

Red Rotary Auto Laser Level

RIRL500-2

500m Range

Includes Receiver



INSTRUCTION MANUAL



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Read through carefully and understand these instructions before use

■ FUNCTIONS

This instrument is equipped with a semiconductor diode with the wavelength of 635nm red laser beam for supreme visibility. The laser module of the instrument will rotate freely to form a laser-scanning surface as follows:



Upright Setting



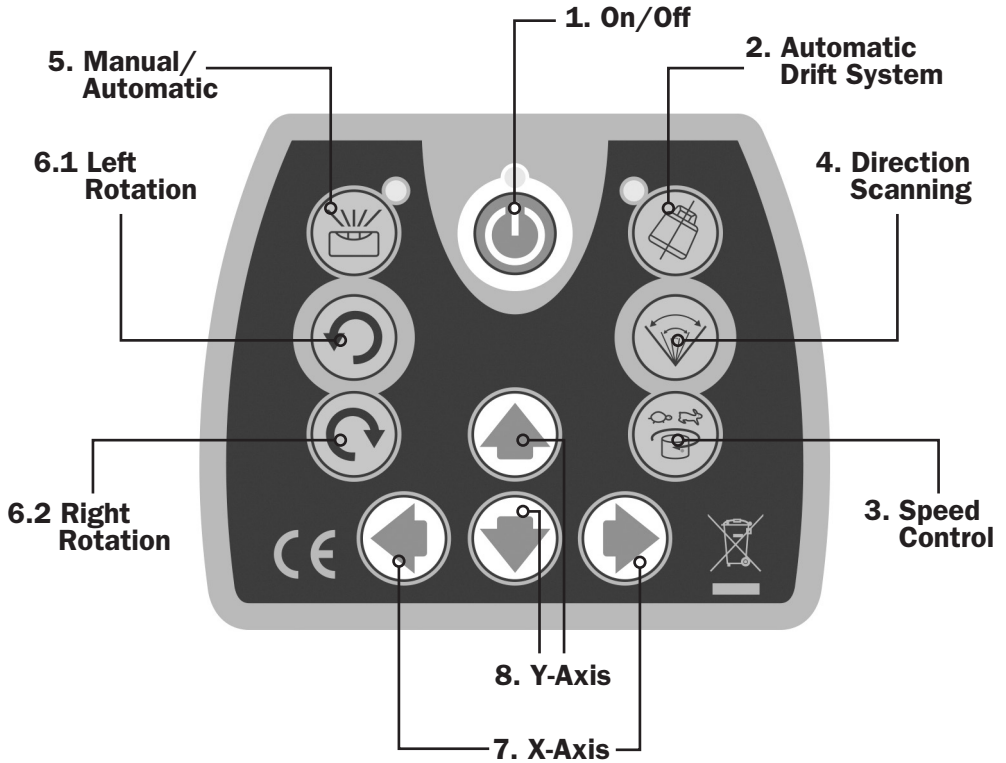
Horizontal Setting

■ PRODUCT FEATURES

Main Body:



Control Panel:



Utilities Of Panel:

1. Power Control: Turn Instrument On/Off. Illuminates when instrument is turned on.
2. Tilt/Drift Mode: Warns user of impact that may affect accuracy. Slow flashing indicates tilt/drift mode. Quick flashing indicates out of level.
3. Speed Control: Scanning speeds of 5 settings: 0, 60, 120, 300, 600RPM.
4. Directional Scanning: Angle of scanning includes 5 levels: 0°, 10°, 45°, 90°, 180°.
5. Manual/Automatic: Illuminates when instrument is in manual mode. Flashes when out of range.
- 6.1 Left Rotation: Making the laser module move counter-clockwise.
- 6.2 Right Rotation: Making the laser module move clockwise.
7. X-Axis: Adjusting the slope of X-axis, when the instrument is in manual mode.
8. Y-Axis: Adjusting the slope of Y-axis, when the instrument is in manual mode.

■ DIRECTIONS

Battery Installation:

1. Remove the cover of battery case at the bottom of the instrument.
2. Put the batteries into the case according to the right electrode.
3. Lay the cover on the box, and then tighten all the screws.

4 x C size Alkaline batteries can be used in instrument

Instrument Placement:

Horizontal scanning in the upright setting:

Place the instrument on the tripod or a stable flat surface. Set the upright instrument and keep the slope of instrument within the range of -5° to $+5^{\circ}$.

Vertical scanning in the horizontal setting:

Lay the instrument on flat surface, and keep the slope of instrument within the range of -5° to $+5^{\circ}$.

Power:

1. Press the Key ON/OFF to turn on the instrument and move into the automatic leveling mode.
2. The power indicator will illuminate when turned on
3. When Power indicator light flashes, it shows the voltage of the batteries is insufficient. The rechargeable batteries need to be charged.
4. Press the Key ON/OFF again to shut down the instrument when power indicator goes out.

Levelling:

Press the Key ON/OFF to bring automatic leveling into function when the laser beam begins to flash.

After automatic leveling, the laser module will rotate right at the speed of 600rpm.

If the instrument is placed improperly, or the slope of instrument exceeds the range of -5° to $+5^{\circ}$, the mode indicator and the laser beam will flash at the same time. Place the instrument properly to resume normal functions

Notice: The instrument will close down automatically after five minutes if not corrected.

Spinning:

Continuous spinning:

Press the speed control key to increase the rotation speed of the laser module. If the speed button is repeatedly pressed it will vary in speeds as follows: 0, 60, 120, 300, 600, 0RPM.

Step Scanning:

Using the speed control to stop the instruments rotation at zero RPM and press the right rotation key. The laser module will step-move clockwise. Then if the left rotation key is pressed, the laser module will step-move counter-clockwise.

Directional Scanning:

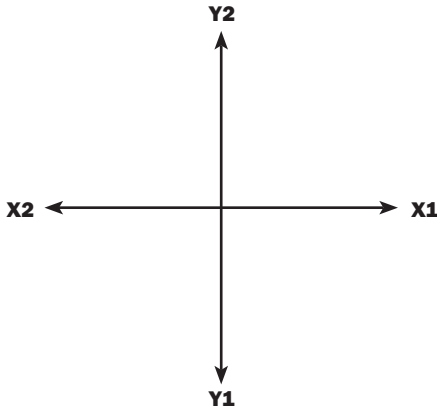
1. Press the Directional scanning key; the laser module will scan directionally. If the direction scanning button is pressed repeatedly, the laser modules scanning angle will continuously change as follows: 0° , 10° , 45° , 90° , 180° , 0° .
2. Press the Left rotation key or the right rotation key to change the direction of scanning.

Slope Adjustment:

When the instrument is set in the upright setting for horizontal scanning, the slope of X-axis and Y-axis can be adjusted. Press the Manual/Automatic key when the mode indicator lights up and the instrument will move into manual levelling mode.

Slope of X-Axis:

a. Aim the X1 -beam in the direction of the slope required to adjust, as depicted below:



b. Press the  or  key to move the laser beam up or down.

Slope of Y-Axis:

a. Aim the Y1 -beam in the direction of the slope required to adjust.

b. Press the  or  key to move the laser beam up or down.

Notice: Press the Manual/Automatic key again when mode indicator goes out, the instrument will enter the automatic levelling mode.

■ POWER SUPPLY

Please load high quality alkaline batteries for longer battery life.

CAUTION: If keeping the instrument in storage (or leaving the instrument unused for extended periods), ensure alkaline batteries are removed.



Battery Cartridge
(Alkaline batteries are not included)

■ REMOTE CONTROLLER

The remote of the instrument uses infrared technology. Aim the aperture of infrared ray to the instrument to bring remote controlling into function (Available distance: indoor: 30m, outdoor: 20m). The telecontrolling panel includes 9 buttons; the indicator on the device will flash to show the operating signal has been sent out once pressing any key.

Functions:

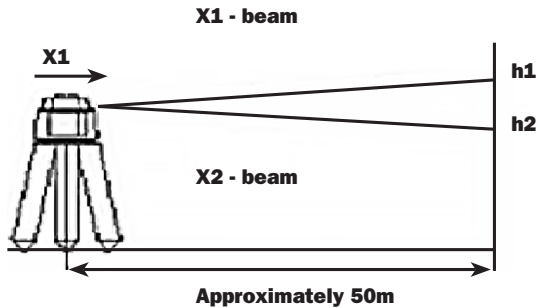
1. Spinning
2. Directional Scanning
3. Slope Adjustment

**Remote
Controller**



■ ACCURACY CHECKING

1. Place the instrument as the point of 50m in front of the 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:



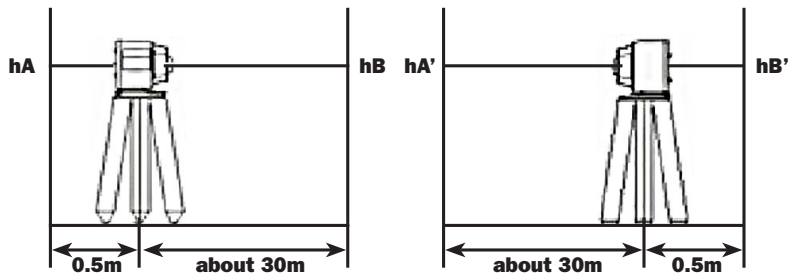
2. After switching on the power, use the laser detector measuring the h1 of the X1 beam on the wall or scaleplate.
3. Loosen the screw of the tripod, and then turn the instrument around 180° to measure the h2 of X2 beam on the wall or scaleplate.

D-Value between h1 and h2 should be less than 10mm

4. Check the Y beam in the same way.

Horizontal-Surface Checking :

1. Place the instrument between two walls with a distance of 30m (or two scaleplates with a 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. $\Delta 1 = hA - hA'$, $\Delta 2 = hB - hB'$.

D-Value between $\Delta 1$ and $\Delta 2$ should be less than 6mm

■ SPECIFICATIONS

Levelling Accuracy	Horizontal: $\pm 15''$ Vertical: $\pm 20''$
Levelling Range	$\pm 5^\circ$
Measuring Range	Diameter: 500m (Using laser detector)
Spinning Speed	0, 60, 120, 300, 600RPM
Directional-Scanning Angle	0° , 10° , 45° , 90° , 180°
Slope-Adjusting Range	$\pm 5^\circ$ (Bi-Directional)
Light Source	Laser Diode, wavelength: 635nm
Down Point Diode	Accuracy: $\pm 1 \text{ mm}/1.5\text{m}$
Remote Controlling Distance	Approximately 20m
Working Temperature	635nm $-10^\circ \text{C} - 45^\circ \text{C}$
Power Supply	4 Section of Alkaline Battery
Hours In Continuous Use	Approximately 15 hours
Water-Proof	IP54
Dimensions	160(L) x 160(W) x 185(h)mm
Weight	2.0kg



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