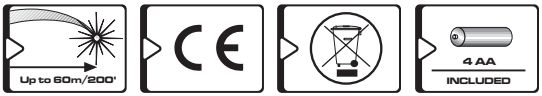
KAPRO
TOOLS WITH VISION

Prolaser Multi Beam GREEN Orbital laser
Model No. 962G

User Manual



Thank you for purchasing Kapro's 962G Prolaser® Multi Beam Orbital laser. 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 962G Prolaser® Multi Beam Orbital laser is an Indoor / Outdoor laser level with 3 laser diodes that emits a horizontal circular line, vertical line and two plumb dots. The laser is innovatively designed for a very broad range of Professional and DIY jobs, including:

- Hanging cabinets and shelves.
- Setting floor and wall tiles
- Drywall and acoustic ceilings installation.
- Framing and aligning windows and doors
- Leveling electrical outlets, plumbing and studs
- Leveling slopes for stairs, rails, roofs and more. (manual mode)

NOTE

Keep this user manual for future reference.

CONTENTS

FEATURES

- This laser emits 1 horizontal 360° and 1 vertical beams, that intersect on the wall in front of the device, as well as two plumb laser dots - on the floor and on the ceiling.
- Self-leveling in automatic mode when the laser is positioned within its self-leveling range which is ±3º
- Visual warning when the laser level is out of leveling range.
- Pulse mode emits pulses that can be detected by a detector.
- Max. indoor working range - 30m (100')
- The max. detectable range of the laser in pulse mode is 60m (200')
- For optimal vertical line viewing : position the laser at least 2 meters from the wall..
- Manual mode allows angular layout/marking.
- IP65 Rated for water and dust protection.
- Locking mechanism to protect the pendulum during transportation.
- 1/4" tripod thread (5/8" thread on the mount)
- Shock resistant rubber over molded casing.
- Multi-purpose magnetic mount.

NOTE

This device contains precision components sensitive to external shock, impact or falls that may compromise its functionality. Handle with care to maintain its accuracy.

SAFETY INSTRUCTIONS

WARNING

This product emits radiation 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,since it will increase the level of eye injury.

WARNING: This product contains lead in soldered joints 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)

- 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 unit.
- Do not use solvents to clean the laser unit.
- Do not use in temperatures below -10°C or above 45°C (14°F to 113°F)
- Do not operate the laser in explosive atmospheres such as flammable liquids, gases or dust. Sparks can cause ignition.
- When not in use remove the battery, 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

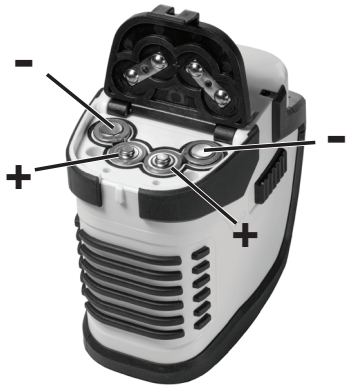
If the Pendulum lock mechanism is not engaged before transportation, internal mechanical damage may occur.

BATTERY INSTALLATION & SAFETY

The 962G Prolaser® Multi Beam Orbital laser® uses 4 standard AA batteries.

Installation

1. Press down the ledge of the battery cover.
2. Insert 4 new AA batteries of the same brand according to the polarity diagram on the battery cover.
3. Reclose the battery cover.



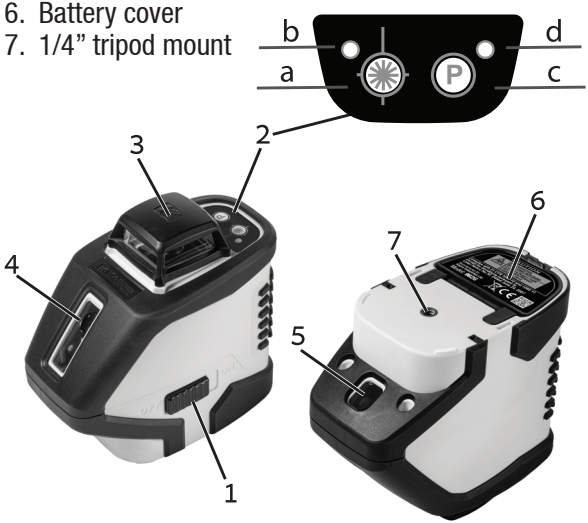
Replace the batteries if the beam/battery indicator (b) starts to flash instead of emitting a steady light.

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

1. Do not shorten the battery terminals.
2. Do not dispose of battery into household waste.
3. Do not dispose of battery in fire.
4. Defective or dead batteries must be disposed according to local regulations.
5. Keep the batteries out of children's reach.

OVERVIEW

1. On/Off Locking Switch
2. Keypad
   a. Beam Selector/Manual mode button
   b. Beam / Battery indicator
   c. Pulse Mode button
   d. Pulse Mode indicator
3. Horizontal laser beam window
4. Forward vertical laser beam window
5. Down plumb dot window
6. Battery cover
7. 1/4” tripod mount



Working in Automatic mode (self-leveling):
In automatic mode the laser level will level itself in ± 3° range and will project horizontal 360° beam, vertical beam and 2 plumb dots.

1. Remove the laser level from the case and place it on a solid, flat, vibration free surface or on a tripod.
2. Push the locking switch #1 to the ON position. The laser level will project all the beams: a 360° horizontal beam, vertical beam and 2 plumb dots. The beam indicator (b) will turn on.
3. Press the beam selector button (a) to choose the required laser beams by cycle:
   All beams => Horizontal beam only => Vertical beam only => Horizontal + Vertical beams => Plumb dots only => All beams.
4. If the initial inclination of the laser level is beyond ± 3° and the automatic mode is activated, the laser beams will flash. In this case reposition the laser level on a more level surface.
5. Before moving the laser level, turn the locking switch #1 to the OFF position, this will lock the pendulum and protect your laser level.

Working in Manual mode:

In Manual mode the 962G self-leveling mechanism is disabled and the laser beams can be set at any slope required.

1. Verify that the locking switch #1 is on the OFF position.
2. Press and hold the beam selector button (a) for 3 seconds, to activate the manual mode. The laser level will project all the beams: a 360° horizontal beam, vertical beam and 2 plumb dots that will flash every 3 sec. to let you know that the beam is not leveled. The beam indicator (b) will turn on.
3. To mark a slope, tilt the laser to the desired angle.
4. To choose a beam, briefly press the beam selector button (a) - it will change the beams by cycle:
   All beams => Horizontal beam only => Vertical beam only => Horizontal + Vertical beams => Plumb dots only => OFF.
5. The last click on the beam selector button (a) will switch OFF all the beams and the beam indicator (b) will turn off.
6. While in Manual mode, turning the locking switch #1 from OFF to ON will turn off the Manual mode. The automatic self – leveling mode will be activated (if the laser level is within the self – leveling range).

Working in Pulse mode with a detector:

For outdoor work under direct sunlight or bright conditions, and for extended indoor ranges up to 60 meters, use the pulse mode with a Detector. When the pulse mode is activated the laser beams will flash at a very high frequency (invisible to the human eye). This will allow the detector to detect the laser beams.

1. The pulse mode can be activated both in Automatic and in Manual mode.
2. Turn on the laser level (to the required mode).
3. Press the Pulse mode button (c) to activate it. The Pulse mode indicator (d) will turn on. Visually, the intensity of the beam will be reduced slightly.
4. Turn on the detector and search for the laser beam.
5. You can choose a different beam, by pressing on the beam selector button (a), while you are in Pulse Mode.
6. To switch the Pulse Mode off, press the Pulse mode button (c) and the Pulse mode indicator (d) will turn off.

MAINTENANCE

To maintain the accuracy of your project, check the accuracy of your laser level according to the field calibration tests procedures.

- Change the battery when the laser beams begins 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, don't 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 battery 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, especially if the unit falls or is mishandled.

1. Check the height accuracy of the horizontal beam.
2. Check the leveling accuracy of the horizontal beam.
3. Check the leveling accuracy of the vertical beam.
4. Check the accuracy of the plumb line.

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

1. Set up the laser on a tripod or on a flat stable surface between two walls **A** and **B**, approximately 5meters/16 feet apart.
2. Position the laser level approximately 0.5 meter from wall **A.**
3. Unlock the pendulum and press the button to project the horizontal and the vertical cross beams towards wall **A**.
4. Mark the center of the cross beams on the wall as a1 (see figure # 1).
5. Turn the laser 180° towards wall **B** and mark the center of the cross beams as **b1** on the wall (see figure 2).

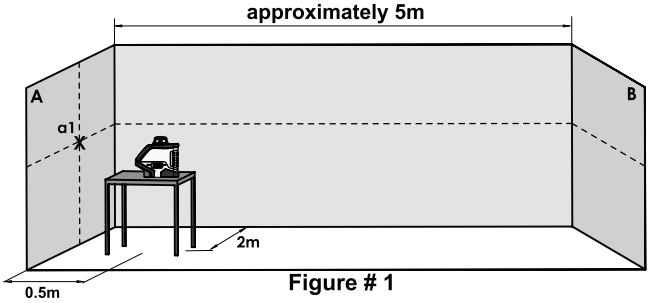


Figure # 1

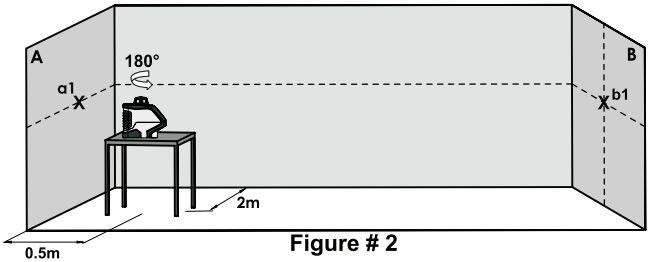


Figure # 2

6. Move the laser level towards wall B and position it approximately 0.5 meter from wall B.
7. Mark on wall B the center of the cross beams as b2 (see figure 3).

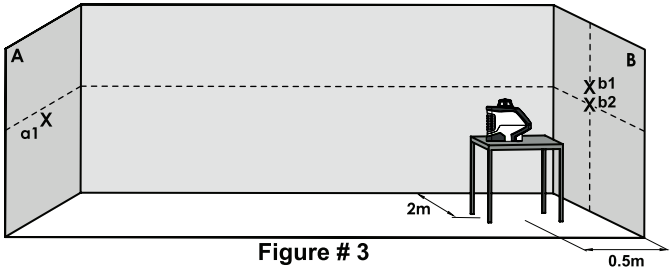


Figure # 3

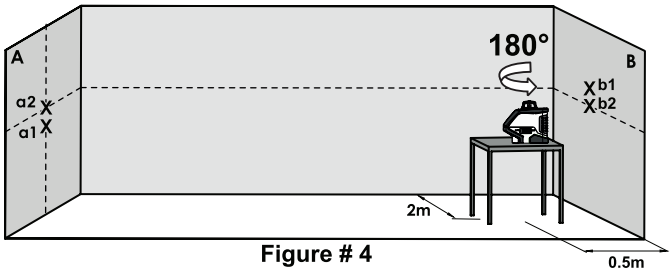


Figure # 4

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

Δa= **|a2-a1|**

Δb= **|b1-b2|**

10. The difference | Δa – Δb| should be no more than 3 mm,if otherwise send the laser level to a qualified technician for repair.

2. 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 a 5 meter/ 16 feet long wall.
2. Unlock the pendulum and press the button to project the horizontal and the vertical cross beams towards the wall approximately at the center of it.

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

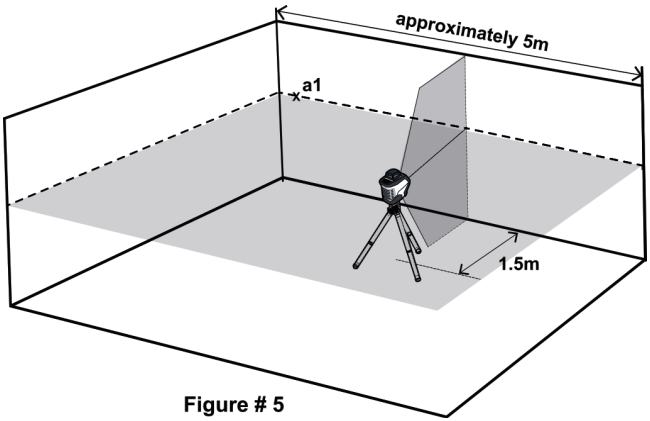


Figure # 5

4. Turn the laser level counterclockwise until the cross-section of the beams moves approximately 90°, mark a point **a2** on the wall near **a1** in the middle of the horizontal beam (see figure 6).
5. The distance between a1 and a2, should be no more than 1.5 mm, if otherwise send the laser level to a qualified technician for repair.

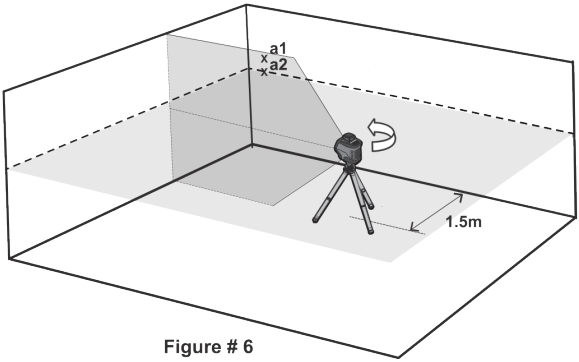


Figure # 6

3. Checking the Accuracy of the Vertical beam.

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).

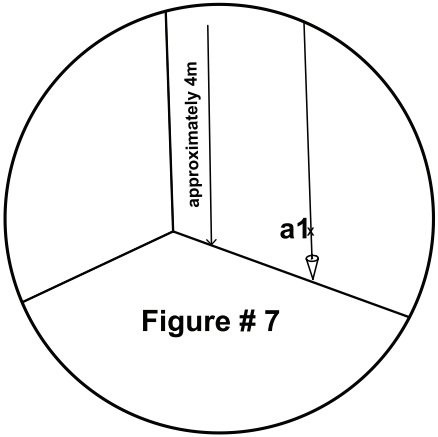


Figure # 7

3. Set up the laser on a tripod or on a flat surface in front of the wall at a distance of approximately 2 meter/ 6.5 feet.
4. Unlock the pendulum, and press the button to project the vertical beam towards the plumb line.
5. Turn the laser so that the vertical beam 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).
7. The distance between a1 and a2, should be no more than 1.5mm, if otherwise send the laser level to a qualified technician for repair.

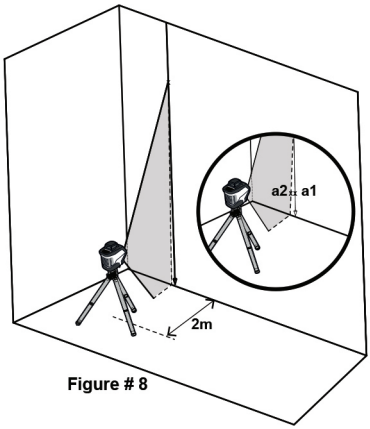


Figure # 8

4. Checking plumb accuracy

For this procedure a room with approx. 5m distance between floor and ceiling is needed.

1. Place the laser level on the floor.
2. Unlock the pendulum and press the beam selector button to project the plumb laser dots on the ceiling and on the floor.
3. Mark the center of the upper plumb dot on the ceiling as point a1. (See Figure 9)
4. Mark the center of the down plumb dot on the floor as point b. (See Figure 9).

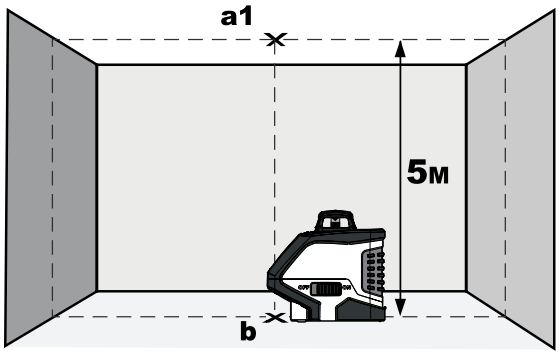


Figure # 9

5. Rotate the laser level 180°, position it so that the center of the down plumb dot is on the point b, which has already been marked, and allow it to level.
6. Mark the center of the upper plumb dot on the ceiling as point a2. (See Figure 10)
7. The distance between points a1 and a2 marked on the ceiling is an indication of the actual deviation of the line between the plumb dots from the ideal plumb line. The distance between a1 and a2, should not be more than 4 mm, otherwise send the laser level to a qualified technician for repair.

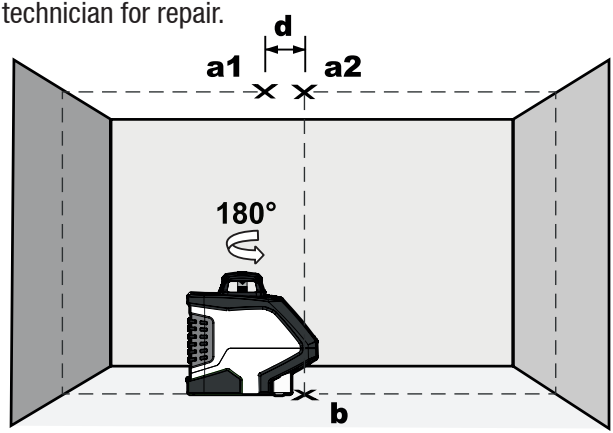


Figure # 10

SPECIFICATIONS

Laser beams output pattern	• Horizontal 360° • Horizontal and vertical lines • Plumb dots • All lines and dots
Laser range	• Indoor - 30m (100ft) • With detector - 60m (200ft)
Accuracy	±0.3mm/m (±0.0003in/in)
Self-leveling Range	±3°
Laser line width	2 mm±0.5mm/5m (0.10" ±0.02" at 20')
Wavelength	510-530nm - Laser Class II
Power supply	4 AA Alkaline batteries
Battery life	Up to 8 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	IP65
Dimensions	119 x 62 x 115 mm 4.7" x 2.44" x 4.53"
Weight including battery	620gr ± 10gr (22 oz ± 0.35 oz)

WARRANTY

This product is covered by a two-year limited warranty against defects in materials and workmanship. The warranty does not cover products that are used improperly, altered or repaired without Kapro Tool's approval. In the event of a problem with the laser level, please return the product to the place of purchase with proof of purchase.

Model #962G
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 962G is in accordance with the requirements of the Community Directives and Regulations:
2014/30/EU
2011/65/EU
EN60825-1: 2014
EN61326-1: 2013

Rev. 3.0