

Main technical parameters of the instrument

The series laser plumb bob is equipped with two sets of semiconductor lasers. The upper and lower lasers emit light that is coaxial and focused on the same axis as the sightline. The upper laser is equipped with an electric focusing function that allows users to adjust the size of the light spot according to the working distance. The laser brightness adjustment function is also included, which can be controlled remotely to change the intensity of the light. The eyepiece features a laser view function for clearer and more intuitive observation of the light spot focus. The electronic automatic leveling design is equipped with dual high-precision stepper motors for fully automatic adjustment of the light axis, eliminating the need for manual fine-tuning of the bubble level and saving operation time.

 Faster leveling speed

- Higher focusing accuracy
- More convenient operation process
- Reduced equipment learning time and cost

- High-rise building construction
- Engineering supervision and deformation monitoring
- Dam horizontal displacement measurement
- Installation of launch shafts, frames, elevators, and large columnar mechanical equipment

Automatic Leveling Accuracy	±2"	
Automatic Leveling Range	3°	
Eyepiece	maging	Upright
	Magnification	25X
	Field of View	1° 50'
	Effective Aperture of Objective Lens	36mm
	Minimum Viewing Distance	1m
Laser Plumb Bob	Stadia Line Accuracy	
	Center: Wavelength	Typical value Maximum value 635nm 645nm
	Laser Output Power	≥1mW
	Laser Output Power	25m
	Effective Laser Range	200m
	Laser Spot Diameter	≤3mm/50m
	Minimum Focusing Distance	1.5m
Downward Laser	Center: Wavelength	Typical value Maximum value 650nm 660nm
	Output Power	≥1mW
	Laser Spot Diameter	≤2mm
	Lower Point Limit Error	±1mm/1.5m
Remote Control Maximum Distance	30m	
Operating Temperature	-20℃~50℃	
Operating Temperature	4.8℃	
Continuous Working Time	≤10h	

Automatic Leveling Indicator Light

Remote Signal Transmitter

Upper Laser Indicator Light

Near Focus Indicator Light

Far Focus Indicator Light

Lower Laser Indicator Light

Power Indicator Light

Settings Indicator Light

Power Switch Button

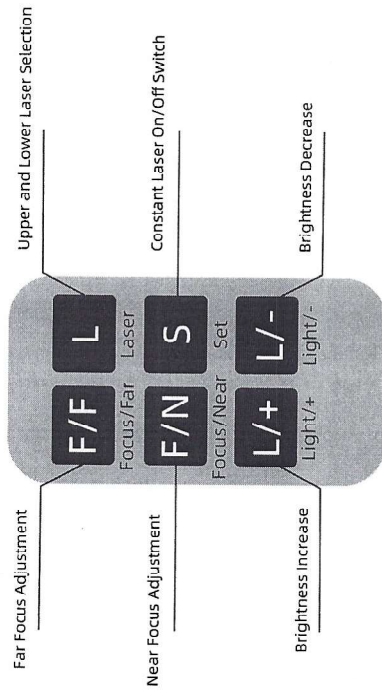
Precision Adjustment Direction Selection Button

Upper and Lower Laser Selection Button

Power Switch Button

Button Functions (Remote Control)

This device is equipped with a remote control (as shown in the picture below), which can be used to control the device from a distance. There are 6 buttons on the remote control panel. When any of these buttons is pressed, the device will emit a beep, indicating that the remote signal has been received. This remote control can be used to control the following functions of the device:



- 1. Upper and Lower Laser Selection:** By operating the "LASER" button, you can select the upper and lower laser beams.
- 2. Focus Adjustment:** By using the "FOCUS NEAR" and "FOCUS FAR" buttons, you can adjust the focus of the device for near and far points, respectively.
- 3. Laser Brightness:** By using the "LIGHT/+" and "LIGHT/-" buttons, you can adjust the brightness of the laser spot, meeting different usage requirements by changing the brightness.
- 4. Precision Adjustment:** Press the "LIGHT/+" and "LIGHT/-" buttons in succession (the interval between button presses must not exceed 0.5 seconds) to enter the precision adjustment mode. (This can also be done using the panel buttons)

*Note: Constant Laser On mode (for easy targeting)

1. Press the "SET" button, the ADJUST light comes on, and the laser stays on constantly, regardless of whether the device is in automatic leveling mode or not.
2. Press the "SET" button again, the ADJUST light goes off, and the device exits the constant laser on mode.

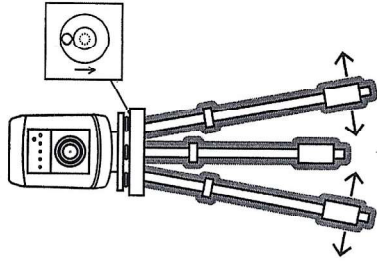
Device Usage

Battery Installation

1. Unscrew the battery compartment cover on the back of the device, insert the provided rechargeable battery, and tighten the battery compartment cover. This product can also be used with standard No.5 batteries.

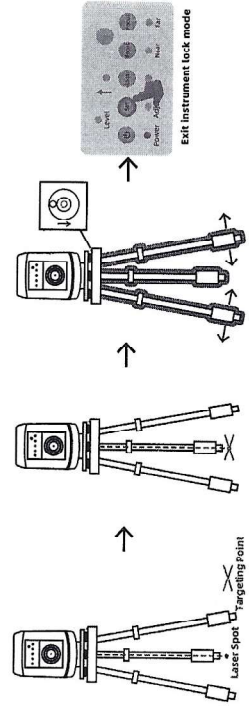
Setting Up the Device

1. Open the tripod, extend the tripod to a suitable height, and spread the tripod legs evenly.
2. Place the device horizontally on the tripod or on a stable flat surface.
3. Coarsely level the device by moving the three tripod legs and adjust the built-in circular bubble level to the center. See the illustration on the right for the adjustment method.

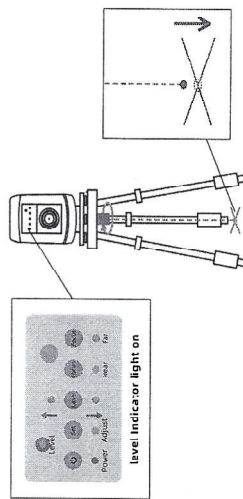


Device Operation

1. Press the power button to turn on the device, and the power indicator light will come on. When the level indicator light stays on, it indicates that the device is leveled, and both the upper and lower lasers are emitting beams. (If the device is placed improperly or tilted more than $\pm 3^\circ$, the device will emit a continuous warning beep. If the out-of-range alarm continues for 5 minutes without any operation, the device will automatically shut down.)
2. Press the SET button once, the SET light flashes, and the device is locked.
3. Move the device directly above the target point according to the laser spot, adjust the tripod again to move the circular bubble level within the black frame. Press the Set button to exit the device lock mode (as shown in the picture below).



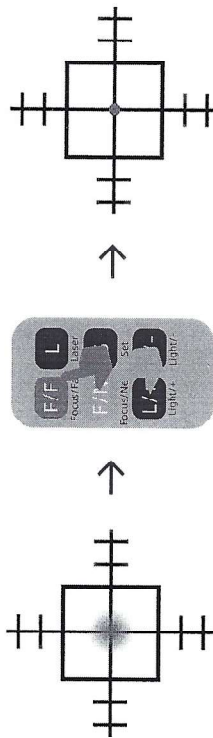
4. Once the leveling indicator light in the upper left corner stays on, loosen the tripod knob, and move the device to move the laser spot to the target point position (as shown in the picture below).



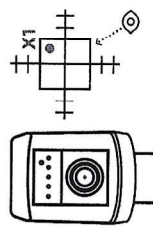
5. Tighten the tripod screw, then rotate the device 180°, and observe whether the laser spot can be reset to the target point position. After resetting to the target point, the leveling and centering is complete.

Vertical Point Calibration

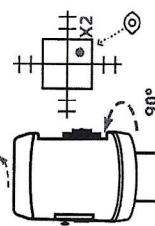
1. The worker at the upper placing point end observes the size of the laser spot on the laser target, and the best focus is achieved by using the remote control's near and far focus adjustment buttons.



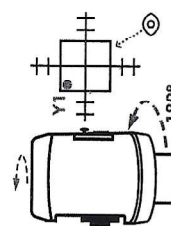
2. The worker at the device end rotates the device at four angles (0°; 90°; 180°; 270°) in sequence, and the worker at the upper placing point end observes the position of the laser spot to calibrate the vertical point. See the step-by-step illustrations below.



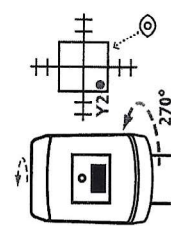
3. The worker at the device end returns the device to 0°, takes the center of the laser spot on the laser target, and marks point X1. (as shown in the picture on the right)



4. Rotate the device counterclockwise by 90 degrees, take the center of the laser spot on the laser target, and mark point X2. (as shown in the picture on the right)



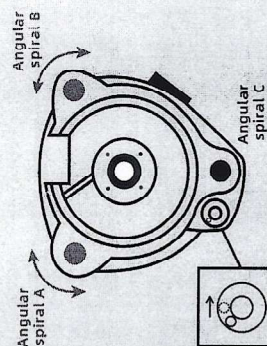
5. Rotate the device counterclockwise by 180 degrees, take the center of the laser spot on the laser target, and mark point Y1. (as shown in the picture on the right)



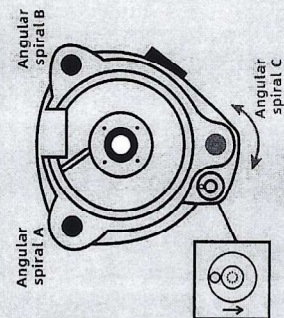
6. Rotate the device counterclockwise by 270 degrees, take the center of the laser spot on the laser target, and mark point Y2. (as shown in the picture on the right)

***Note: If moving the tripod still cannot level the device, use the adjustment knobs as follows:**

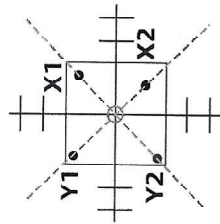
- *1. Turn the leg screws A and B in opposite directions to move the bubble to the circular level line perpendicular to the line connecting A and B. (as shown in the picture on the right)



- *2. Turn the leg screw C to center the bubble in the circular level. (as shown in the picture on the right)



7. Connect points "X1" and "X2," then connect points "Y1" and "Y2." The intersection of the two lines is the desired plumb point.
(as shown in the picture on the right)



Instrument Maintenance

In order to use and store the instrument correctly and reasonably, ensure the accuracy of vertical alignment, and prolong the service life of the instrument, please pay attention to the following points:

- 1、 Hold the handle with one hand and support the triangular base with the other hand to prevent it from accidentally falling.
- 2、 Do not forcefully rotate the eyepiece during observation.
- 3、 Avoid direct sunlight on the instrument during use.
- 4、 If there is dust, moisture, or grease on the exposed optical lenses, gently clean them with lens paper or a clean, dry cloth.
- 5、 In winter, when there is a significant temperature difference between indoors and outdoors, allow the instrument to acclimate for a while before opening the case.
- 6、 When not in use, store the instrument in its packaging box, which should be placed in a dry, clean, and well-ventilated room.

Instrument Charging

When the power indicator light on the panel flashes, the battery should be charged promptly. Remove the battery when not using the instrument for an extended period.

Instrument Warranty

Dear user,

Thank you for choosing our product. From the date of purchase, you are entitled to a one-year warranty service. Within one year, if the failure is caused by product quality issues, we will provide maintenance; if the failure is not due to product quality issues, we will only charge for material costs to repair; maintenance beyond the warranty period will be charged according to our after-sales maintenance fee standards.

Our company does not provide warranty service for instruments in the following situations: inability to use due to operation errors or man-made damage, breakage not caused by product quality issues; unauthorized opening of the product during the warranty period; accessories are not covered by the free warranty.