

BD6A

EN

ORIGINAL INSTRUCTIONS
CROSS LINE LASER



 **TROTEC**

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Notes regarding the instructions

Symbols


 **Warning of electrical voltage**
 This symbol indicates dangers to the life and health of persons due to electrical voltage.


 **Warning of laser radiation**
 This symbol indicates dangers to the health of persons due to laser radiation.

 **Warning**
 This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

 **Caution**
 This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note
 This signal word indicates important information (e.g. material damage), but does not indicate hazards.

 **Info**
 Information marked with this symbol helps you to carry out your tasks quickly and safely.

 **Follow the manual**
 Information marked with this symbol indicates that the instructions must be observed.

You can download the current version of the instructions and the EU declaration of conformity via the following link:




BD6A



<https://hub.trotec.com/?id=47206>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.

 **Warning**
Read all safety warnings and all instructions.
 Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Do not immerse the device in water. Do not allow liquids to penetrate into the device.
- The device may only be used in dry surroundings and must not be used in the rain or at a relative humidity exceeding the operating conditions.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device.
- Avoid looking directly into the laser beam.
- Never point the laser beam at people or animals.
- Never charge batteries that cannot be recharged.
- Different types of batteries and new and used batteries must not be used together.
- Insert the batteries into the battery compartment according to the correct polarity.
- Remove discharged batteries from the device. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
- Remove the batteries from the device if you will not be using the device for a longer period of time.
- Never short-circuit the supply terminal in the battery compartment!
- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!

- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Only use the device, if sufficient safety precautions were taken at the surveyed location (e.g. when performing measurements along public roads, on building sites etc.). Otherwise do not use the device.
- Observe the storage and operating conditions (see Technical data).

Intended use

Only use the device BD6A for the projection on non-reflective surfaces as an aid to determine and check horizontal, vertical and / or parallel lines. Observe and comply with the technical data.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Any use other than the intended use is regarded as misuse.

Foreseeable misuse

Do not use the device BD6A in potentially explosive atmospheres or in liquids. Never point it at people or animals. Trotec accepts no liability for damages resulting from improper use. In such a case, any warranty claims will be voided.

Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualifications

People who use this device must:





- be aware of the dangers that occur when working with laser measuring devices.
- have read and understood the instructions, especially the Safety chapter.

Safety signs and labels on the device

Note

Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.

The following safety signs and labels are attached to the device:

Safety symbol	Meaning
	<p>The warning sign is located on the side of the device and indicates that the device is equipped with a class 2 laser.</p> <p>The power is less than 1 mW. The frequency range of the laser is 630 to 670 nm.</p> <p>Do not look directly into the laser beam or the opening from which the laser beam emerges!</p>
	<p>The warning sign is located above the laser.</p> <p>Do not look directly into the laser beam or the opening from which the laser beam emerges!</p>
	<p>The warning sign is located on the side of the device and indicates that the gimbal suspension of the laser must be disabled before transport.</p> <p>To do so, the switch must be set to the  position.</p>

Residual risks



Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning of laser radiation

Laser class 2, P max.: < 1 mW, λ: 400-700 nm, EN 60825-1:2014

Do not look directly into the laser beam or the opening from which it emerges.

Never point the laser beam at people, animals or reflective surfaces. Even brief eye contact can lead to eye damage. Examining the laser output aperture by use of optical instruments (e.g. magnifying glass, magnifiers and the like) entails the risk of eye damage.

When working with a laser of class 2, observe the national regulations on wearing eye protection.



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



Caution

Keep a sufficient distance from heat sources.

Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

Note

Do not use abrasive cleaners or solvents to clean the device.

Information about the device

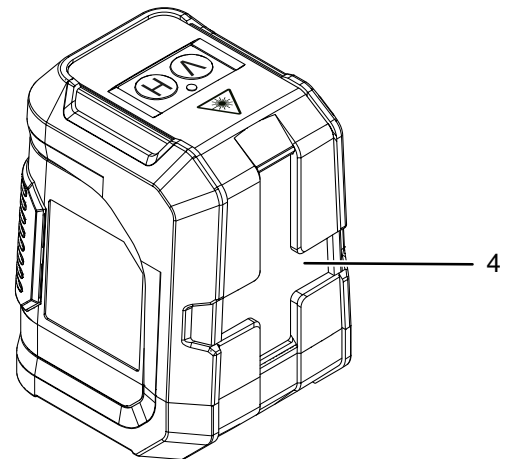
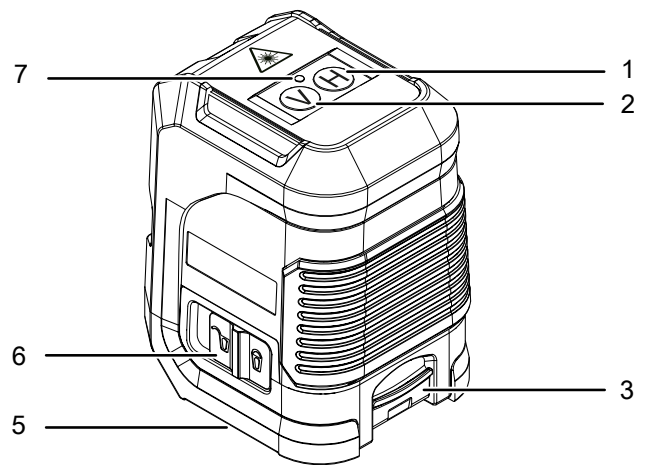
Device description

The cross line laser BD6A projects laser lines on surfaces, e.g. to drill holes in a straight line – similar to using a spirit level.

The device comes with the following features:

- Projects light-intense laser lines up to a distance of 10 m
- Self-levelling up to an inclination of 3.5°
- Laser projection either as cross lines or as individual horizontal or vertical line
- Battery-operated
- Integrated ¼ inch tripod connection

Device depiction



No.	Designation
1	H button
2	V button
3	Battery compartment with cover
4	Laser
5	1/4 inch tripod connection (bottom)
6	On/off/lock switch
7	Operating mode LED

Technical data

Parameter	Value
Model:	BD6A
Weight:	274 g
Dimensions (length x width x height):	70.4 x 62.1 x 90.5 mm
Laser accuracy:	±3 mm/10 m
Self-levelling function:	3.5° (±1°)
Range:	10 m
Laser output:	<1 mW (635 nm)
Laser class:	2
Operating temperature:	-10 °C to 50 °C
Resistant to drop height of:	1.2 m
Tripod	1/4 inch
Protection class	IP54
Standby time	12 h
Power supply:	2 x Alkaline AA, 1.5 V batteries

Scope of delivery

- 1 x Cross line laser BD6A
- 2 x Alkaline AA, 1.5 V batteries
- 1 x Quick guide

Available accessories

Designation	Article number
Combi mount with universal clamp	6,300,000,201

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

When transporting the device, ensure dry conditions and protect the device from external influences e.g. by using a suitable bag.

Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- the storage temperature complies with the values specified in the Technical data
- Batteries are removed from the device

Operation

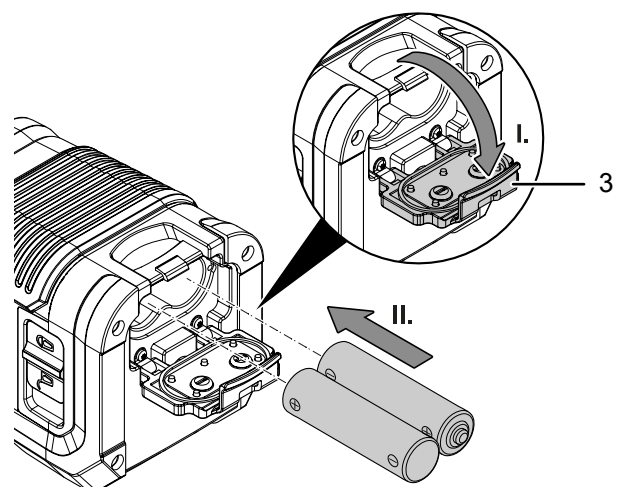
Inserting the batteries

Insert the supplied batteries into the device before first use.

Note

Make sure that the surface of the device is dry and the device is switched off.

1. Open the cover (3) of the battery compartment.
2. If applicable, remove the old batteries.
3. Insert the new batteries in the battery compartment with correct polarity.
4. Then close the cover of the battery compartment (3) again.



Important information before use



Warning of laser radiation

Laser class 2, P max.: < 1 mW, λ: 400-700 nm, EN 60825-1:2014

Do not look directly into the laser beam or the opening from which it emerges.

Never point the laser beam at people, animals or reflective surfaces. Even brief eye contact can lead to eye damage.

Examining the laser output aperture by use of optical instruments (e.g. magnifying glass, magnifiers and the like) entails the risk of eye damage.

When working with a laser of class 2, observe the national regulations on wearing eye protection.

Selecting the mode


The device comes with two operating modes, a self-levelling and an inclination mode. In self-levelling mode, the device automatically compensates for an angle of up to 3.5 ° and aligns the laser lines horizontally or vertically. In the inclination mode, the device can be aligned at any angle. In both modes, the device is switched on and off differently.

To change the mode, please proceed as follows:

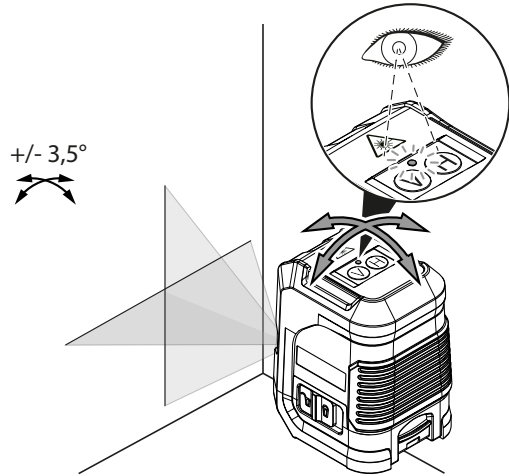
1. Switch off the device according to the current mode.
2. Switch on the device according to the new mode.


Self-levelling function

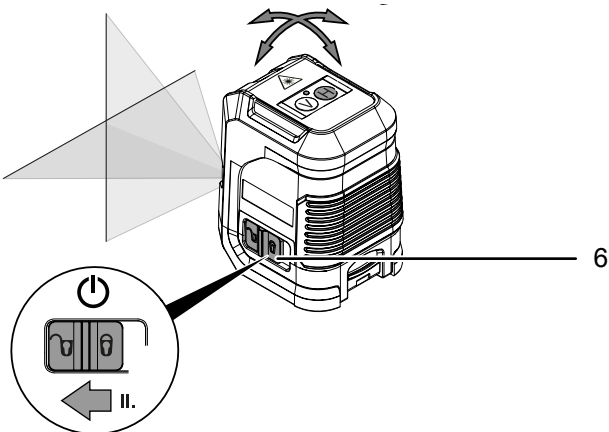
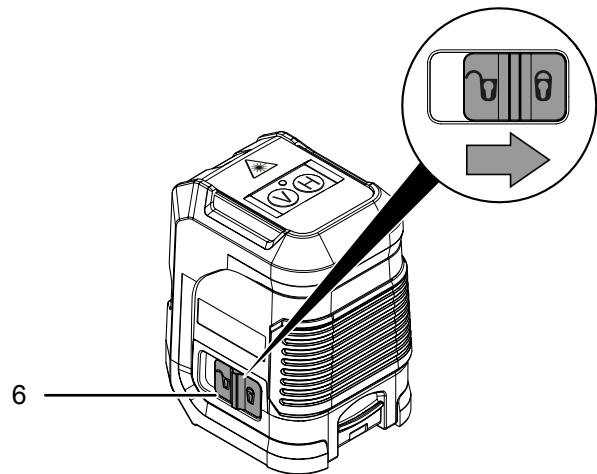
✓ The device stands on a level, horizontal surface.

1. Set the *on/off* switch (6) to position .
 - ⇒ The vertical and horizontal laser lines are switched on.
 - ⇒ The *operating mode* LED (7) is illuminated in green.


⇒ If the *operating mode* LED (7) is illuminated in red and the laser flashes, the permissible inclination range of 3.5° is exceeded. Position the device horizontally.

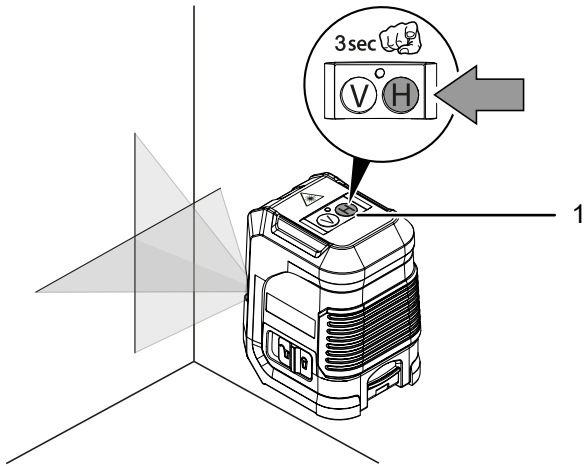


2. Slide the *on/off* switch (6) to the  position to switch the device off.

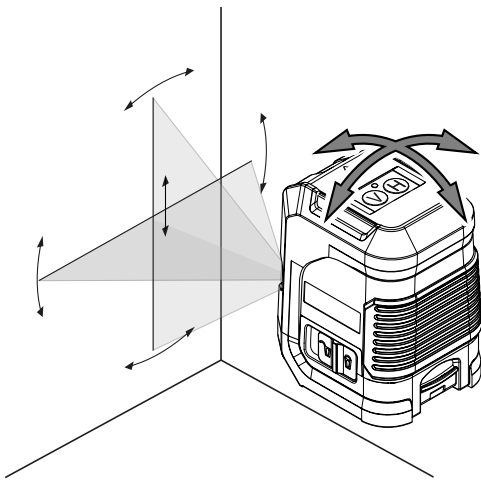


Inclination mode

- ✓ The *on/off* switch (6) is in the  position.
- 1. Press and hold the *H* button (1) for approx. 3 seconds.
 - ⇒ The *operating mode* LED (7) is illuminated in red.



- 2. Place the device on a surface or tripod, for example, and position it at the desired angle.
 - ⇒ Both laser lines are no longer aligned horizontally, but follow the inclination angle of the device.

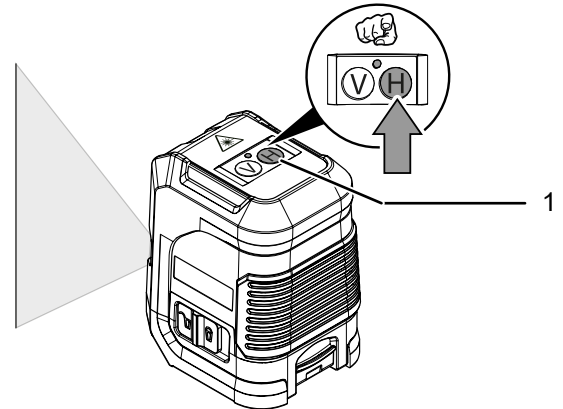


- 3. Press and hold the *H* button (1) for approx. 3 seconds to switch the device off.

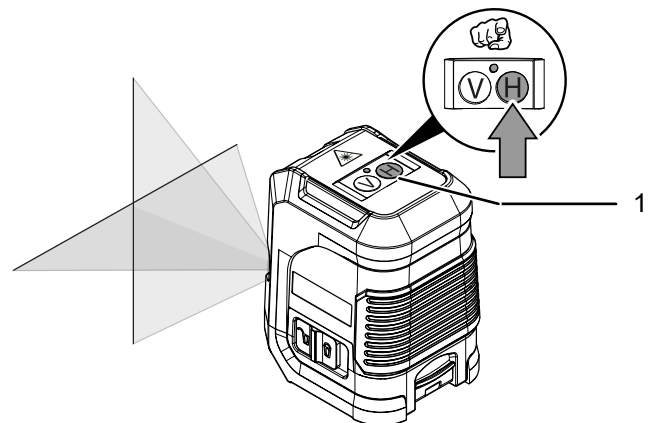
Switching the laser lines on and off

You can switch the laser lines off and on individually in both operating modes to work either with cross lines or a single laser line.

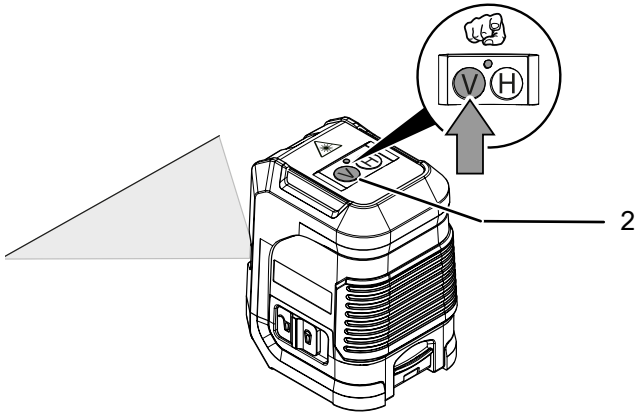
- 1. Press the *H* button (1) briefly to switch off the horizontal laser line.
 - ⇒ Only the vertical laser line is visible.



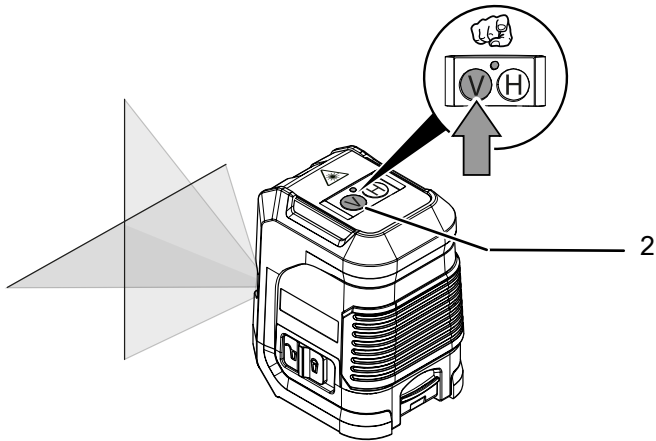
- 2. Press the *H* button (1) again to switch the horizontal laser line back on.
 - ⇒ The vertical and horizontal laser lines are visible.



3. Press the *V* button (2) to switch off the vertical laser line.
 ⇒ Only the horizontal laser line is visible.



4. Press the *V* button (2) again to switch the vertical laser line back on.
 ⇒ The vertical and horizontal laser lines are visible.



Maintenance and repair

Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.


Battery change

A battery change is required when the device can no longer be switched on (see chapter Inserting the batteries).

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The laser lines are apparently not aligned horizontally/vertically:

- The possible range of max. 3.5 ° for automatic levelling has been exceeded. If necessary, readjust the device.
- The switch (6) is still set to position  or has not been properly opened. Check the switch position.
- The device has been dropped or was subject to a hard impact. This may have lead to damages on the laser optics suspended on a pendulum. Send the device to the Trotec Service for inspection.

Only one of both laser lines is visible:

- Check whether you have activated only one of the two lasers.
- The device has been dropped or was subject to a hard impact. This may have lead to damages on the laser optics suspended on a pendulum. Send the device to the Trotec Service for inspection.

Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

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