Self-leveling Rotary Laser R440

Operating Manual

WARNING

- While the instrument is operating, be careful not to expose your eyes to the emitting laser beam. Exposure to a laser beam for a long time may be hazardous to your eyes (laser beam: equivalent to class 2 laser level).

- Do not try to dismantle the instrument. Have it repaired by your dealer or supplier. Dismantling it by yourself may cause permanent instrument malfunctions.

- When attaching the instrument to a tripod, make sure the instrument is securely fixed on tripod and the tripod leg clamps should be securely fastened. If not securely fastened or tightened, the laser could fall off or the tripod could fall over.

- When setting the tripod, beware of the tripod feet, which are sharp. These sharp points allow tripod to be securely positioned on the ground.

- Operate this laser product with the height which avoiding eyes of vehicle drivers or pedestrians. Avoid putting the laser on a highly reflective material such as a mirror. When disposing this instrument, take measure by removing the batteries so that the laser will not be emitted.

PRECAUTIONS

- The instrument should not be stored or used in extreme temperatures or job sites subject to rapid change of temperature. The instrument may not function properly if used out of working temperature range.

- Store inside the carrying case and place in a dry area not subject to vibration, dust or high moisture.

- The instrument should be transported or carried carefully to avoid impact or vibration.

- The instrument should be stored in the carrying case and packed with cushioning material. Always handle the item with care.

- Be sure to observe the items in the instruction manual for proper use of the instrument.

INCLUDES

- R440 Instrument
- Power adaptor &type C cable
- Magnetic Laser Target
- Laser Receiver
- 3M（6section) stuff
- Tripod
- BMC case

1.Functions

This instrument is equipped with the green semiconductor diode with a wavelength of 635nm, which gives laser beam has supreme visibility. And the laser module of instrument will rotate freely to form a laser-scanning surface. Emitting direction of rotary laser-beam illustrated as follows:

Upright-setting

Horizontal-setting

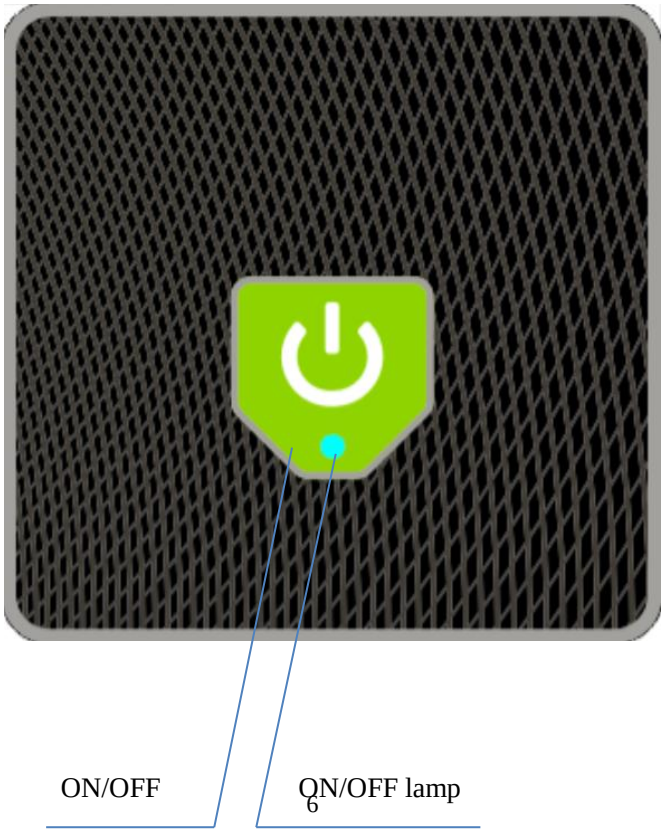
When the instrument is set upright, it will emit laser-beam to form a horizontal scanning surface and a plumb line automatically. When set horizontally, it will form a plumb scanning surface and a vertical line.

2. Introductions

2.1Main body

2.2

Panel



2.3Utilities of Panel

(1) ON/OFF: Controlling the state of power.

(2) Power lamp: When it lights, the instrument is starting up. Otherwise it is closing down.

(3) Mode lamp: When it lights, the instrument is leveling manually. When it winks, it stays in alarm. (The slope of the instrument is out of range).

(4) Speeding-up: Speed 600 r.p.m

(5) ON/OFF lamp

	ON	OFF
Charging (connected)	green blink slow	Green blink slow
Fully charged (connected)	green continue	green continue
Battery OK (not connected)	Red continue	/
Battery low (not connected)	Red blink slow	/

3.Directions:

3.1 Battery

3.7V 8000mAH Li-ion batteries can be used in laser

Please do not disassemble the batteries pack without support from professional service worker .

3.2 Operations

3.2.1 Power

Press the Key ON/OFF to bring automatic leveling into function when the power lamp lights.

When Power lamp lights, it shows the voltage of the batteries is insufficient. Then the rechargeable batteries need to be charged.

Press the Key ON/OFF again to switch off the instrument and power lamp will goes out.

3.2.2 Leveling

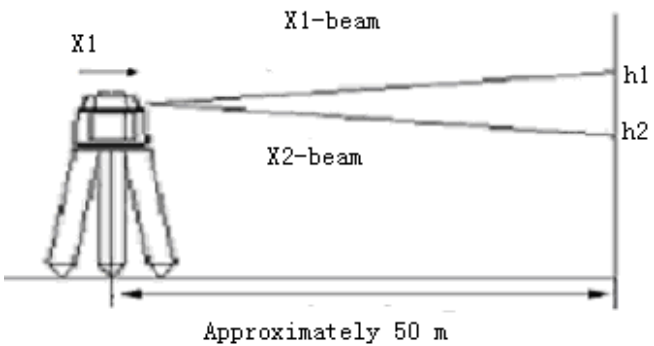
Press the Key ON/OFF to bring automatic leveling into function when the laser beam begins to blink. After automatic leveling, the laser module will rotate at the speed of 600r.p.m.

If the instrument is placed improperly, or the slope of instrument exceeds the range of ±5°,at that moment mode lamp and the laser beam will blink together. Then place the instrument properly.

4.Accuracey Checking

4.1 Horizontal-surface Checking

(1) Place the instrument at the point of 50m in front of wall (or set a scaleplate at the point of 50m away from the instrument), and then adjust the level of the base approximately to aim the X1 to the wall (or scaleplate), as depicted below:



(2) After switching on the power, use the laser detector measuring the h1 of X1-beam on the wall or scaleplate.

(3) Loose the screw of the tripod , turn around the instrument for 180° to

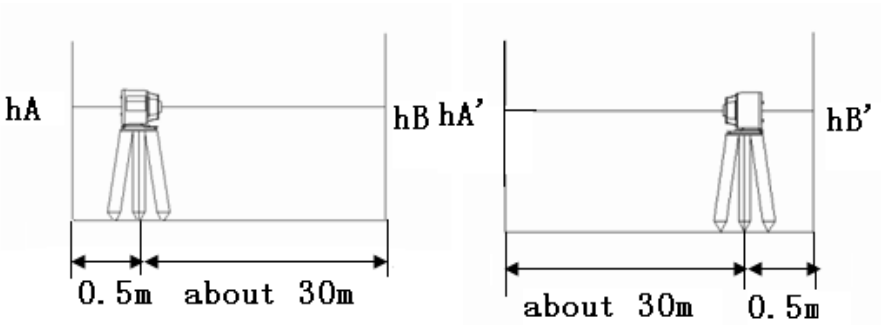
measure the h2 of X2-beam on the wall or scale- plate. The method should be the same with h1.

D-value between h1 and h2 ought to be less than 10mm.

(4) Check the Y-beam in the same way.

4.2 Horizontal-line Checking

(1) Place the instrument between two walls with the distance of 30m (or two scaleplates with the distance of 30m).



(2) Place the instrument according to horizontal setting and then adjust the

instrument.

(3)Switch on the power, and then measure the middle point of the laser beam on the wall (or scaleplate): hA, hB and hA′ , hB′ .

(4)△1=hA-hA′ , △2=hB-hB′

D-value between △1 and △2 ought to be less than 6mm.

5.Specifications

Leveling Accuracy	**Horizontal:±30″** **Vertical :±35″**
Leveling Range	**±5º**
Measuring Range	**Diameter:400m(with detector)**
Spinning Speed	**600 r.p.m**
Light Source	**Laser Diode,** **wavelength: 635nm**
Down Point Diode	**Accuracy:±1mm/1.5m**

Working Temperature	**-10℃-- 50℃**
Power Supply	**Li-ion batteries**
Hours in continuous use	**Approximately 40 hours**
Water-proof	**IP 55**
Dimension	**128(L)×149(W)×170(H)mm**
Weight	**1.35kg**