
Instrument Features and Applications

This product is a semiconductor laser device that takes advantage of the strong directionality and concentrated energy of lasers to provide clear and accurate calibration of reference points.

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.

Features:

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

Applications:

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

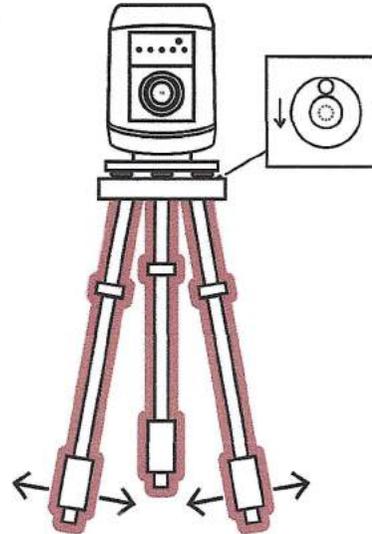
Device Usage

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.

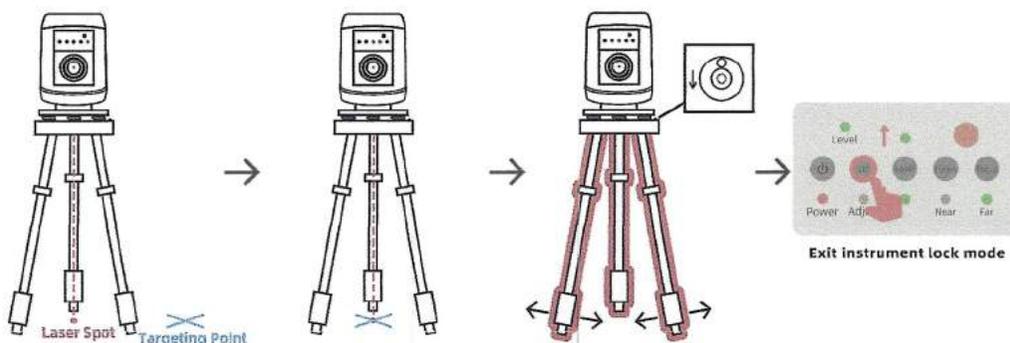
Setting Up the Device

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

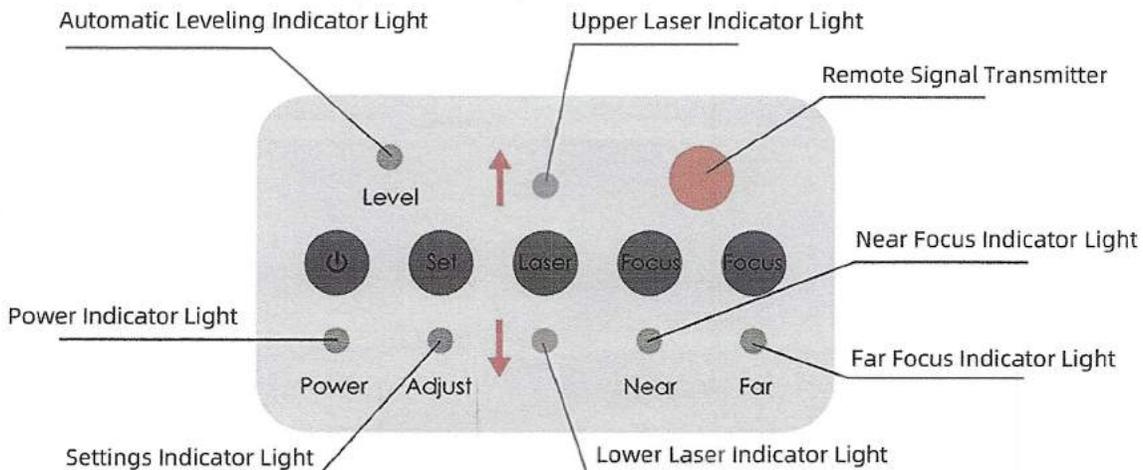
1. Press the power button to turn on the device, and the power indicator light will come on. When the level indicator light stays on, it indicates that the device is leveled, and both the upper and lower lasers are emitting beams. (If the device is placed improperly or tilted more than $\pm 3^\circ$, 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).



Main technical parameters of the instrument

Automatic Leveling Accuracy	$\pm 2''$		
Automatic Leveling Range	3°		
Eyepiece	Imaging	Upright	
	Magnification	25X	
	Field of View	$1^\circ 50'$	
	Effective Aperture of Objective Lens	36mm	
	Minimum Viewing Distance	1m	
	Stadia Line Accuracy	0.1mm/graduation	
Laser Plumb Bob	Center Wavelength	Typical value	Maximum value
		635nm	645nm
	Laser Output Power	$\geq 1\text{mW}$	
	Laser Output Power	25m	
	Effective Laser Range	200m	
	Laser Spot Diameter	$\leq 3\text{mm}/50\text{m}$	
Minimum Focusing Distance	1.5m		
Downward Laser	Center Wavelength	Typical value	Maximum value
		650nm	660nm
	Output Power	$\geq 1\text{mW}$	
	Laser Spot Diameter	$\leq 2\text{mm}$	
Lower Point Limit Error	$\pm 1\text{mm}/1.5\text{m}$		
Remote Control Maximum Distance	30m		
Operating Temperature	$-20^\circ\text{C} \sim 50^\circ\text{C}$		
Operating Temperature	4.8V		
Continuous Working Time	$\leq 10\text{h}$		

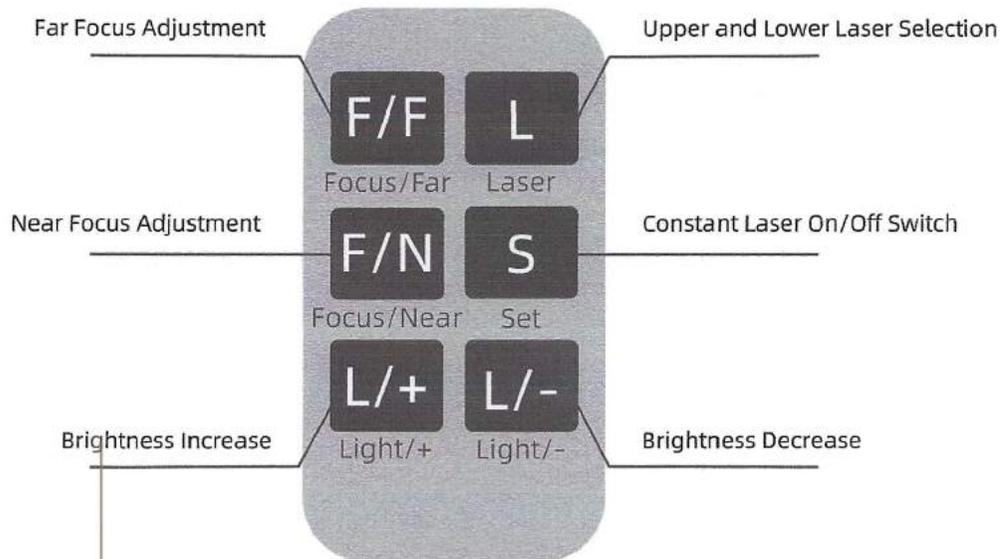
Button Functions (Panel)



-  **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.