

EvolutionCross-Laser 8P PowerBright

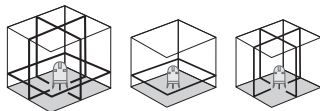


RX
READY

SENSOR
AUTOMATIC

PowerBright
LASER

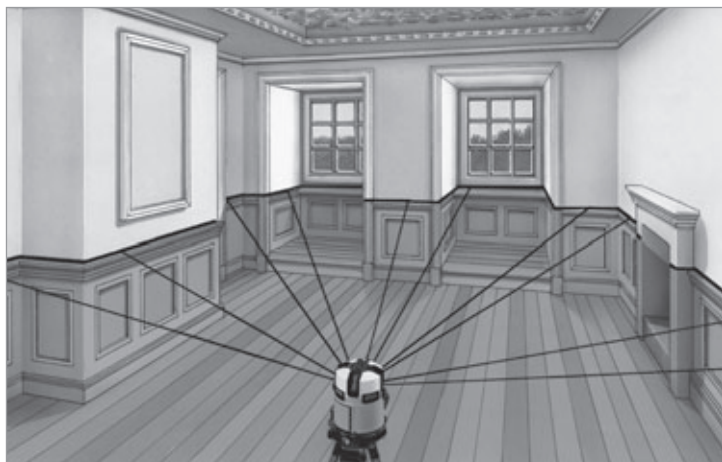
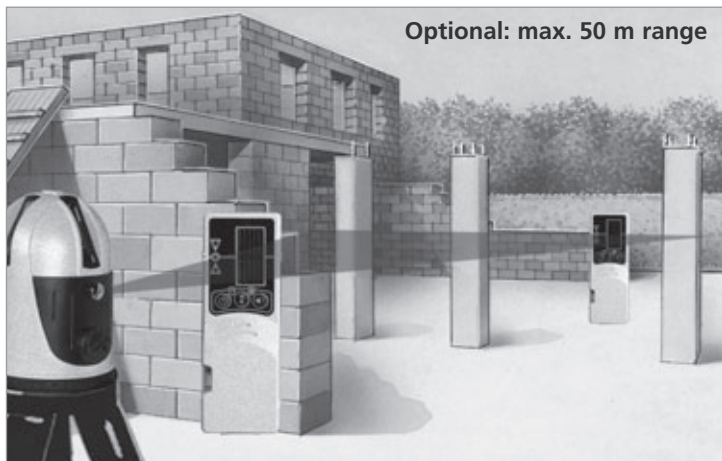
4H 4V 1D



Laserliner[®]
Innovation in Tools

- | | | |
|-----------|------------------------|-------|
| DE | Bedienungsanleitung | 3-10 |
| GB | Operating instructions | 11-18 |
| NL | Gebruiksaanwijzing | 19-26 |
| FR | Mode d'emploi | 27-34 |

EvolutionCross-Laser 8P PowerBright



High-precision cross-line laser with 8 super-bright laser lines, plumb laser and additional slope function.

The 4 horizontal laser diodes project a homogeneous 360° laser line, the 4 vertical laser lines are aligned at right angles to one another. Special high-performance laser diodes project extremely visible laser lines. Manual mode can be used to set slopes by means of a motor. The laser cross at the top and the plumb laser allow a plumb line to be drawn from the ceiling to the floor. Electronic positioning motors controlled by temperature-stable sensors for automatic alignment, 2.5° self-levelling range. The pivoted housing can be turned with a vernier adjustment mechanism and horizontal circle to permit exact positioning of laser lines. Precision 1 mm/10 m. RX-Ready: The laser receiver, which is available as an optional extra, can detect laser lines in a range of up to 50 m.

General safety instructions

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



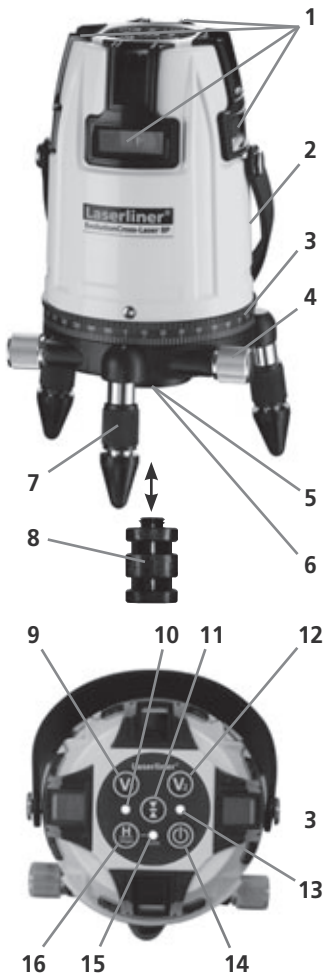
Laser radiation!
Do not stare into the beam or observe it directly with optical instruments.
Class 2M laser
< 5 mW · 635-650 nm
EN 60825-1:2007-10

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.

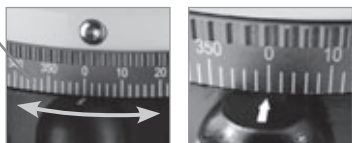
Note: This is a precision instrument which must be handled with care. Avoid impacts and jarring. Store and transport the instrument in its case! Turn off the unit when it is not in use! Clean with a soft cloth and glass cleaner.

Warranty: The warranty period is 2 years from the date of purchase. The warranty covers all material or manufacturing defects occurring during this time. The following are excluded from warranty: Damage due to improper use (e.g. operation with wrong type of current/voltage, connection to unsuitable power source, fall onto hard surface, etc.) or improper storage, normal wear and tear, and defects which only insignificantly impair the value or suitability for use. Any tampering by unauthorised persons will render this warranty void. In the event that you need to claim warranty, please take the complete device together with all information and the invoice to one of our dealers or send it in to Umarex-Laserliner.

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1	Laser emitting window
2	Battery compartment
3	Continuous horizontal 360° laser line
4	Knob for precision adjustment
5	5/8" thread (underside)
6	Window for plumb laser (underside)
7	Adjustable feet with removable rubber caps
8	Tripod adapter
9	Vertical laser line/ slope function: set the slope
10	LED Hand receiver mode
11	Hand receiver mode
12	Vertical laser line/ slope function: set the slope
13	Status indicator/ low battery charge LED
14	ON/OFF button
15	Automatic mode (auto)/slope function (slope) LED indicator
16	Horizontal laser lines/ slope function: activate/deactivate (press and hold for 3 seconds); axis switch-over



Battery (NiMH) charging

- Charge the batteries (NiMH) fully before using the laser unit. Insert only rechargeable (i.e. secondary) batteries into the charging unit. Be sure that the batteries are marked with the label „RECHARGEABLE“.
- Insert the rechargeable batteries into the charger and connect the charger to the mains power supply. Observe the charger operating instructions. As soon as the rechargeable batteries are charged up, disconnect the charger from the mains power supply.
- Insert the rechargeable batteries (NiMH) into the laser unit. Do this by opening the battery compartment (2) and inserting the batteries according to the symbols. If the status indicator (13) flashes, the rechargeable batteries need to be replaced.

Attention: Only insert rechargeable batteries into the charger – risk of explosion! Used batteries must not be disposed of with regular domestic waste; instead, they can be deposited at a collection point for batteries or hazardous waste.

⏻ Setting up

- Press the „ON/OFF“ switch (14).
- The automatic sensor aligns the device without any need for operator intervention. To accomplish this, two electronic sensors are used to detect the X and Y axes. The working angle is $\pm 2,5^\circ$. During the set-up phase, the auto LED (15) flashes rapidly. When levelling is complete, the auto LED lights up continuously.
- Switch the lasers on using the H slope, V1 or V2 buttons (press briefly). Maximum visibility of the laser line is obtained when hand receiver mode is switched off (button 11, indicator light 10 off).

SENSOR
AUTOMATIC



H
slope



V1

V2

Note: If the unit is placed at an excessive angle (out of its $2,5^\circ$ range), the lasers will blink. If this should be the case, align the unit roughly with the levelling feet (7) or place it on a more level surface.



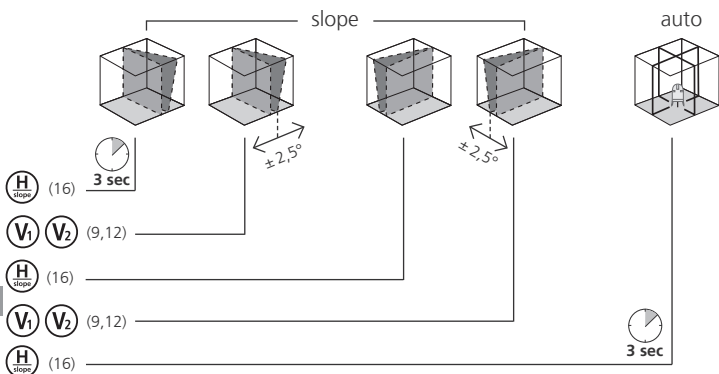
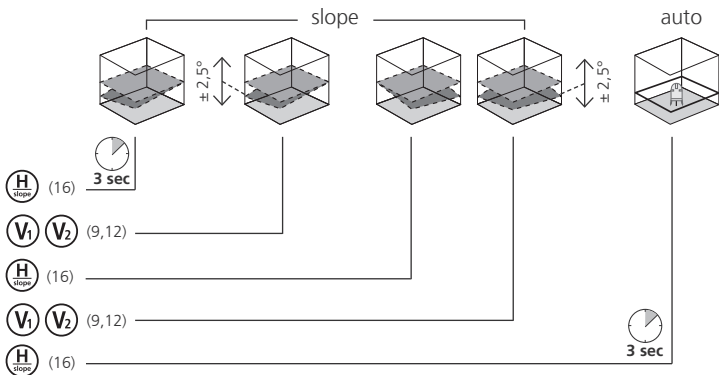
Anti-shake function

The automatic sensor continuously levels the devices, even if they are in motion. This makes device alignment easier, as it enables the laser to be set to a required height by means of a crank tripod or a wall bracket, for example. It also means that the laser can be used on vibrating surfaces and in windy conditions. **IMPORTANT:** Precision is adversely affected during the set-up phase.

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Manual Slope function

This function deactivates the automatic sensor, which enables slopes to be set. Press the **H slope** button and hold it down for 3 seconds until the auto LED starts to flash very rapidly. The **V1**, **V2** buttons are used to re-adjust the slope by means of a motor. The **H slope** button (pressed briefly) is used to switch over between axes. **IMPORTANT:** Since the automatic sensor is not active, horizontal and/or

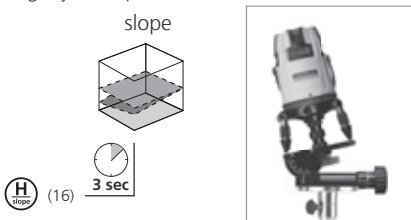


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Manual re-adjustment:

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 professional crank tripod, product ref. 080.34.

TIP: Allow the device to align itself automatically and set the angle plate to the zero position. Next, deactivate the automatic sensor by pressing the H slope button (and holding for 3 seconds). Finally, incline the device to the angle you require.



auto LED status indicator

Automatic mode (auto)



auto



auto

Continuous
OK

Rapid
Set-up phase

Slope function (slope)



auto



auto

Every second
X axis

Very rapid
Y axis

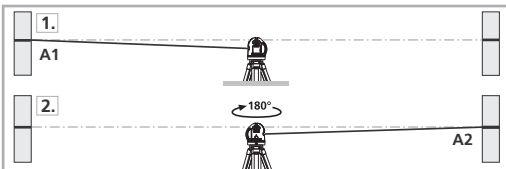
TIP: Switch the required laser lines on before you activate the slope function.

Positioning laser lines

The top section of the laser unit can be turned on the plinth to align the lasers approximately. The vernier adjustment mechanism (4) can be used to position the lasers precisely. The freely rotatable horizontal circle (3) makes it easy to turn the device to the required angle. Simply set the scale to zero, then rotate the device to the angle you want.

Preparing the calibration check:

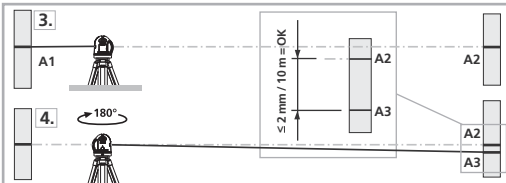
It is possible for you to check the calibration of the laser. To do this, position the device **midway** between 2 walls, which must be at least 5 metres apart. Switch the device on (Laser cross ON). The best calibration results are achieved if the device is mounted on a tripod. **1.** Mark point A1 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.



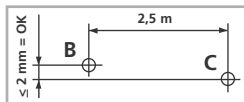
4. Turn the device through 180° and mark point A3. The difference between points A2 and A3 is the tolerance.

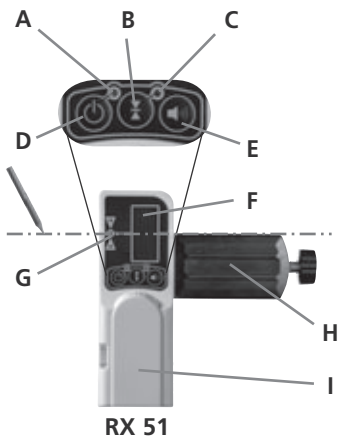
Note: If points A2 and A3 are more than 2 mm / 10 m, the device is in need of calibration. Contact your authorised dealer or else the UMAREX-LASERLINER Service Department.

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 ± 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.





A	Power indicator
B	Switch accuracy short range / long range
C	Sensitivity indicator light RX 51: Close range max. 15 m green – Long range max. 50 m red
D	ON / OFF switch
E	Sound ON / OFF
F	Receiver field for laser beam
G	LED's for Laserindication (front, side, backside)
H	Universal mount
I	Battery compartment (backside)



Working with the laser receiver RX (optional):

For levelling over longer distances or in conditions of bright light, use the laser receiver RX. Switch on with button D; control lamp A will light up.

IMPORTANT: Set the laser unit to hand receiver mode (button 11).

The laser lines now pulsate at a high frequency (5 kHz) and become darker. The pulsation allows the laser receiver to detect the laser lines.

Now move the receiver field (F) of the laser receiver through the laser lines upwards and downwards (horizontal laser line) and/or sideways (vertical laser line) until the centre LED (G) lights up. Now mark the horizontal and/or vertical reference dimension.

Adjust the sensitivity of the laser receiver with button B.

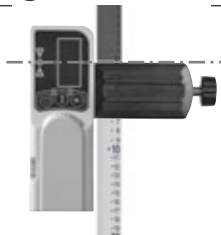
The sound can be switched on or off with button E.

Note: The light intensity of the laser lines is greatest at their midpoints and less toward their ends. Therefore at line ends the distance range for the laser receiver is reduced somewhat. An even distribution of brightness can be achieved by switching on all 4 horizontal laser lines. When this is done the maximum range for laser reception is remains constant.

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Universal mount (optional):

The laser receiver RX can be fitted on measuring staffs with the universal mount. The Flexi measuring staff (Art. No. 080.50) is always recommended when measuring from floor heights. It also allows you to determine heights directly without any need for calculation.



Technical data

Self-levelling range	$\pm 2,5^\circ$
Precision	$\pm 1 \text{ mm} / 10 \text{ m}$
Working range with laser receiver RX 51	max. 50 m
Laser wavelengths, line lasers / plumb laser	635 nm / 650 nm
Laser class/line laser output power	2M / $< 5 \text{ mW}$
Laser class/plumb laser output power	2 / $\leq 1 \text{ mW}$
Power supply ECL 8P	3 x type AA
Battery/rechargeable battery life	ca 5 Std. / ca. 8 h
Power supply laser receiver RX 51	1 x 9V Block
Weight ECL 8P (incl. battery)	1,3 kg
Dimensions (W x H x D)	195 x 130 x 130 mm
Operating temperature	0°C ... + 50°C
Storage temperature	-10°C ... + 70°C
Article-No. (ECL) EvolutionCross-Laser 8P PowerBright RX	048.200A
Subject to technical alterations	06/2009

Note: Regularly check the calibration before use, after transport and after extended periods of storage



- DE **Zubehör (optional)**
- GB **Accessories (optional)**
- NL **Accessoires (optioneel)**
- FR **Accessoires (en option)**

Art.-Nr: 023.61A



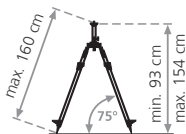
Art.-Nr: 090.120A



Art.-Nr: 033.20-1



ECL 8P PowerBright: optional
ECL 8P PowerBright RX: inclusive



Art.-Nr: 080.30



max. ca. 330 cm

EvolutionCross-Laser 8P PowerBright



Laserstrahlung!
Nicht in den Strahl blicken
oder direkt mit optischen
Instrumenten betrachten.
Laser Klasse 2 M
EN60825-1:2007-10

Laser radiation!
Do not look into the
beam or observe it directly
with optical instruments.
Laser class 2 M
EN60825-1:2007-10



- DE** Service- und Versand-Anschrift
- GB** Service- and Shipping Address
- NL** Service- en verzendadres
- FR** Livraison et expédition

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