorrect operation, maintenance and repair

Incorrect operation, maintenance and repair of the product can cause injury and material damage.

Safety measures:

⇨ Use the product only for its intended use (as described in the operating instructions)!

⇨ Repair and maintenance work must only be performed by authorised and qualified personnel!

⇨

INFO

The company Hexagon AICON ETALON GmbH cannot foresee all potentially hazardous situations. The warnings specified herein are not to be understood as exhaustive.

3 Remote Control

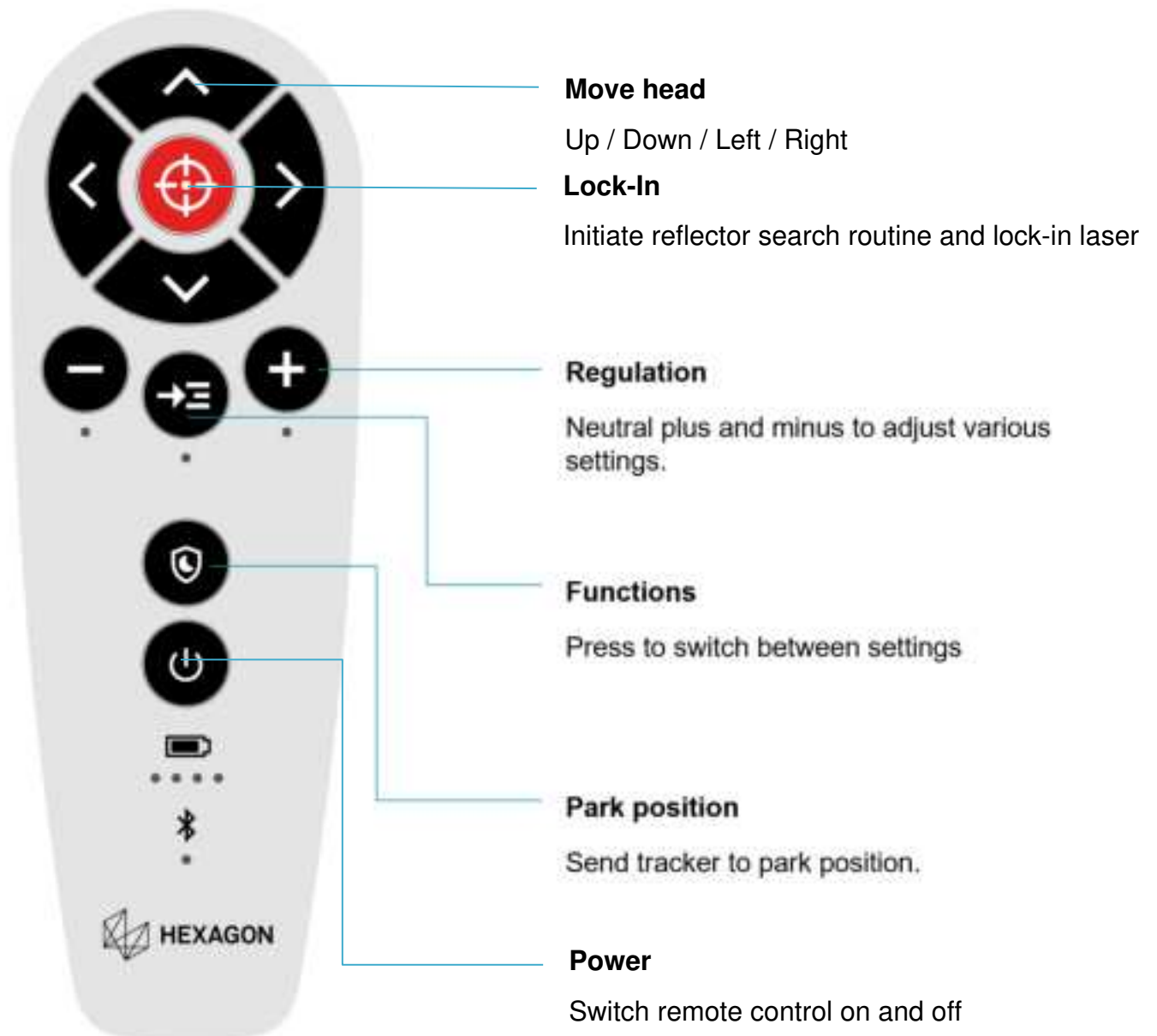The Remote Control is part of the supply with LASERTRACER. Its purose is to simplify operation of LASERTRACER by giving access to some of the most important functions during the use of LASERTRACER. The main functions are:

1. Moving the LASERTRACER head direction in horizontal manner
2. Moving the LASERTRACER's laser in vertical direction
3. Starting the lock-in procedure
4. Setting the initial measurement distance
5. Bring the head into transport position

3.1 Buttons

The Remote control is equipped with 10 buttons. The functionality of these buttons is described in the System manual within the LT3man-section. They are basically as follows:

Move head

Up / Down / Left / Right

Lock-In

Initiate reflector search routine and lock-in laser

Regulation

Neutral plus and minus to adjust various settings.

Functions

Press to switch between settings

Park position

Send tracker to park position.

Power

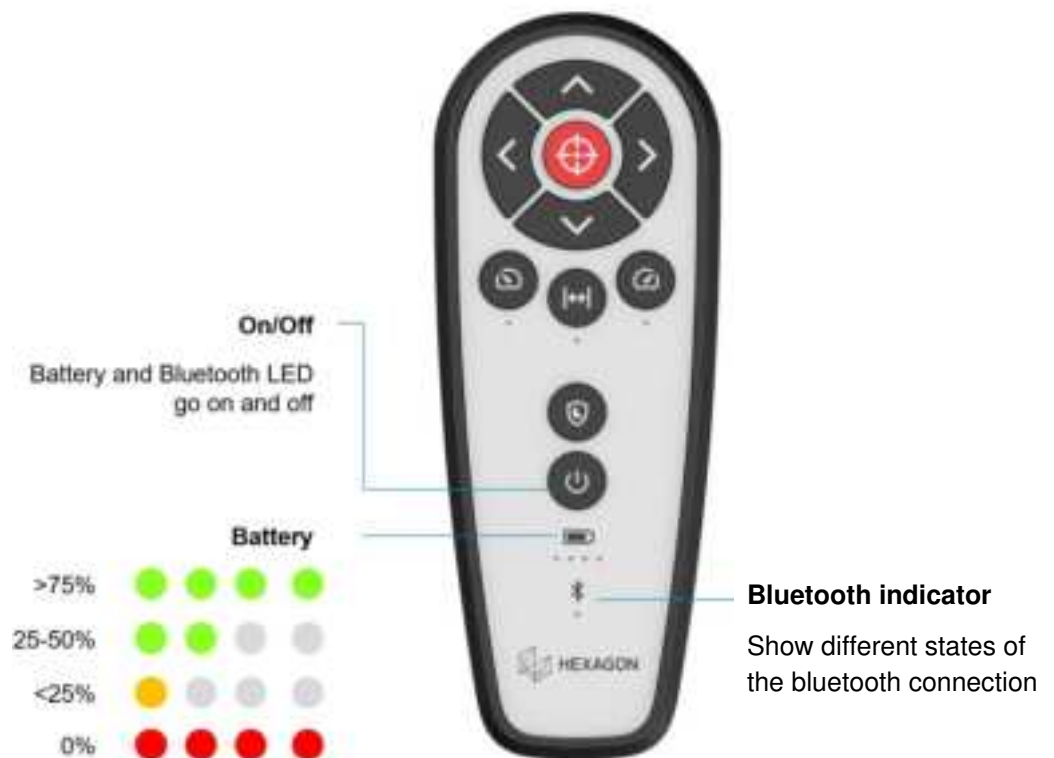Switch remote control on and off

Piicture: Remote control of LASERTRACER and its basic functions

3.2   Battery Status and Charging

The Remote Control is equipped with an internal battery. The battery typically last far more than one working day, however, it needs to be recharged regularly.

The battery status is inticated with an internal LED display. The charging status is can be estimated as follows:

Bluetooth indicator

Show different states of the bluetooth connection

NOTE
If the bluetooth device is not reacting any more, press the On/Off - Button for more than 7.5s. This will cause the remote to restart.

The Remote Control can be recharged by a standard USB charger and a USB-C cable. Therefore, plug the cable into the charging port of the Remote Control at the lower end of the device.

USB-C Charging Port

Charge the internal battery of the remote

 WARNING

Internal Battery

The remote control has diverse screws on the bottom. These are only to access the internal elements for qualified service and maintenance. The Remote Control shall at no circumstances be opened be the user. This can cause shortcuts of the battery and thus can injure the operator.

Safety measure:

⇨   Do not try to open the Remote Control. There are no internal parts to be maintained.

3.3   Connecting the Remote Control to the PC

In order to connect the Remote Control to the PC follow these steps:

1. Go to the bluetooth menu of your PC and start searching for a new bleutooth device.
2. Switch the Remote Control into the connection mode. In order to start the connection mode, switch the Remote Control off and then press the power button for >3s. This will cause the bluetooth LED start blinking.
3. Select "Remote Control" from the avalable devices.
4. Remote Control should now apppear in the list of cenncted items.

4   Maintenance

No specific maintenance of the Remote Control is needed.

Danger due to incorrect maintenance and repair works

Incorrect maintenance and repair works can cause injury and material damage.

Safety measure:

⇨   All maintenance and repair must only be performed by a special trained technician!

4.1   Cleaning the Remote Control

Dirt and dust can be removed with a dry soft towel. In case the Remote Control is contaminated or covered with liquids, remove the liquids from the surface and let it dry for some hours.

5 Technical data

Remote Control	
Battery type	Li-Ion
Capacity	2.7 Wh
Charging Time	≤ 1.5 h
Operating Time	≥ 70 h
Bluetooth Range	10 m / 32.81 ft
Communication	Bluetooth V5.3
Output Power	-20 to 4.0 dBm
Frequency of Bluetooth Smart	2.36 to 2.5 GHz
Ports	USB-C

Table: Technical data

5.1 Regulations

5.1.1 USA

FCC ID: RFF-RC1BT Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference does not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Hexagon AICON ETALON GmbH for compliance could void the user's authority to operate the equipment.

5.1.2 Canada

CAN ICES-003 Class B IC: 3177A-RC1BT

Canada Compliance Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference

2. This device must accept any interference, including interference that may cause undesired operation of the device

Canada Déclaration de Conformité

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage

2. L'appareil doit accepter tout brouillage radioélectrique subi, même si

le brouillage est susceptible d'en compromettre le fonctionnement

Radio Frequency (RF) Exposure Compliance Statement

The radiated RF output power of the instrument is below the Health Canada's Safety Code 6 exclusion limit for portable devices (radiated element separation distance between the radiating element and user and/or bystander is below 20 cm).

Hexagon AICON ETALON GmbH
Biberweg 30 C
D-38114 Braunschweig

tel.   +49 (0) 531 58 000 58
www.hexagon.com

Hexagon AICON ETALON GmbH
Scanner Innovation Center
Torenstraße 14
D-88709 Meersburg

tel.   +49 (0)7532 4346 0
www.hexagon.com