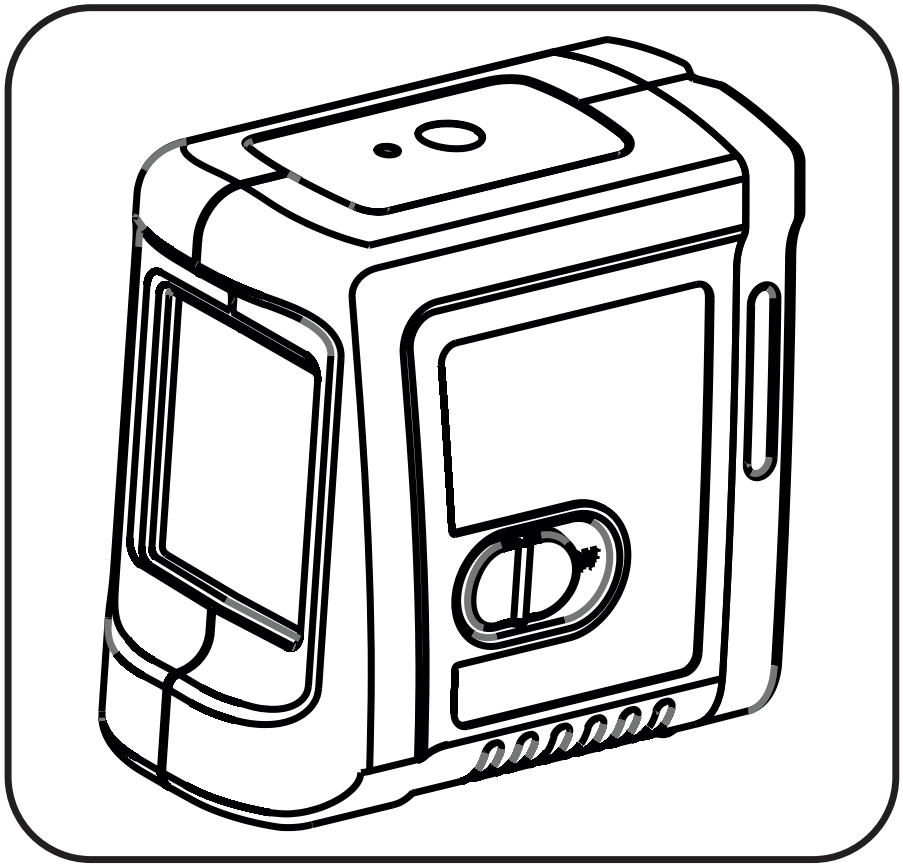
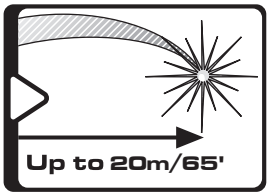
KAPRO
TOOLS WITH VISION

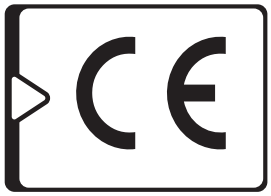
Prolaser® Cross Line

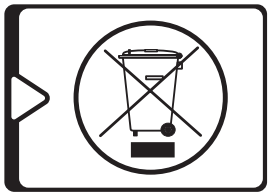
Model No. 862 GREEN

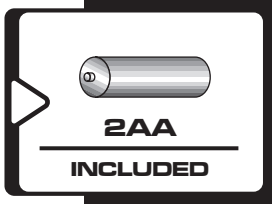
User Manual









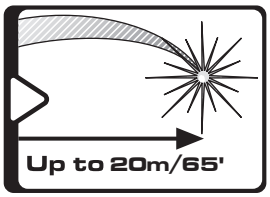


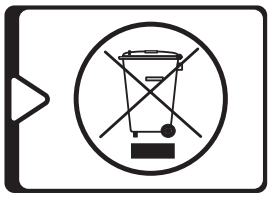
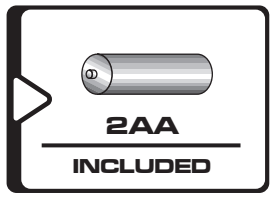
Thank you for purchasing Kapro's 862 GREEN Prolaser® Cross Line. You now own one of the most advanced laser tools available. This manual will show you how to get the most out of your laser tool.

APPLICATIONS

The 862 GREEN Prolaser® Cross Line is a laser level with one green diode. The laser is innovatively designed for a very broad range of professional and DIY jobs, including:

- Aligning tiles, marble, cabinets, borders, moldings and trimmings
- Framing and aligning windows and doors.
- Accurately laying out right angles for fences, gates, decks and pergolas.
- All types of DIY jobs, including hanging shelves, hanging hooks, pictures, curtains and more



NOTE

Keep this user manual for future reference.

CONTENTS

FEATURES

- This laser tool automatically determines the horizontal and vertical plans.
- The laser projects intersected horizontal and vertical lines.
- Max. indoor working range - 20 m (65').
- Self-levels in automatic mode when the laser is positioned within its self-leveling range of ±3°.
- Visual warning (blinking) when the laser is out of leveling range.
- Manual mode allows angular layout/marking.
- The locking mechanism protects the pendulum during transportation or when not in use.
- Hanging hole for screw or nail in the back side of the laser.
- Slot at the back side of the laser for strap tightening.
- Strong R.E magnets at the back side of the laser.
- 1/4" tripod adaptor.
- Compact size – fits in your toolbox.

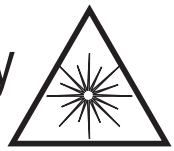
NOTE

This device contains precision components that are sensitive to external shock. An impact or fall may compromise its functionality – handle with care to maintain its accuracy.

SAFETY INSTRUCTIONS

WARNING

This product emits radiation that is classified as class II according to EN 60825 -1



The laser radiation can cause serious eye injury

- Do not stare into the laser beam
- Do not position the laser beam so that it unintentionally blinds you or others.
- Do not operate the laser level near children or let children operate the laser level.
- Do not look into a laser beam using magnifying optical devices such as binoculars or a telescope, as this will increase the level of eye injury.

WARNING: This product contains lead in solder and certain Electrical parts contain chemicals which are known to the State of California to cause cancer, birth defects or other Reproductive harm.
(California Health & Safety Code Section 25249.6- Proposition 65)

NOTE

The green goggles are intended to enhance the visibility of the laser beam. They will not protect your eyes against laser radiation.

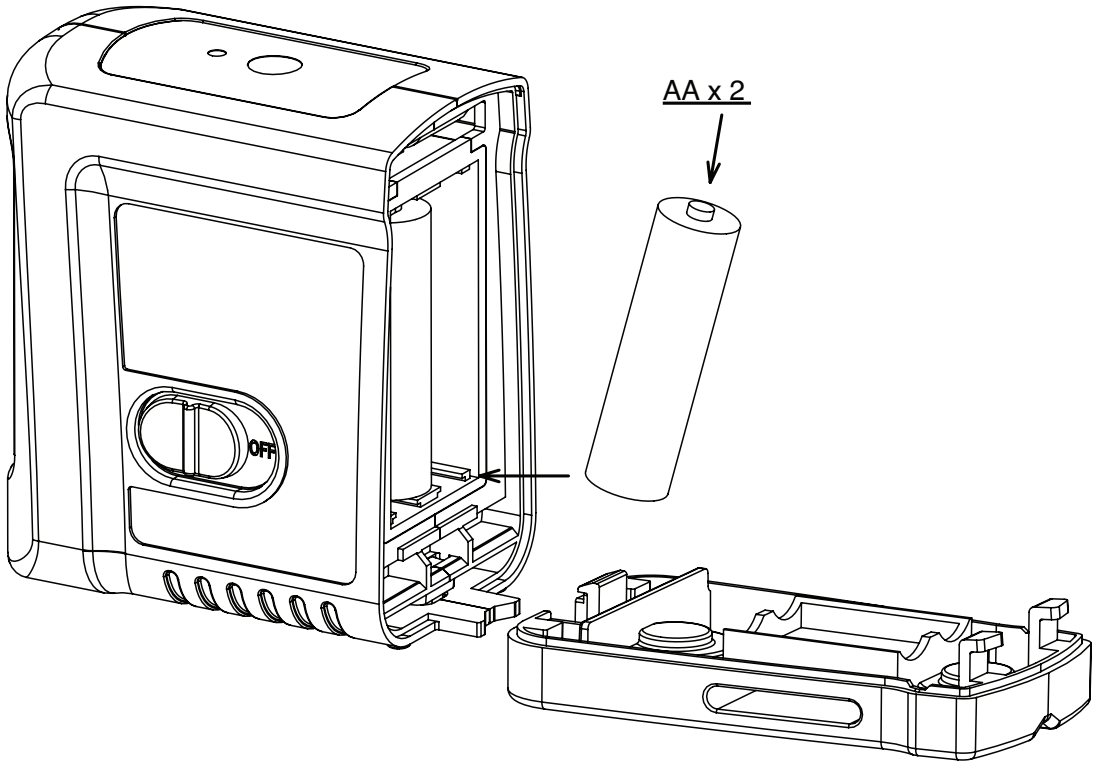
- Do not remove or deface warning labels on the laser level.
- Do not disassemble the laser level, laser radiation can cause serious eye injury.
- Do not drop the laser.
- Do not use solvents to clean the laser.
- Do not use in temperatures below -10°C or above 45°C (14°F / 113°F)
- Do not operate the laser in explosive surroundings such as flammable liquids, gases or dust. Sparks from tools can cause ignition.
- When not in use, turn off the power, engage the pendulum lock and place the laser in the carrying pouch.
- Make sure the pendulum lock mechanism is engaged before transporting the laser.

NOTE

If the Pendulum lock mechanism is not engaged before transportation, internal mechanical damage can occur.

BATTERY INSTALLATION & SAFETY

1. To open the batteries cover (#5), press the release button (#10) at the base of the laser and open the battery cover.
2. Insert 2 new AA batteries of the same brand according to the polarity diagram on the inside of the battery compartment.
3. Hook and push the battery cover in place.



NOTE

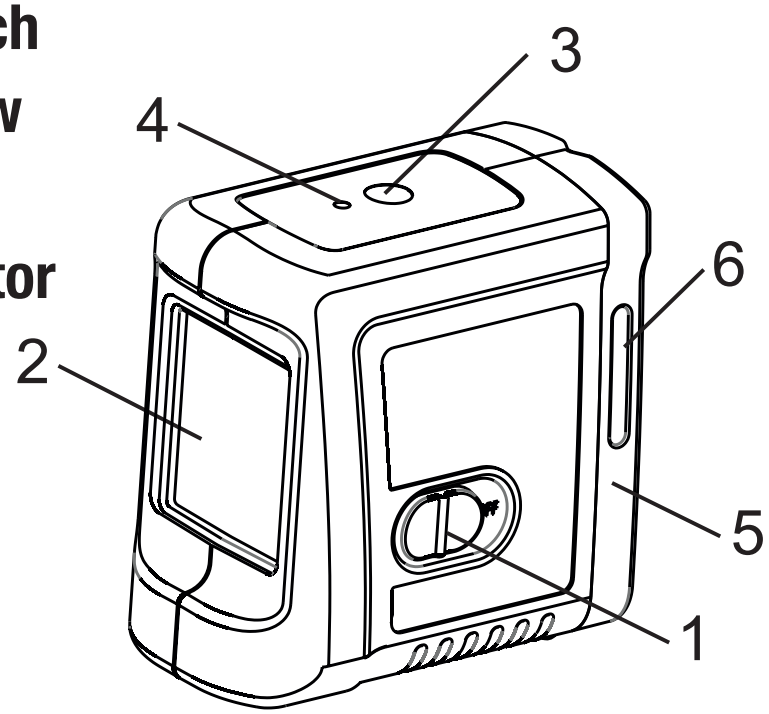
If the laser levelis not in use for a long period of time, remove the batteries from the battery compartment. This will prevent batteries from leaking and corrosion damage.

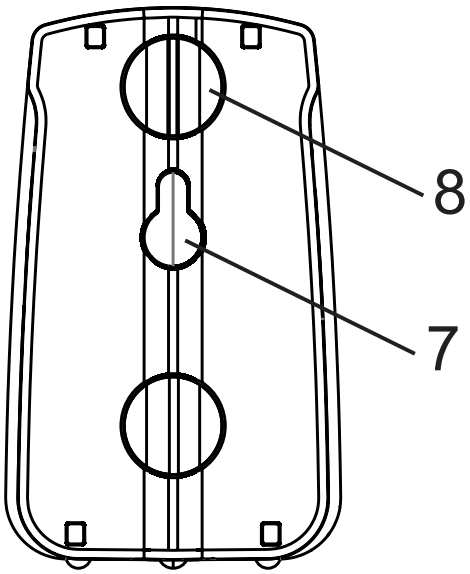
WARNING: Batteries can deteriorate, leak or explode, and can cause injury or fire.

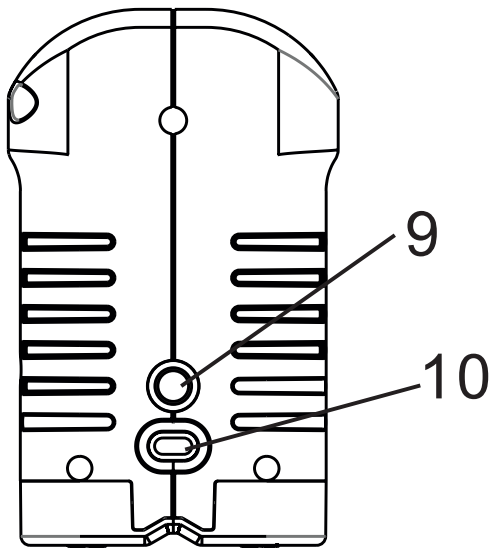
1. Do not shorten the battery terminals.
2. Do not charge Alkaline batteries.
3. Do not mix old and new batteries.
4. Do not dispose of batteries into household waste.
5. Do not dispose batteries in fire.
6. Defective or dead batteries must be disposed of according to local regulations.
7. Keep the batteries out of reach of children.

OVERVIEW

1. On/Off Locking Switch
2. Laser output window
3. Manual Mode button
4. Operation LED indicator
5. Battery cover
6. Tying Slot
7. Hanging hole
8. Magnet
9. ¼" Tripod mount
10. Battery cover release button.



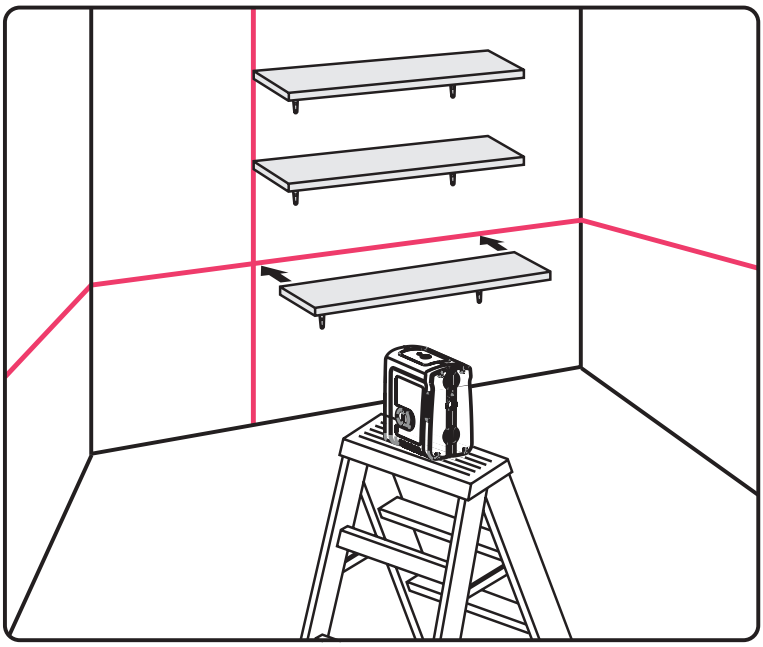




Working in Automatic mode (self-leveling):

In automatic mode the laser level, will level itself in a ±3° range and project a horizontal and vertical cross beam.

1. Remove the laser from the case and place it on a solid flat vibration free surface or on a tripod.
2. Turn the locking switch #1 to the **ON** position. The laser level will generate the horizontal and vertical cross lines and the green LED will light up.
3. If the initial slope of the laser is beyond ±3° the laser lines will flash. In this case, reposition the laser on a more leveled surface.
4. Before moving the laser level, turn the locking switch #1 to the **OFF** position, this will lock the pendulum and protect your laser.



Working in Manual mode:

In manual mode the self-leveling mechanism of the 862G is disabled and the laser lines can be set at any slope required.

1. Long press on the Manual mode button (#3) will activate the Manual mode. The laser will project blinking cross lines and the red LED will light up.
2. Tilt the laser to the desirable slope.
3. To turn the manual mode **OFF**, press again the Manual mode button.
4. While in Manual mode turning the locking switch #1 from the **OFF** to **ON** position, will turn off the Manual mode and the red LED near the button. The automatic self – leveling will be activated if the laser level is within its self – leveling range.

MAINTENANCE

- To maintain the accuracy of your project, check the accuracy of your laser level according to the field calibration tests procedures.
- Change the batteries when the laser beams begin to dim.
- Wipe the aperture lens and the body of the laser level with a clean soft cloth. Do not use solvents.
- Although the laser level is dust and dirt resistant to a certain degree, do not store in dusty places as long term exposure may damage internal moving parts.
- If the laser level is exposed to water, dry the laser level before returning it to the carrying case to prevent corrosion damage.
- Remove the batteries if the laser level is unused for a long period of time, to prevent corrosion damage.

FIELD CALIBRATION TEST

This laser level left the factory fully calibrated. Kapro recommends the user check the accuracy of the laser periodically, or if the unit falls or is mishandled.

1. Check the height accuracy of the horizontal beam
2. Check the level accuracy of the horizontal beam
3. Check the level accuracy of the vertical beam.

Checking the Height Accuracy of the Horizontal Beam. (Up and down deviation)

1) Set up the laser on a tripod or on a flat surface between two walls **A** and **B**, approximately 5 meters apart.
2) Position the laser level approximately 0.5 meters from wall **A**
3) Unlock the pendulum to project the horizontal and the vertical cross beams towards wall **A**.
4) Mark the center of the cross beam on the wall as **a1** (see figure 1).

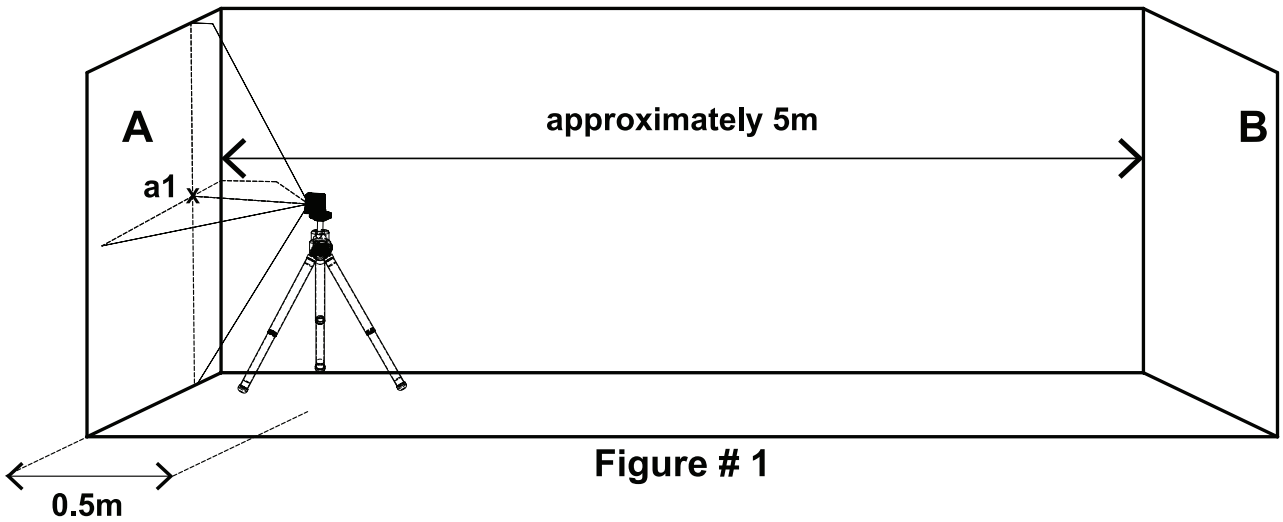


Figure # 1

5) Turn the laser 180° towards wall **B**, and mark the center of the cross beam as **b1** on the wall (see figure 2).

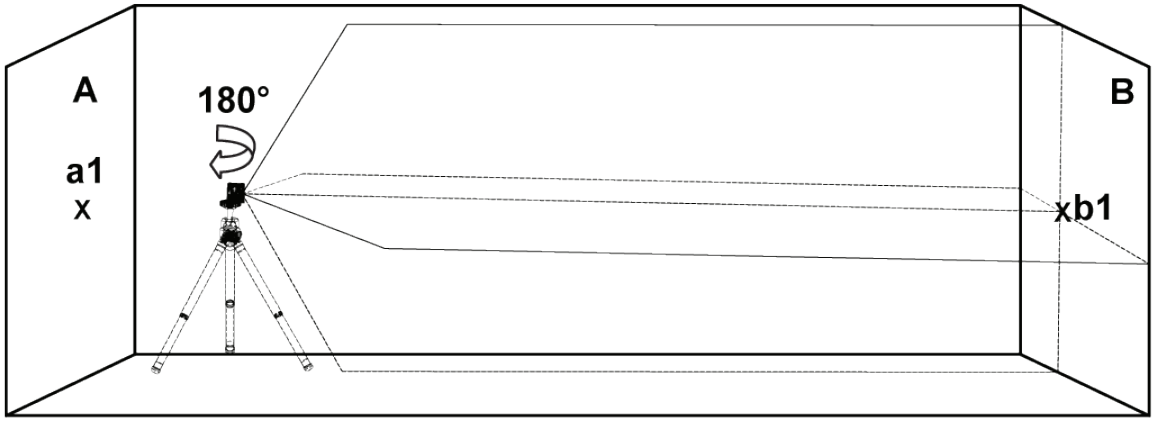


Figure # 2

6) Move the laser level towards wall **B** and position it approximately 0.5 meters from wall **B**.
7) On wall **B**, mark the center of the cross beam as **b2** (see figure 3).

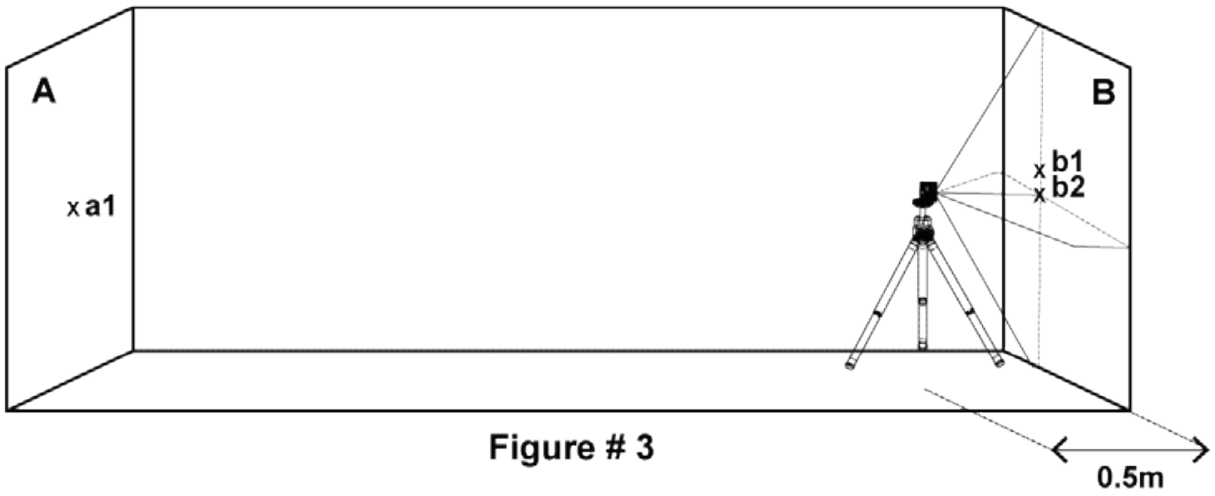


Figure # 3

8) Turn the laser 180° towards wall **A**, and mark the center of the cross beam as **a2** on the wall.(see figure 4).

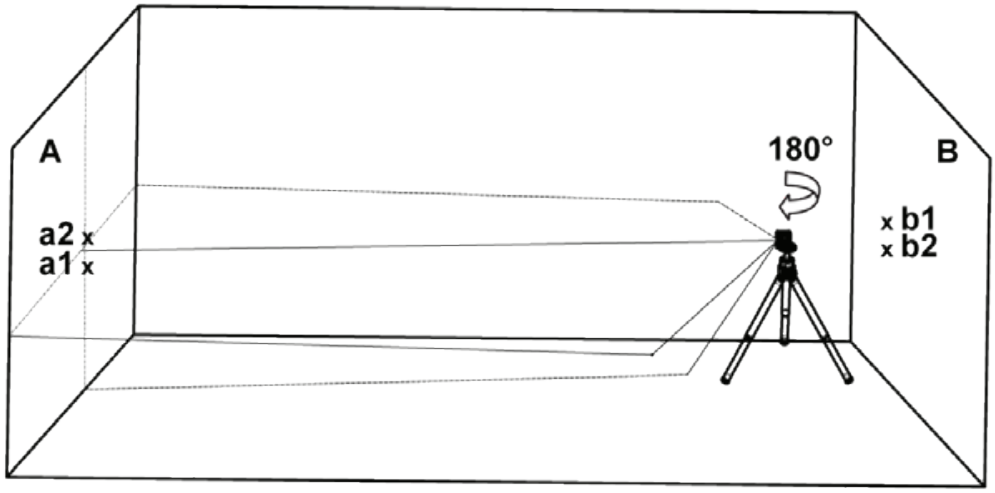


Figure # 4

9) Measure the distances:

$$\Delta a = |a2 - a1|$$

$$\Delta b = |b1 - b2|$$

10) The difference $|\Delta a - \Delta b|$ should be no more than 3 mm, otherwise send the laser level to a qualified technician for repair.

Checking the Level Accuracy of the Horizontal Beam. (Side to side inclination)

1) Set up the laser on a tripod or on a flat surface at a distance of approximately 1.5 meters from 5 meter long wall.
2) Unlock the pendulum to project the horizontal and vertical cross beams towards the wall.

3) Mark point **a1** on the wall, in the middle of the horizontal line at the left edge of the horizontal line (see figure 5).

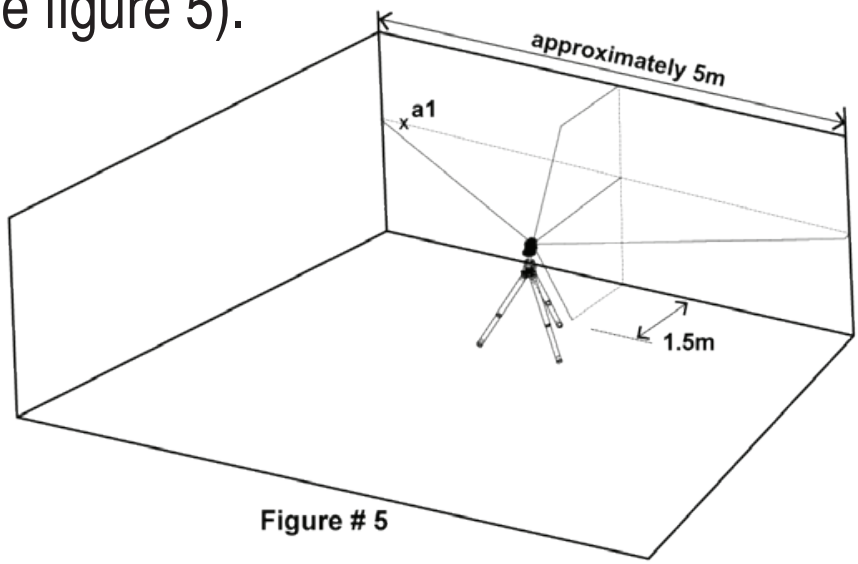


Figure # 5

4) Turn the laser level counterclockwise until the right edge of the horizontal beam reaches near **a1**, mark a point **a2** on the wall in the middle of the horizontal beam (see figure 6).

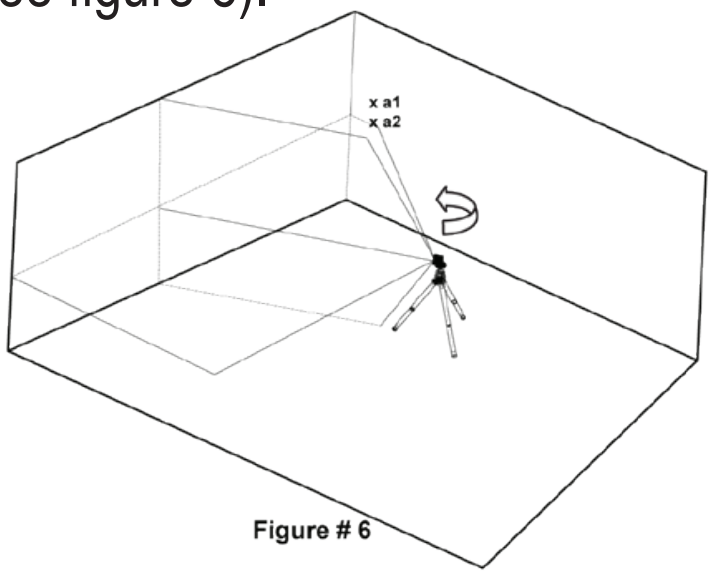


Figure # 6

5) The distance between **a1** and **a2**, should not be more than 2 mm, otherwise send the laser level to a qualified technician for repair.

Checking the Accuracy of the Vertical line.

1) Hang an approximately 4 meter/13 feet plumb line on a wall.
2) After the plumb line has settled, mark point **a1** on the wall behind the plumb line, near the plumb cone. (see figure 7).

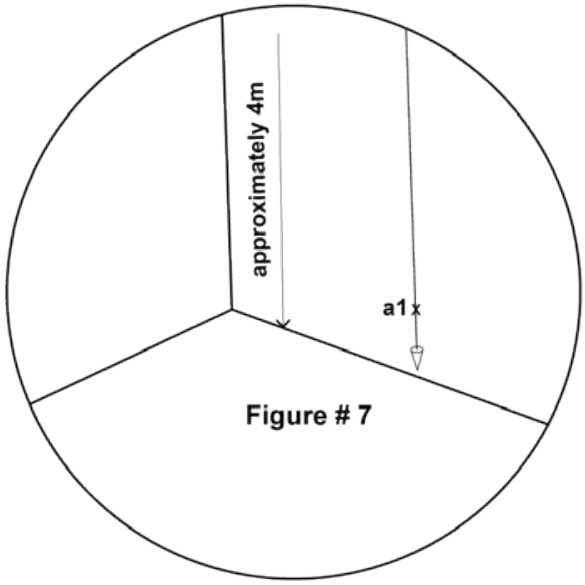


Figure # 7

3) Set up the laser on a tripod or on a flat surface in front of the wall at a distance of approximately 2 meters/ 6.5 feet.
4) Unlock the pendulum safety lock to project the laser beams toward the plumb line.
5) Turn the laser so that the vertical line will merge with the plumb line below the hanging point.

6) Mark point **a2** on the wall, in the middle of the vertical beam at the same height as **a1**. (see figure 8).

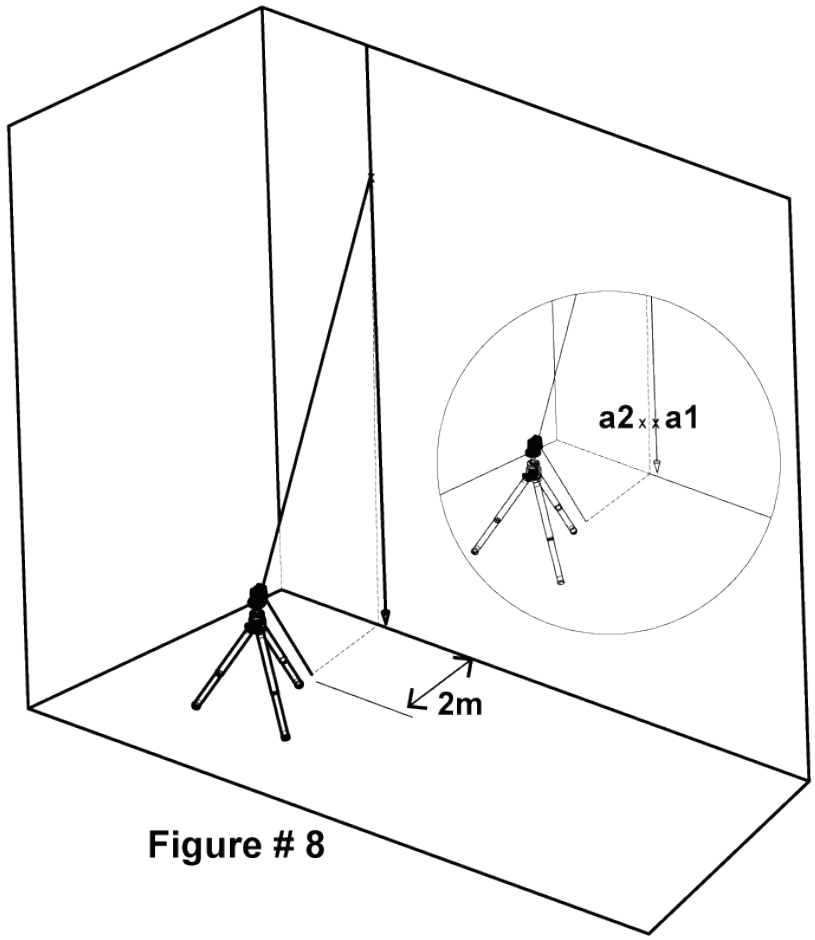


Figure # 8

7) The distance between **a1** and **a2**, should be no more than 2mm, otherwise send the laser level to a qualified technician for repair.

SPECIFICATIONS

Laser beams output pattern	Vertical and horizontal cross beams
Laser range	• Indoor - 20m (65ft)
Accuracy	±0.4mm/m (±0.0004in/in)
Fan angle	100° ±5°
Self-leveling range	±3°
Laser line width	2.5 mm±0.5mm/5m (0.13” ±0.02” at 20’)
Wavelength	520 ±10nm - Laser Class II
Power supply	2 AA batteries (included)
Battery life	15 hours of continuous operation
Operating temp.	-10° C + 45° C (14°F +113°F)
Storage temp.	-20° C +60° C (-4°F +140°F)
Water & dust proof	IP54
Dimensions	9cm x 5.5cm x9.2cm (3.5” x 2.2” x 3.6”)
Weight including batteries	330gr±10gr (0.728lbs 0.35±oz)

WARRANTY

This product is covered by a two-year limited warranty against defects in materials and workmanship. It does no cover products that are used improperly, altered or repaired without Kapro approval. In the event of a problem with the laser level you have purchased, please return the product to the place of purchase with the proof of purchase.
Model #862G Prolaser Cross.
The Serial number sticker is positioned inside the battery compartment.

CE CONFORMITY CERTIFICATE

This product meets the standards of the Electromagnetic Compatibility (EMC) established by the European Directive 2014/30/EU and the Low Voltage Directive (LVD) 2014/35/EU

EC DECLARATION OF CONFORMITY

We declare under our responsibility that the product 862G is in accordance with the requirements of the Community Directives and Regulations:
2014/30/EU
2011/65/EU
EN60825-1: 2014
EN61326-1: 2013