

# AUTO-LEVELING DOTS & LINES LASER

FAN ANGLE 150°



Before operating this product, please read the instructions completely

## Caution

1. Never stare directly into beam or view directly.
2. Do not aim the laser beams at others.
3. Keep the laser out of the reach of children.
4. Never repair or replacement by yourself.
5. Do not dispose in fire or heat.
6. Risk of battery leakage.

Take care of your unit, please pay more attention on the following items:

1. Never put it on these places
  - 1) magnetic area
  - 2) vibrative area
2. Maintenance
  - 1) The light turns dark because of dirty glass. Please clean the glass with the special cleanser.
  - 2) Please clean the unit with the dry soft cloth. Don't clean the unit with the detergent or other cleansers.
  - 3) Clean the unit dry and put it into the carrying case when it is raining
3. Storage
  - 1) Keep the unit into the special carrying case
  - 2) Take the unit out of the case if the lock of the carrying case is bad. Otherwise the unit will be broken if it fall off from the high.

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Caution Label:



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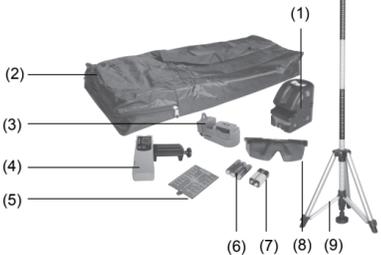
## Introduction

- 
- (1) keypad
  - (2) vertical fan window
  - (3) locking knob
  - (4) horizontal fan window
  - (5) fan window of left dot
  - (6) fan window of up dot
  - (7) fan window of front dot
  - (8) fan window of right dot
  - (9) fan window of down dot
  - (10) soft rubber
  - (11) Battery box
  - (12) 1/4" connecting nut
  - (13) Adjusting bolt
  - (14) alnico
  - (15) 5/8" connecting screw
  - (16) 1/4" connecting nut
  - (17) Hanging hole
  - (18) 1/4" connecting knob
  - (19) Binding groove(1)
  - (20) Binding groove(2)

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## Package

- (1) unit
- (2) soft bag
- (3) multifunction base
- (4) detector detector clamp
- (5) target plate
- (6) battery
- (7) 9V battery
- (8) laser glass
- (9) tripod



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## Battery installing

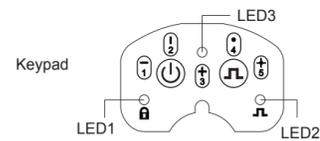
- Installing/replace the battery with 3xAAA batteries as following:
1. open the battery cover
  2. take out the batteries and replace them.
  3. Return the battery cover to its original position.



NOTE:  
Put the anode of battery firstly into the groove, otherwise it is difficult to install the batteries.

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## Unit Using

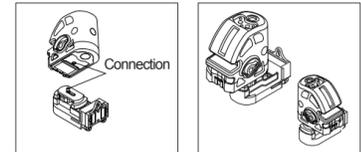


1. Open the locking knob.
2. Press the power key (LED3) shows green, and the laser beams turn as following:  
H→V→H,V→5dots→H,V,5dots
3. Press the pulse key (LED2) to 10kHz status, green LED2 turns on.
4. Close the locking knob, locking LED1 shows green.
5. When the unit tilts over the compensative range 3°±0.5°, the laser beam will blink on 2times/second speed.
6. When the power voltage bellows 3.3V, the green LED3 will turn to red.

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## Connecting accessories

1. Multifunction base  
Connect the 1/4" nut of the unit bottom with that of the multifunction base. The unit can be rotated 360° on the multifunction base.



2. The 5/8" connecting screw and the 1/4" connecting nut of the multifunction base can be fixed on the special tripod.



3. Multifunction rotating base



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## Application

interior decorating, instrument installation, floor & wall bricks, drop ceiling, wall frame, level wall device, wainscot, level the cabinets and the shelves, build the slope, more and more

line



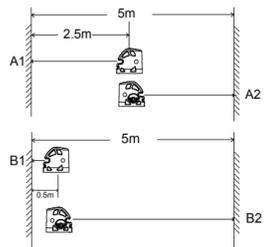
dot



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## Calibration

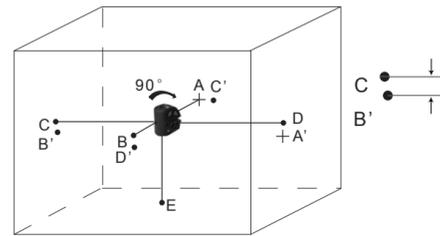
1. Check the concinity of the horizontal beam and the front, left, right dots
  - ① Set the unit between two walls about 5m.
  - ② Turn on the unit, mark the cross dot of the horizontal and the vertical beams on one of the wall as A1.
  - ③ Rotate the unit 180° to face the another wall and mark A2.
  - ④ Move the unit far away from one wall about 0.5m.
  - ⑤ Turns the unit face to the wall with A1, then mark B1.
  - ⑥ Rotate the unit 180°, then mark B2 on another wall.
  - ⑦ According to the  $|A1-B1| - |A2-B2| \leq 2mm$ . If the value is greater than 2mm, the unit must be returned to the authorized service center.
  - ⑧ Measure the front, left and right dots with the same steps. If the value is greater than 3mm, the unit must be returned to the authorized service center.



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## Calibration

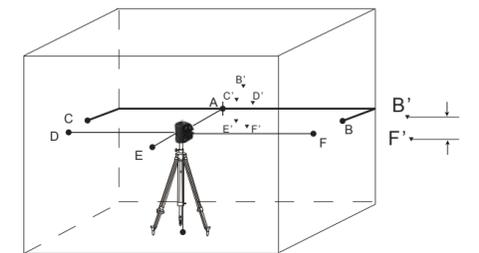
2. Check the 90° including angle of cross dot and the front, left, right dots
  - ① Installing the unit on the multifunction base, and put them in the center of 6m x6m room, then turn on all the laser beams and dots.
  - ② Face the cross dot and front, left, right dots to the walls, the down dot aims the floor, mark A,B,C,D,E respectively.
  - ③ Rotate the unit 90° around the down dot, mark A',B',C',D' on the walls, measure respectively the distances of A to C', B to D', C to B' and D to A'. If the value is greater than 2mm, the unit must be returned to the authorized service center.



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## Calibration

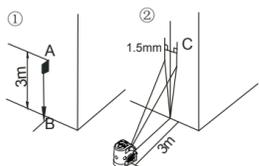
3. Check the horizontal accuracy of horizontal beam and the front, left, right dots
  - ① Put the unit with multifunction base on the tripod, and then turn on all the lasers.
  - ② Make the cross dot face to one wall, mark the center dot A.
  - ③ Rotate the unit, and make the left & right ends of horizontal beam, front, left, right dots shoot respectively near the mark A, then mark B', C', D', E', F'.
  - ④ Measure the vertical distance from the highest dot to the lowest dot among these A, B', C', D', E', F' dots.
  - ⑤ If the value is greater than 3mm, the unit must be returned to the authorized service center.



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## Calibration

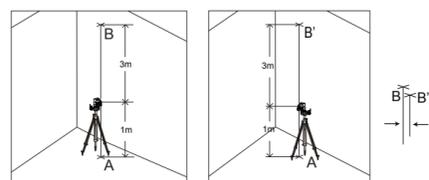
4. Check the vertical accuracy
  - ① Find an old building without wind, mark point A at 3m high.
  - ② Along point A set a plumb, and then mark point B on the floor.
  - ③ Put the unit far away from the point B about 3m.
  - ④ Turn on the unit, and make the vertical beam aim at the point B.
  - ⑤ Under this status, mark the point C near the point A on the wall, it is ok if the value between A and C is less than 1.5mm.



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## Calibration

5. Check the accuracy of up & down dots
  - ① In a 4m high room, set the unit on a plat where is far away from the floor about 1m, and then turn on the unit.
  - ② When the down dot shoots on the floor, mark the point A, the up dot shoots on the ceiling, mark the point B.
  - ③ Rotate the unit 180° and make the down dot aims at the point A.
  - ④ Then mark point B' on the ceiling.
  - ⑤ Measure the distance between point B and point B', if the value is greater than 3mm, the unit must be returned to the authorized service center.



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## Specifications

- Unit feature: 1V(over the ceiling), 1H, 5Dots
- H accuracy:  $\leq \pm 3mm/10m$
- V accuracy:  $\leq \pm 3mm/10m$
- Up dot accuracy:  $\leq \pm 1.5mm/3m$
- Down dot accuracy:  $\leq \pm 1.5mm/2m$
- H accuracy of laser dots (formed by left, front and right dots):  $\leq \pm 4mm/10m$
- Accuracy of 90° including angle:  $\leq \pm 4.5mm/10m$
- Overlap ratio of beams and dots:  $\leq \pm 4mm/10m$
- Width of laser beam:  $\leq \pm 2mm/5m$
- Leveling time:  $\leq 3$  seconds
- Receive range:  $\geq 30m$  (with receiver)
- Fan angle: 150°
- Laser diode: 635nm±5nm
- Laser power: Class 2M (EN 60825-1)
- Power voltage: DC 4.5V
- Operation time:  $\geq 7hs$  (Alkaline battery)

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