

CROSS TM

Self-leveling Cross Hair Laser Instruction Manual



www.level1lasers.com.au

User Safety

- Do not stare into laser beam directly.
- Do not disassemble the instrument or attempt to perform any internal servicing. Repairs and servicing should be performed only by authorized service centers of Level1Lasers.
- This instrument complies with the safety classification standards of laser radiation.



CAUTION: Class II laser <1mW at 635nm.
Do NOT stare into laser beam or aim at another person.
Follow Australian Standards AS2397

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1. Features and Functions

CROSS1 laser marker can simultaneously project visible horizontal and vertical laser lines for self-leveling. It creates an accurate horizontal and vertical reference for indoor layout and leveling. It is the ideal tool for many indoor leveling jobs.

Features:

- Project horizontal and vertical laser lines
- Self-leveling with laser flash indication when out of self leveling range
- The instrument can rotate 360°
- Able to connect with tripod through 5/8" screw thread
- Pendulum lock for safe transportation

2. Diagram

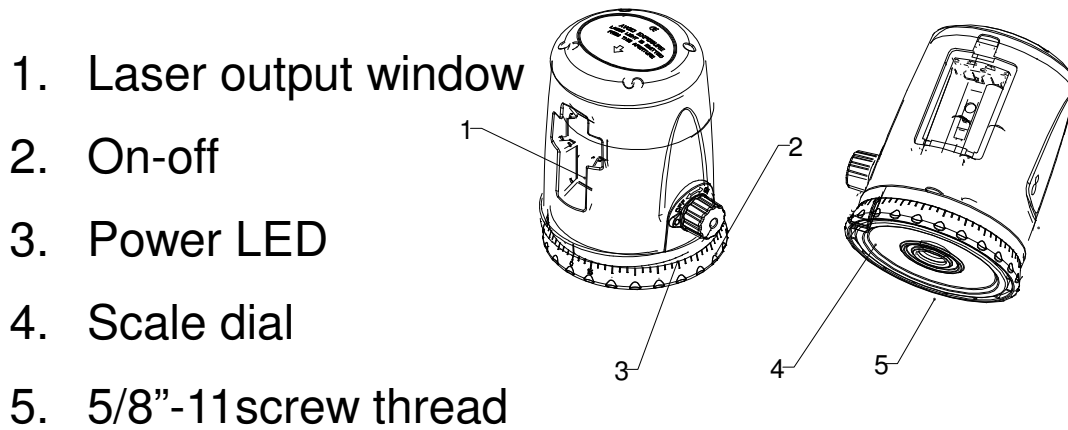
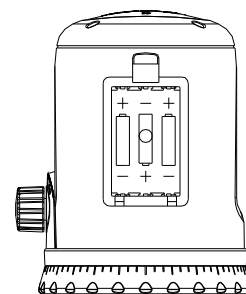


Figure 1

3. Operation Instruction

- 3.1 Open the battery cover and insert 3*AAA alkaline batteries into the battery compartment as shown.
- 3.2 Put the instrument on a platform or a tripod
- 3.3 Power on, and the instrument emits a cross line

Figure 2

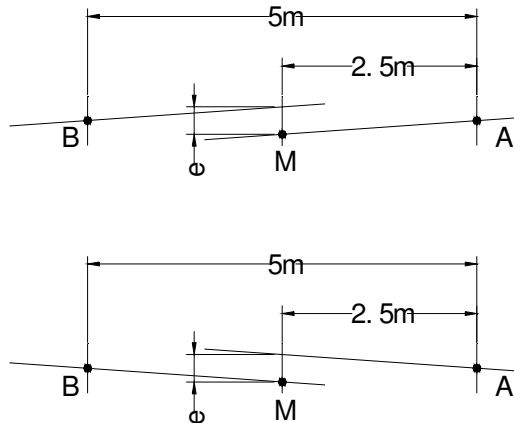


Note:

- Pay attention to the polarity of the battery.
- Remove batteries if unit is not used for extended periods

4. Self-Check Calibration

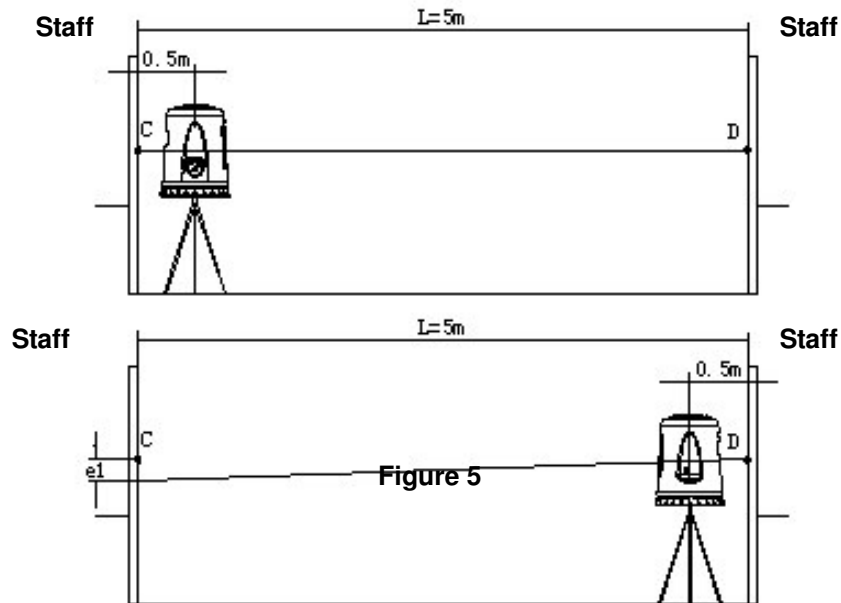
4.1 Self-check calibration of horizontal laser line accuracy



1. Find a smooth wall, set up a tripod at 5 meters away from the wall
2. Put the unit on the tripod, and make it face the wall
3. Power on the unit to project a cross line on the wall. Mark A at its center point
4. Mark M on the horizontal line, which is 2.5m away from A
5. Turn the unit until the center point of the cross line moves 5m away from point A, then mark B at the center point.
6. Measure the distance E between the horizontal line and M.
7. If $e > 2\text{mm}$, it means the accuracy of the unit is beyond tolerance and it needs calibration.

Please return the laser to Level1Lasers if recalibration is required

4.2 Self-check calibration of horizontal accuracy



1. As shown in figure 5, set up two survey-staffs that are 5 meters away from each other (or two parallel walls that are 5m away from each other)
2. Set the instrument on the elevating tripod, and the distance between the unit and the left staff is about 0.5m.
3. Make the unit face the left staff and power on, then take the cross point on the left staff as C.
4. Turn the unit 180°, have the cross point located on the right staff as D.
5. Move the tripod, to change the distance between the unit and the right staff to 0.5m. Then elevate the tripod upwards and downwards to make the cross point coincident with D.
6. Turn the unit 180°, and measure the vertical distance e_1 between the cross point on the left staff and point C.
7. If $e_1 \leq 4\text{mm}$, it means the accuracy of the unit is beyond tolerance and it need calibration

Please return the laser to Level1Lasers if recalibration is required

5. Technical Specifications

- Wavelength: 635nm
- Laser class: class II
- Accuracy: $\pm 0.4\text{mm/m}$
- Self-leveling range: $\pm 5^\circ$
- Working temperature: -10°C to $+45^\circ\text{C}$
- Power: 3*AAA batteries
- Size: 100×110×130mm
- Weight: 0.5Kg

6. Maintenance

- This is a precision leveling instrument should be carefully operated and maintained, and any violent shock or fall will possibly result in damage to the instrument.
- Before moving or transporting the instrument, please power off and lock the pendulum to avoid damage to the leveling mechanism.
- Do not attempt to disassemble the instrument as this will void warranty.
- Keep the laser clean, especially the laser output window, and remove dust by gently wiping with a soft clean cloth.
- Take the batteries out when the instrument is not in use for a extended periods, and keep the instrument in the carry case when not in use.
- Do not put unit away wet. It is recommended that this unit not be used in damp conditions



**For further warranty information please visit
www.level1lasers.com.au**