



Laserliner PrecisionPlane-Laser 3D Pro Cross Line Laser Self-Levelling Range Instructions

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Laserliner®

Laser liner Precision Plane-Laser 3D Pro Cross Line Laser Self-Levelling Range



Read the operating instructions and the enclosed brochure „Guarantee and additional notices“ completely. Follow the instructions they contain. This document must be kept in a safe place and if the laser device is passed on, this document must be passed on with it.

Function / Application

Three-dimensional laser with three red 360° laser circles and adaptable metal base

- Additional slope function for aligning inclines
- Motorized adjustment up to $\pm 2^\circ$
- Out-Of-Level: is indicated by optical signals when the unit is outside its self-levelling range.
- Adaptable metal base for exact laser line positioning with the rotary casing with vernier adjustment mechanism.
- Automatic levelling range 2° , accuracy 0.15 mm / m

General safety instructions

- The device must only be used in accordance with its intended purpose and within the scope of the specifications.
- Laser radiation!
- Do not stare into the beam!
- Class 2 laser
- $< 1 \text{ mW} \cdot 635 \text{ nm}$
- EN 60825-1:2014
- Attention: Do not look into the direct or reflected beam.
- Do not point the laser beam towards persons.
- If a person's eyes are exposed to class 2 laser radiation, they should shut their eyes and immediately move away from the beam.
- Under no circumstances should optical instruments (magnifying glass, microscope, binoculars) be used to look at the laser beam or reflections.
- Do not use the laser at eye level (1.40 ... 1.90 m)
- Reflective, specular or shiny surfaces must be covered whilst laser devices are in operation.

- In public areas shield off the laser beam with barriers and partitions wherever possible and identify the laser area with warning signs.
- Tampering with (making changes to) the laser device is not permitted.
- This device is not a toy – keep out of the reach of children.

Special product features

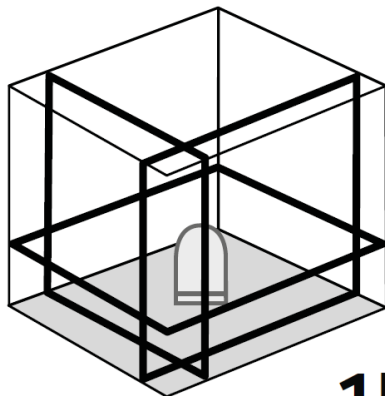
Electronic vials and positioning motors controlled by temperature stable sensors for automatic alignment of devices. The device is brought into initial position and aligns itself autonomously. This function is automatically enabled when the sensor auto- matic is switched on. This easily enables the horizontal or vertical levelling at a required hight, for instance in connection with a crank tripod or wall mount. Also, the laser can be used on vibrating surfaces and in windy conditions.

Transport LOCK: The device is protected by a special motor brake during transport.

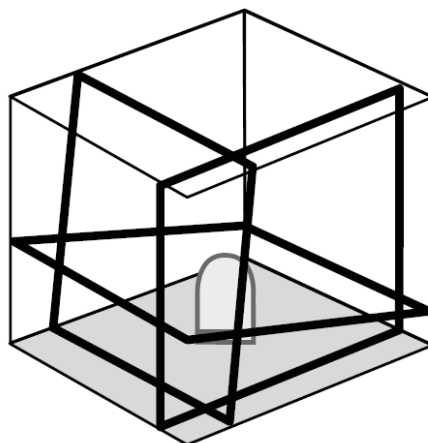
Special high performance laser diodes generate even brighter laser lines as units with Power Bright Technology do. They remain visible over longer distances, in bright ambient lighting conditions and on dark surfaces. RX-READY technology enables line lasers to be used even in un favourable light conditions. The laser lines pulsate at a high frequency and this can be picked up by special laser receivers over long distances.

Number and direction of the lasers

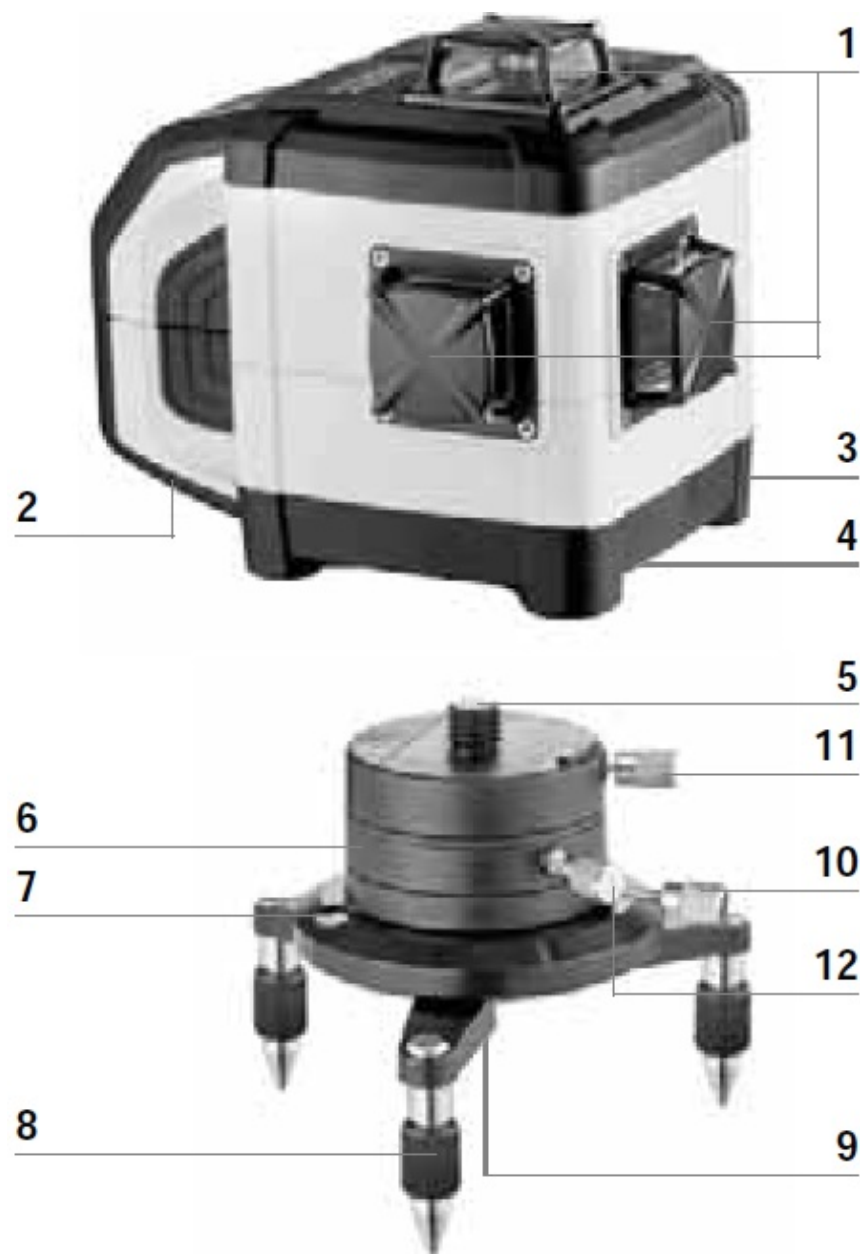
- H = horizontal laser
- V = vertical laser
- S = slope function



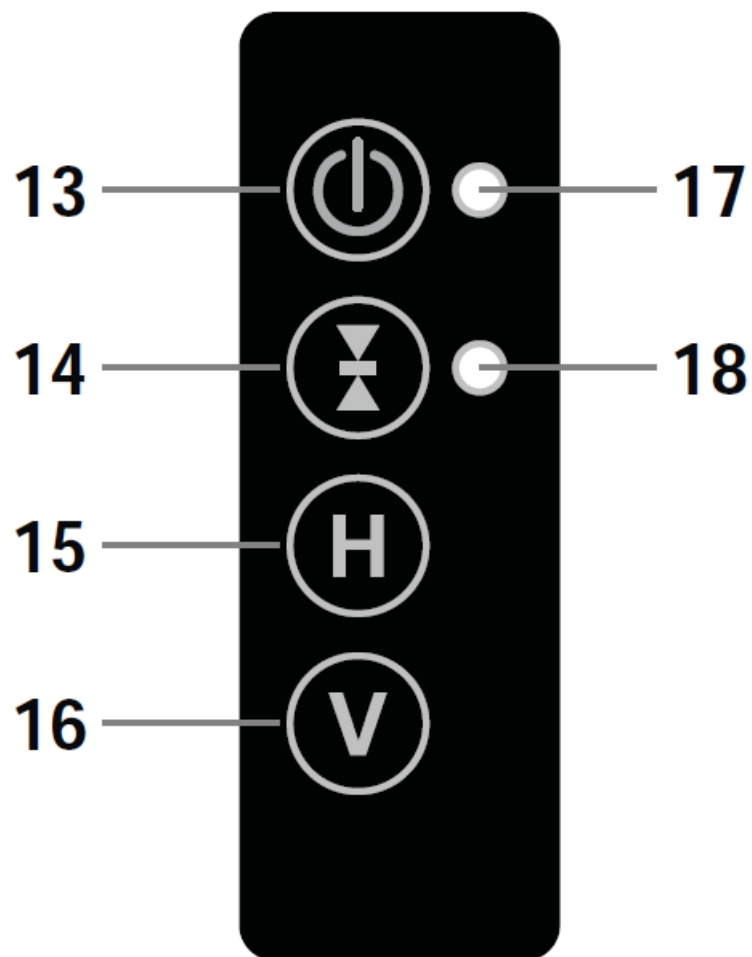
1H360° 2V360°



S



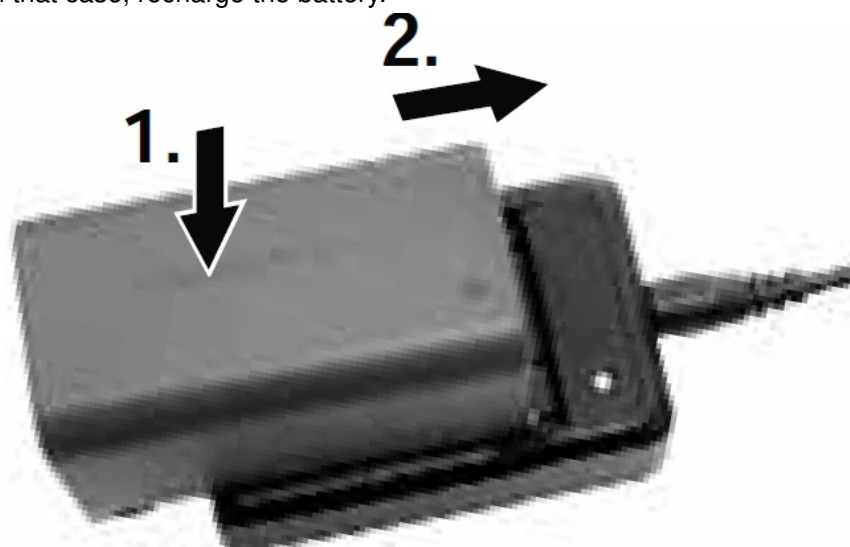
1. Laser output windows
2. Rechargeable battery compartment (bottom)
3. Connecting socket for mains adapter (12V / 2000mA, no charging function)
4. 5/8" tripod thread (bottom)
5. 5/8" threaded adapter
6. Free-moving base
7. Circular bubble level
8. Adjustable feet
9. 5/8" tripod thread
10. Lock
11. Threaded adapter lock screw
12. Vernier adjustment mechanism



- 13. ON/OFF button
- 14. Hand receiver mode on / off / slope function ON
- 15. Horizontal laser lines
- 16. Vertical laser lines
- 17. LED status indicator / automatic mode (LED blinks during set-up phase)
- 18. LED hand receiver mode / Slope function LED

Use of lithium-ion rechargeable battery

Fully charge the battery before using for the first time. to charge the battery, place it in the supplied battery charger. Ensure the battery is inserted the right way round. When the rechargeable battery is being charged, the LED on the charger lights up red. When the LED changes to green, charging is complete. LEDs (17) and (18) flashing indicates that the battery charge level is low. The device switches off automatically when the battery charge is very low. In that case, recharge the battery.



- The battery may only be charged with the battery charger provided and used only in this laser device. Any other use may cause injury or fire.
- Make sure there are no conductive objects in the vicinity of the battery contacts. Short-circuiting of these contacts can cause burn injuries or fire.
- Do not open the rechargeable battery. This could cause short-circuits.

Power supply

To insert the lithium-ion rechargeable battery



Open the battery compartment and insert the lithium-ion battery as illustrated.

Operation with power pack/battery charger



The device can be used with the supplied power pack/battery charger.

- The battery is not charged when connected to the power supply.

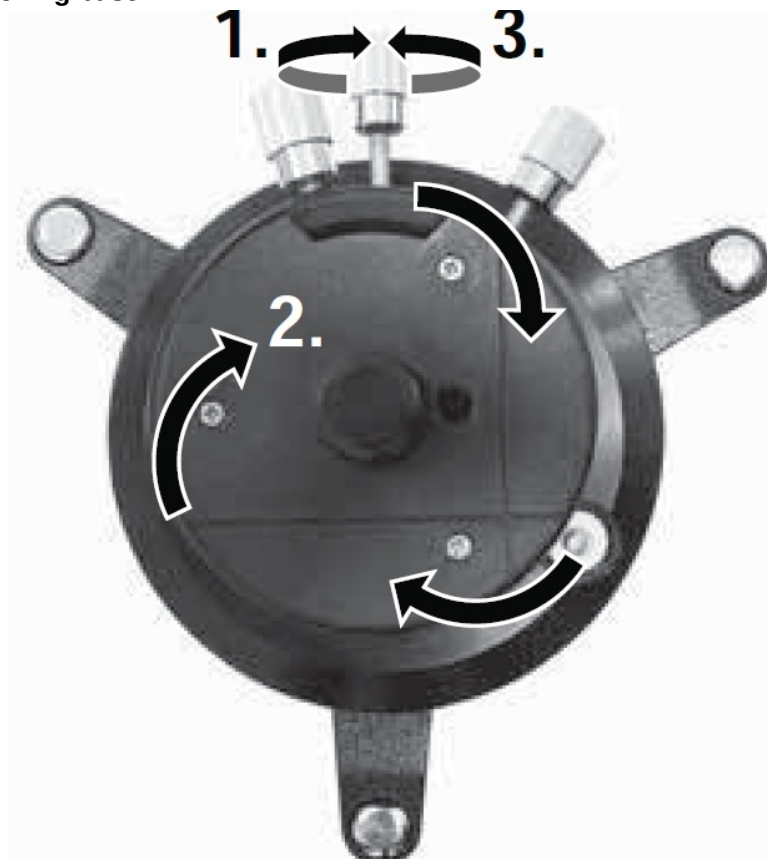
Positioning laser lines

The adaptable metal base allows precise positioning of the laser lines.

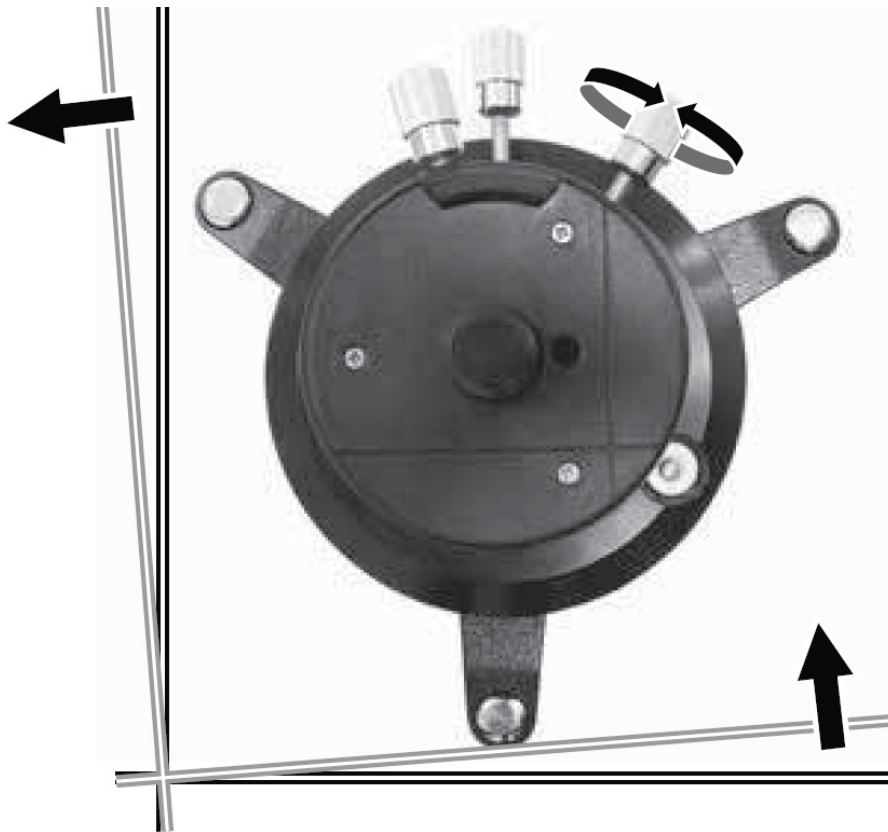


- Undo threaded adapter lock screw (11)
- Remove 5/8" threaded adapter (5) and screw the device into the 5/8" thread (4) in the stand.
- Place the device with 5/8" threaded adapter on the metal base and tighten the lock screw
- To secure the device correctly it must snap into the groove (D).

Alignment with free-moving base

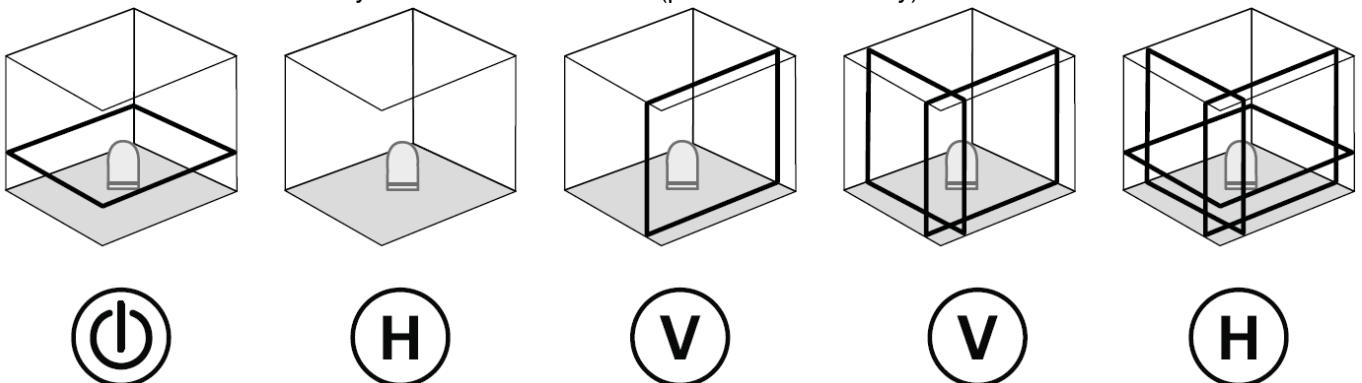


Alignment with vernier adjustment



Horizontal and vertical levelling

Switch the laser device on. The automatic sensor is now active and will level the laser device automatically. As soon as device-levelling is completed and the auto LED illuminates continuously, horizontal or vertical object levelling can be carried out. Maximum accuracy is attained when device-levelling is completed. Lasers can be switched on and off individually with the H or V buttons (press buttons briefly).



- The laser lines flash when the device is outside the automatic levelling range of 2° . Position the device such that it is within the levelling range.

Slope function up to max. 2°

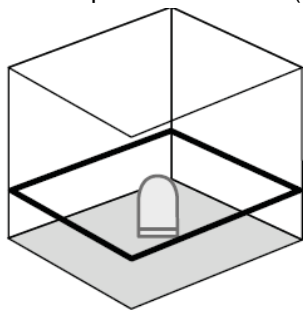
Activation of the slope function deactivates the automatic sensor. Press and hold button 14 (slope function ON) until the slope function LED (18) flashes rapidly. Motor driven adjustment of the slope can now be carried out. Press and hold the H or V button to adjust slope. When the lasers blink, the maximum slope range has been reached. Button 14 (pressed briefly) switches between axes. The slope function LED (18) flashes slowly.

- For the slope function, laser lines are no longer aligned to the horizontal or vertical plane. This is a specific peculiarity of adjusted laser lines. To reinstate horizontal or vertical levelling, deactivate the slope function. To do so, switch the device off and back on or keep button 14 (slope function ON) pressed until the laser lines move automatically.

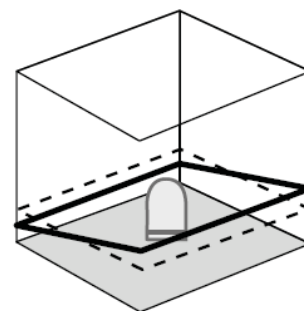
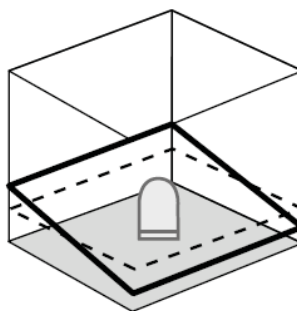
Horizontal levelling adjustment up to a max. of 2° (X, Y axis)

Adjustment of the X axis up to a max. of 2°

The slope function LED (18) flashes rapidly.

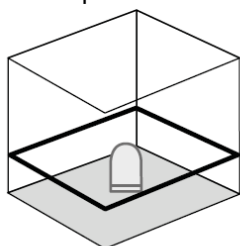


3 sec.



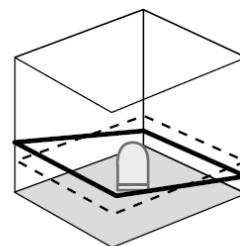
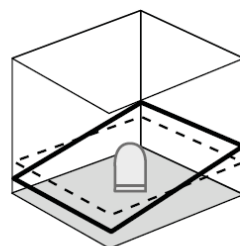
Adjustment of the Y axis up to a max. of 2°

The slope function LED (18) flashes slowly.



3 sec.

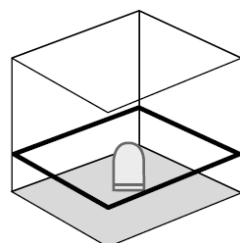
1 sec.



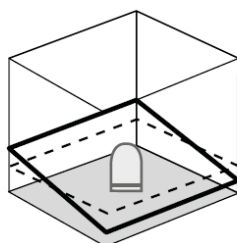
Adjusting both axes

X axis: The slope function LED (18) flashes rapidly.

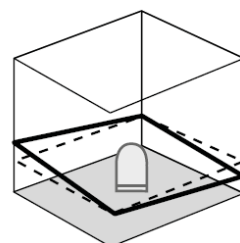
Y axis: The slope function LED (18) flashes slowly.



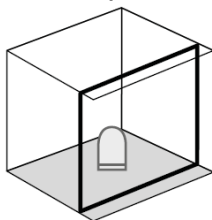
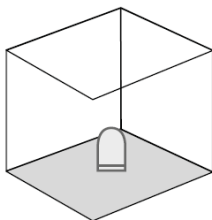
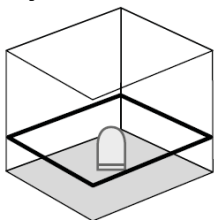
3 sec.



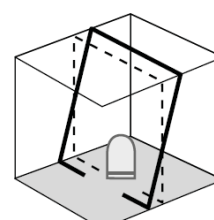
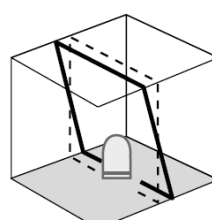
1 sec.



Adjust vertical slope, to a max. of 2° (X, Y axis)



3 sec.



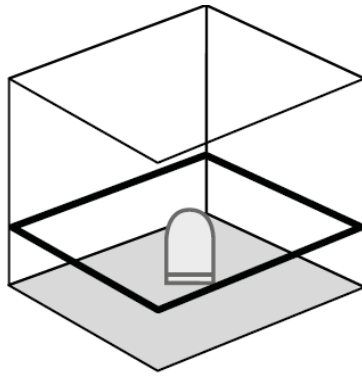
Slope function > 2°

Steeper slopes can be set using the angle plate, which is available as an optional extra (product ref. 080.75). To this end you need to use a crank tripod, such as the 300 cm crank tripod P 300 cm, product ref. 080.39. Refer to the illustrations below.

TIP:

Set the angle plate to the zero position and allow the device to align itself automatically. Then switch off the

automatic sensor with button 14 (slope function ON). Finally, incline the device to the angle you require.
Slope adjustment > 2°



3 sec.



Hand receiver mode

Optional: Working with the laser receiver RX

Use an RX laser receiver (optional) to carry out levelling at great distances or when the laser lines are no longer visible. To work with a laser receiver, switch the line laser to hand-held receiver mode by keeping button 14 (hand-held receiver mode on / off) pressed. The laser lines will now pulsate with high frequency, making the laser lines darker. The laser receiver can detect these pulsating laser lines.



- Observe the laser receiver's operating instructions for line lasers.
- Due to the special optics required to generate a continuous 360° laser line, the underlying technology may cause differences in brightness in different areas of the line. This may lead to different ranges in hand receiver mode.

EU directives and disposal

This device complies with all necessary standards for the free movement of goods within the EU.

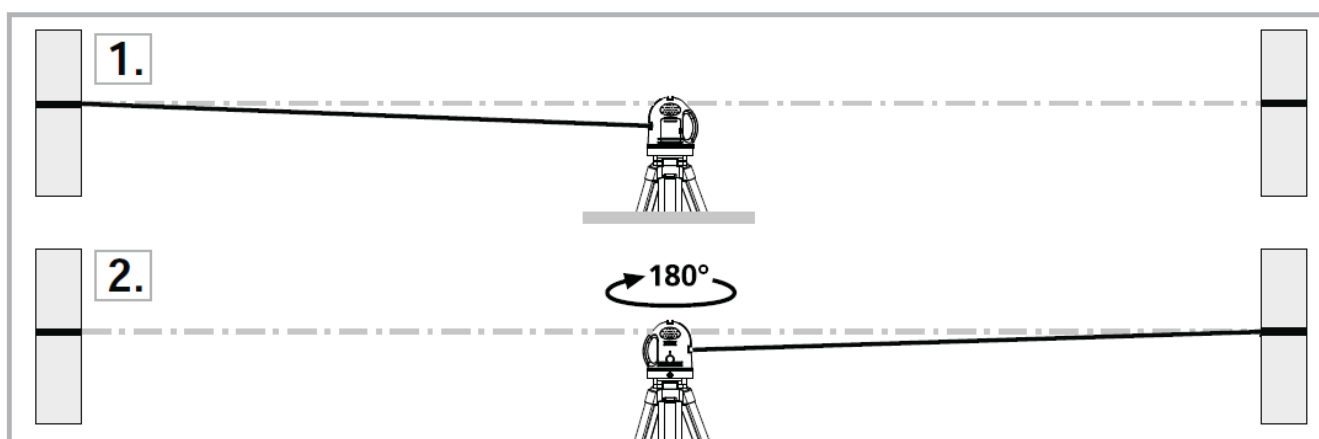
This product is an electric device and must be collected separately for disposal according to the European Directive on waste electrical and electronic equipment.

Further safety and supplementary notices at: www.laserliner.com/info

Preparing the calibration check

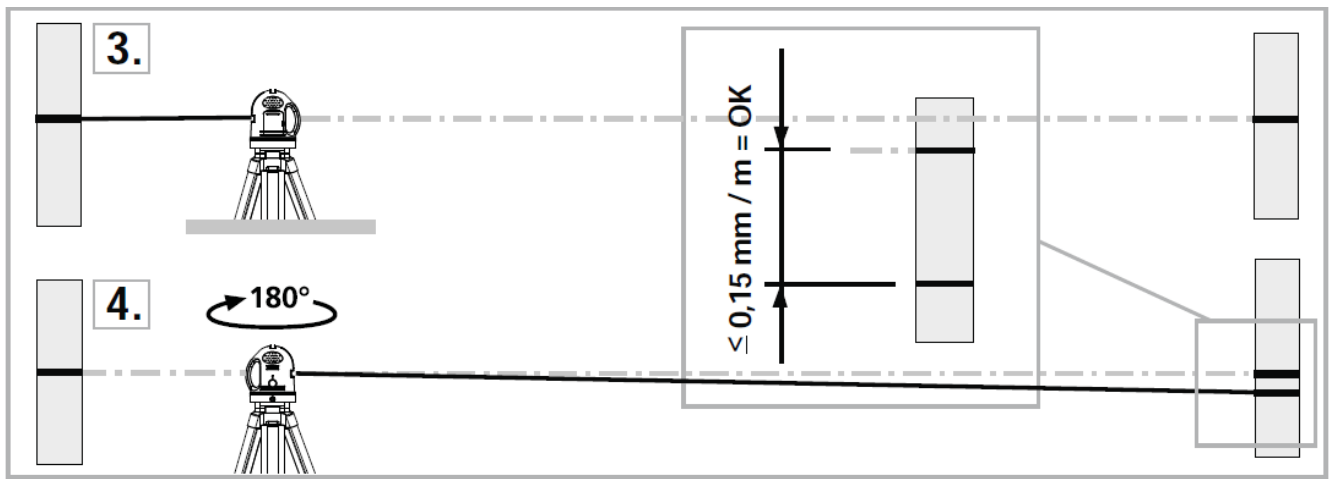
It is possible for you to check the calibration of the laser. To do this, position the device midway between 2 walls, which must be at least 5 metres apart. Switch the device on (Laser cross ON). The best calibration results are achieved if the device is mounted on a tripod.

1. Mark point A1 on the wall.
2. Turn the device through 180° and mark point A2. You now have a horizontal reference between points A1 and A2.



Performing the calibration check

3. Position the device as near as possible to the wall at the height of point A1.
4. Turn the device through 180° and mark point A3. The difference between points A2 and A3 is the tolerance.

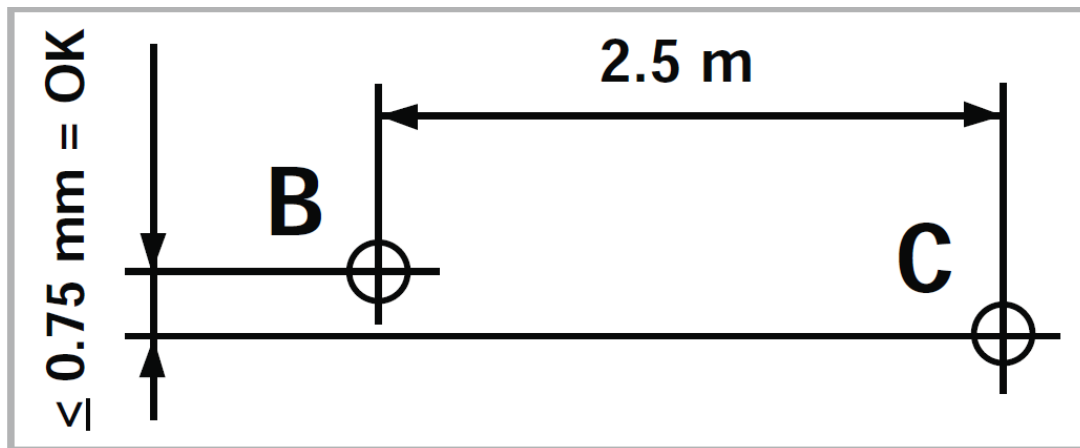


If points A2 and A3 are more than 0.15 mm / m, the device is in need of calibration. Contact your authorised dealer or else the UMAREX-LASERLINER Service Department.

Checking the vertical line

Position the device about 5 m from a wall. Fix a plumb bob with a line of 2.5 m length on the wall, making sure that the bob can swing freely. Switch on the device and align the vertical laser to the plumb line. The precision is within the specified tolerance if the deviation between the laser line and the plumb line is not greater than ± 0.75 mm.

Checking the horizontal line




Position the device about 5 m from a wall and switch on the cross laser. Mark point B on the wall. Turn the laser cross approx. 2.5 m to the right and mark point C. Check whether the horizontal line from point C is level with point B to within ± 0.75 mm. Repeat the process by turning the laser to the left.

- Regularly check the calibration before use, after transport and after extended periods of storage.

Technical data (Subject to technical changes without notice. 02.17)	
Self-levelling range	± 2°
Accuracy	± 0.15 mm / m
Operating range (depending on room illumination)	20 m
Working range with hand receiver depends on how the technology affects the difference in brightness)	30 m
Laser wavelength line laser	635 nm
Laser class	2 / < 1 mW
Power supply	Li-Ion rechargeable battery pack 7.4 V / 2600 mA Power pack operation
Operating time with 3 laser levels with 2 laser levels with 1 laser level	approx. 7 hours approx. 10 hours approx. 15 hours
Operating temperature	0°C ... +50°C
Storage temperature	-10°C ... +70°C
Dimensions (W x H x D)	180 x 145 x 125 mm
Weight (including battery pack)	1.51 kg

Documents / Resources

	<p>Laserliner PrecisionPlane-Laser 3D Pro Cross Line Laser Self-Levelling Range [pdf] Instructions</p> <p>PrecisionPlane-Laser 3D Pro, Cross Line Laser Self-Levelling Range, Line Laser Self-Levelling Range, Self-Levelling Range, Levelling Range, PrecisionPlane-Laser 3D Pro, Range</p>
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References

-  [Home](#)
-  [Info - Laserliner](#)

