Greenline-Laser 3P / 5P

DE 02
GB 10
NL 18
FR 26
FI 34

AUTOMATIC LEVEL

Laser 532-650 nm

lock

GRX READY

Greenline-Laser 3P

Greenline-Laser 5P

Laserliner®
Innovation in Tools

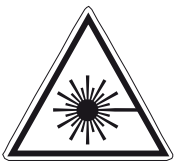
! Read the operating instructions and the enclosed brochure „Guarantee and additional notices" completely. Follow the instructions they contain. Safely keep these documents for future reference.

Function / Application

Cross-line laser with intense light green laser lines for horizontal and vertical levelling with plum function.

– The vertical lines are aligned at right angles to one another.
– A simple, precise plumb function is afforded by the additional plumb laser at the bottom and the laser cross at the top.
– Individually switchable laser lines.
– Out-Of-Level: is indicated by optical signals when the unit is outside its self-levelling range.
– Long-lasting, powerful lithium-ion rechargeable battery.
– The pivoted housing can be turned with a vernier adjustment mechanism to permit exact positioning of laser lines.
– Automatic levelling range 2°, accuracy 2 mm / 10 m.

General safety instructions



Laser radiation!
Do not stare into the beam or observe it directly with optical instruments.
Class 2M laser
< 5 mW · 532-650 nm
EN 60825-1:2007-10

Caution: Do not look directly into the beam. Lasers must be kept out of reach of children. Never intentionally aim the device at people. This is a quality laser measuring device and is 100% factory adjusted within the stated tolerance. For reasons of product liability, we must also draw your attention to the following: Regularly check the calibration before use, after transport and after extended periods of storage. We also wish to point out that absolute calibration is only possible in a specialist workshop. Calibration by yourself is only approximate and the accuracy of the calibration will depend on the care with which you proceed.

Special product features

AUTOMATIC LEVEL Automatic alignment of the device with a magnetically dampened pendulum system. The device is brought into initial position and aligns itself autonomously.

lock Transport LOCK: The device is protected with a pendelum lock during transport.

GRX READY GRX-READY technology allows the line lasers to be used even when the laser lines are no longer visible. The laser lines pulsate at a high frequency and can be detected by special laser receivers, even at great distances.

Green laser technology

The distance at which a laser is visible to the naked eye depends on its colour i.e. wavelength. This is because of the human eye's physiology – green appears brighter to us than red. Depending on ambient light, green lasers are therefore many times more visible than red lasers; in indoor areas this is as much as 12 times brighter. This permits applications on dark surfaces, over longer distances and work in very bright ambient light.
A red laser with a 635 nm wavelength is used as a reference value for brightness differentiation.

In contrast to red lasers, green laser light can only be produced indirectly. This is a source of potential characteristic fluctuations:

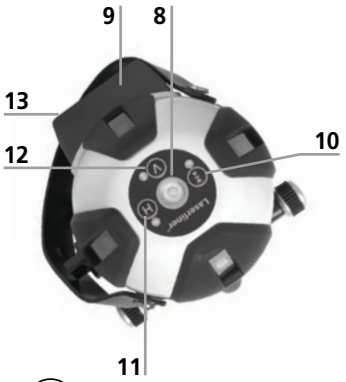
– The optimal operating temperature is 20°C. Outside its operating temperature range of 0 – 40°C this green laser is darker. IMPORTANT: Allow the unit enough time to adapt to the ambient temperature before switching the unit on.
– Laser brightness may vary somewhat from one unit to another. This is a natural phenomena and excluded from warranty claims.

Number and direction of the lasers

H = horizontal laser / V = vertical laser / D = downpoint

Greenline-Laser 3P
1H 2V 1D

Greenline-Laser 5P
1H 4V 1D



1	Laser emitting window
2	ON / OFF switch; Transport fastener
3	Vernier adjustment
4	5/8" thread (underside)
5	Window for plumb laser (underside)
6	Adjustable feet with removable rubber caps
7	Adapter for crank tripods and teleskopic stands
8	Vial for approximate alignment
9	Battery compartment
10	Hand receiver mode
11	Horizontal laser lines
12	Vertical laser line
13	Connection socket for battery charger

! For transport, the device must always be switched off with the transport securing device (2) so as to protect device from damage.

1 Use of lithium-ion rechargeable battery

Before using the laser for the first time, insert the battery in the device and fully charge (at least 5 hours). Connect the battery charger to charge the battery. The LED lights red while the battery is charging and green when the battery is fully charged. Recharge the battery as soon as one or several laser lines switch off. The rechargeable battery can also be charged when it is not inserted in the device.

!

– 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.

2 Horizontal and vertical levelling

Turn the transport fastener (2) clockwise and release the pendulum lock. The lasers are now automatically aligned by the pendulum system and the horizontal laser lights constantly. The lasers can be switched on and off individually with the H and V buttons. It is now ready for levelling in the horizontal or vertical plane.

!

If the device is too far off the horizontal (more than 2°), the lasers will blink. Align the device using the adjustable feet (6) or place on a more level surface. The round vial (8) is provided as an aid to alignment.

3 Positioning laser lines

The top section of the laser unit can be turned on the plinth to align the lasers approximately. Precise positioning can then be done with the Vernier adjustment (3). The adjustable feet (6) allow the device to be positioned on sloping surfaces.

4 GRX READY Hand receiver mode
Optional: Working with the laser receiver GRX

Use an GRX 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 into hand receiver mode with the Hand receiver mode button (10). The laser lines will now pulsate with high frequency, making the laser lines darker. The laser receiver GRX can detect these pulsating laser lines.

Green lasers can only be used with special laser receivers, which are available on request.

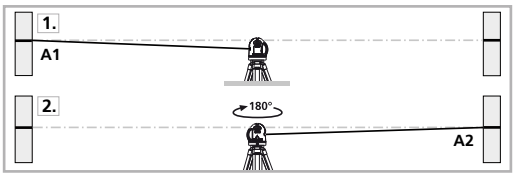
! Follow the operating instructions of the corresponding laser receiver.

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. Do this by turning the unit on, thus releasing the transport restraint (cross laser on). Please use a tripod.

1. Mark point A1 on the wall.

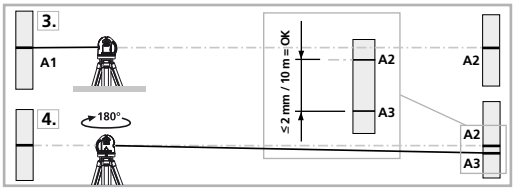
2. Turn the device through 180° and mark point A2.
You now have a horizontal reference between points A1 and A2.



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.

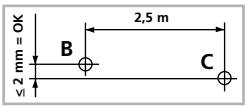


! When A2 and A3 are more than 2 mm / 10 m apart, an adjustment is necessary. Contact your authorised dealer or else the UMAREX-LASERLINER Service Department.

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 ± 1.5 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 ± 2 mm. Repeat the process by turning the laser to the left.

! Regularly check the adjustment before use, after transport and after extended periods of storage.

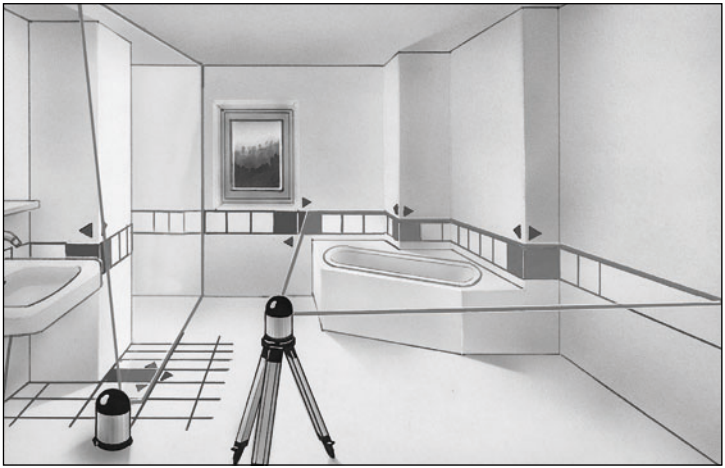
Technical data (Subject to technical alterations)	
Self-levelling range	± 2°
Precision	± 2 mm / 10 m
Laser wavelength linelaser (green)	532 nm
Laser wavelength plumb laser (red)	650 nm
Laser class / line laser output power	2M / < 5 mW
Laser class / plumb laser output power	2 / ≤ 1 mW
Power supply	Lithium-ion rechargeable battery
Battery operating time (all lasers on) 3P / 5P	approx. 10 h / approx. 4 h
Battery recharging time	approx. 5 h
Operating temperature	0°C ... + 40°C
Storage temperature	-10°C ... + 60°C
Weight (incl. battery)	1,7 kg
Dimensions (W x H x D)	135 x 135 x 215 mm

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



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8.037.96.01.1 / Rev.0211

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