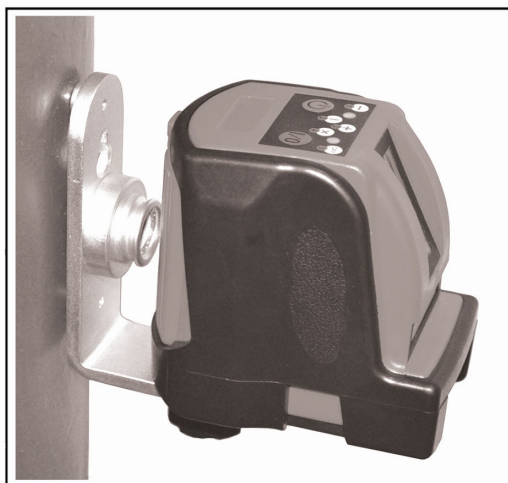
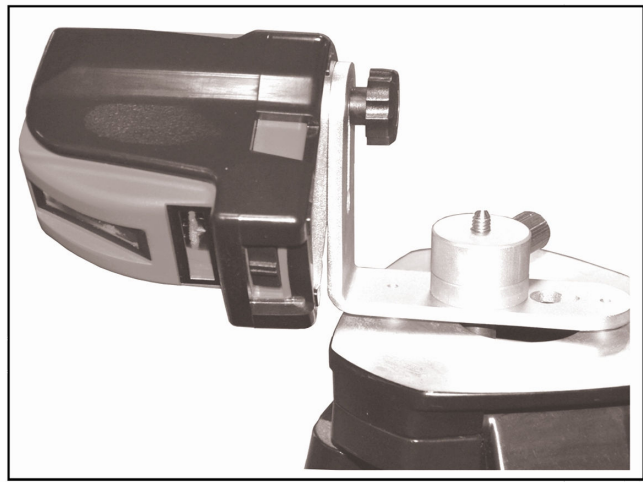


# LP103 CROSS LINE LASER OPERATION MANUAL



Many thanks for purchasing LP103 cross line laser, Please read the manual carefully before you use this laser.

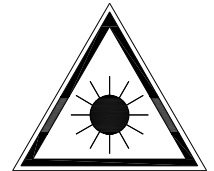
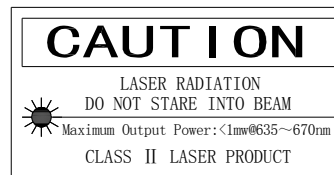
## **Features**

- Magnetic damping compensator to ensure quick self-leveling time.
- Horizontal / vertical high visibility laser line.
- Laser line will flash if the unit is out of self-leveling range.
- Compact size for easy carrying.
- Built-in compact locking system to lock the compensator while in transportation to avoid vibration.
- Line laser detector can be used for outdoor operation.

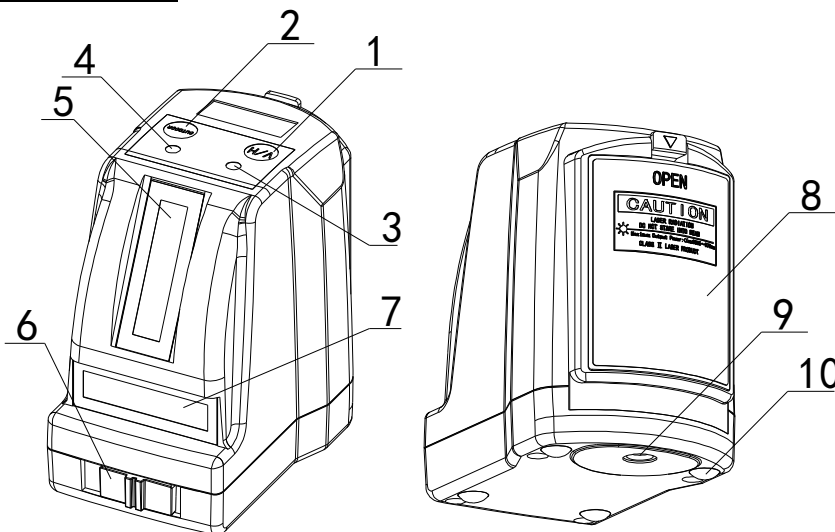
## **User Safety**

Caution: Laser radiation is emitted from this product. Use of controls, adjustments or procedures other than those specified herein may result in laser radiation exposure. Never stare directly into beam or view directly with optical instrument.

These symbol is attached to the instrument.



## **Description**



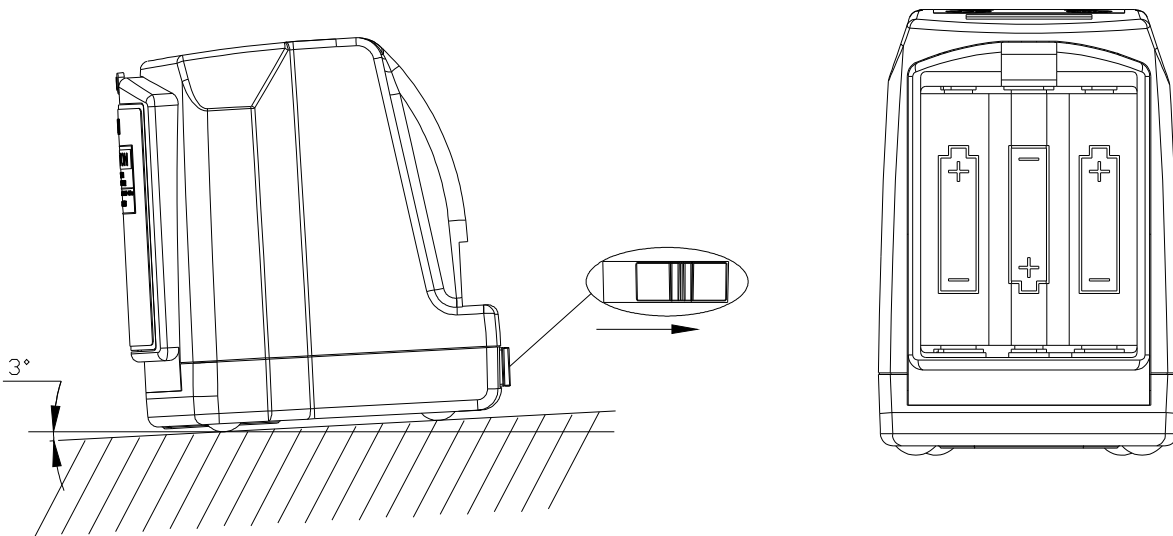
- |                                  |                                 |
|----------------------------------|---------------------------------|
| 1. Laser line button(cycle)      | 2. Indoor/outdoor switch button |
| 3. Hand-mode indicator           | 4. Indoor/outdoor indicator     |
| 5. Vertical line output window   | 6. Pendulum Lock / power switch |
| 7. Horizontal line output window | 8. Battery cover                |
| 9. 1/4" Connection thread        |                                 |

## **Operation**

1. Open the battery cover, replace three piece batteries and shut off the battery cover.
2. Turn on the Pendulum lock, press Laser line button once, only Horizontal laser line emit; press this button again, Horizontal laser line emit; press this button again, Horizontal and vertical laser line all emit; press this button again, the unit is into Hand-mode function, horizontal laser line and vertical all emit.
3. Press Indoor/outdoor button, indicator will be on, the unit is into outdoor function, You can use Line laser detector to find Laser line position.
4. If the laser line is weak, it means the battery voltage is low, you should Replace new battery as soon as possible.

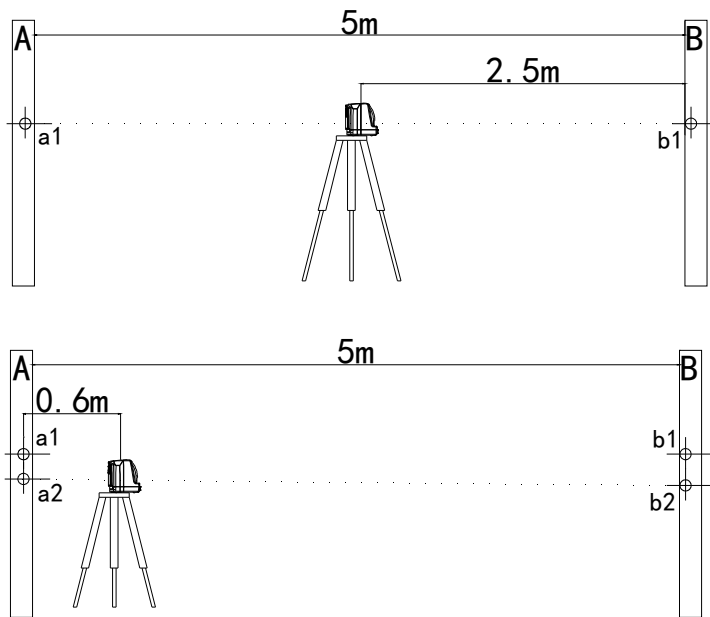
## **Notice**

1. Laser should be put on a level surface of object, such as desktop, ground, etc. Self-leveling range is  $\pm 3^\circ$ , the laser line will flash if the laser is out of self-leveling range.
2. Please lock the pendulum and put the laser into a soft bag to protect the laser when It is not in use.



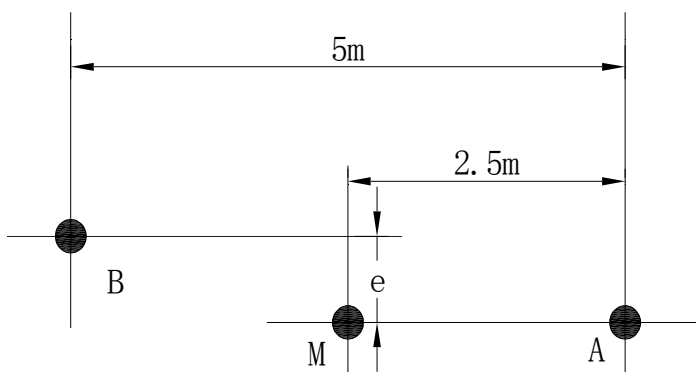
## **Horizontal accuracy calibration:**

1. Set up two piece poles, the distance is 5M.
2. Put the laser on the top of tripod and make it in the middle of the two poles.
3. Turn on the laser to make two piece laser line is on, and then the point of cross laser line will be marked a1 on pole A.
4. Swivel the laser 180 degree, the point of cross laser will be marked b1 on Pole B.
5. Move the tripod and make the laser 60cm away from Pole A, double-mark a2, b2; Measure the distance between a1 and a2 and between b1 and b2, if the difference is over 1.2mm, the laser accuracy is out of calibration, Please contact with Seller to calibrate the laser.



### **Check the accuracy of horizontal laser line**

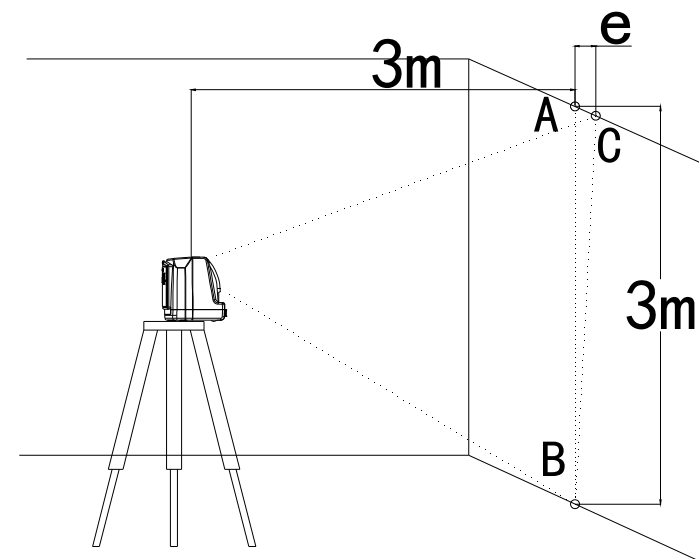
1. Choose a wall and set laser 5M away from the wall.
2. Put the laser on the tripod and face to the wall, turn on the laser and cross point of cross laser line is marked A on the wall, find another point M on the horizontal line, ( the distance is around 2.5M.)
3. Swivel the laser, and another cross point of cross laser line is marked B, please note the distance of B to A should be 5M. Measure the distance between M to cross laser line to be E, if "E" is over 3mm, the laser is out of calibration, please contact with seller to calibrate the laser.



### **Check the vertical laser line**

1. Choose a wall and set laser 5M away from the wall.
2. Mark point A on the Wall, please note the distance from point A to ground should be 3m. Hang a plumb line from A point to ground and find a plumb point B on ground.
3. Turn on the laser and make the vertical laser line meet the point B, along the vertical laser line on the wall and measure the distance 3M from point B to another point C, point C must be on the vertical laser line, it means the height of C point is 3M.

- a) Measure the distance from point A to point C to be E, if the “E” is  
 b) over 2mm, Please contact with seller to calibrate the laser.



### **Specifications:**

1. Laser source: 10mw semiconductor laser diode
2. Wave length: 635nm
3. Laser safety class: Class 2M
4. Accuracy:  $\pm 1$  mm/3m
5. Self leveling range:  $\pm 3^\circ$
6. Self leveling time:  $\leq 5$  seconds
7. laser line fan angle:  $\geq 120^\circ$
8. Operating range: 15m
9. Power supply: 3pcs AA battery
10. Operating time: around 15hours
11. Unit dimensions: 92 X 70X90mm
12. Unit weight: around 400g
13. Operating temperature:  $-5^\circ$  ---  $+45^\circ$
14. Unit tripod mount: 1/4"

### **Packing List**

Item	Specification	Quantity	Remark
1	Cross line laser	1	
2	AA Battery	3	
3	Multi-function wall bracket	1	
4	Operation manual	1	
5	Soft bag	1	
6	box	1	

Optional accessory: LVH100 line laser detector with clamp

## **Care & Maintenance**

This unit is a product of superior design and manufacture, it should be treated with care. It also should be transported or carried carefully to avoid drop, impact or vibration.

The following suggestions will help the user to enjoy this products.

- Keep it and all its parts and accessories out of children's reach.
- Do not store it in the hot areas, hot temperatures can short the life of electronic device, damage battery, and warp or melt certain plastics.
- Do not store it in the cold areas. When the unit warms up to its normal operating temperature, moisture can form inside where it may damage circuit board.
- Although unit is dust and dirt resistant, do not store in dusty, dirty areas as long term exposure to these elements may damage internal moving parts.
- Do not attempt to open it. Non-expert handling of the unit may damage it and will void the warranty.
- Do not drop, knock, or shake it. Rough handling can break the unit or compromise its functionality.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it. Wipe it with a soft cloth, slightly dampened in a mild soap and water solution.
- Keep the laser aperture windows clean by periodically wiping them with a cotton swab dipped in isopropyl alcohol.
- Please take out the battery when the unit is not in work.

## **Warranty**

This unit is warranted to the original purchaser to be free from defects in workmanship and material. Our corporation will repair or replace any defective parts which may malfunction under normal and proper use within a period of 90days from the date of purchase without charge of parts and labor once delivered prepaid to us together with a proof of date and place of purchase.

This warranty is not subject to misuse, abuse, assignment or transfer. The exclusive remedy under any and all warrants and guarantees, expressed or implied, is limited to repair or replacement as provided herein, and we shall not be liable for damaged from loss or delay of equipment uses, consequential or incidental damage.