

FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.



E-mail: cs@hueparpro.com

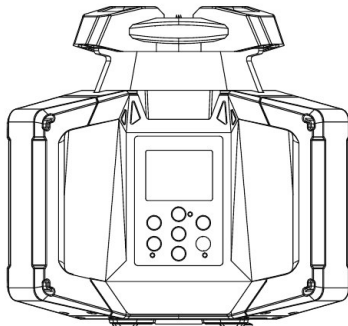
CE UK FC RoHS Made in China

HUEPAR PRO[®]

Operating Manual

RL450HVG3-2S/RL400HV3-2S

Horizontal /Vertical Rotary Laser
(Green Beam / Red Beam)



cs@hueparpro.com

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Safety Instruction

Please read thoroughly and comply with the Safety Instructions and User Manual before using this product. Failure to read and follow may void the warranty.

WARNING!

CLASS III R LASER PRODUCT
COMPLIES WITH CFR 1040.10 AND 1040.11

Max. Power Output: <5mW
Wavelength: 505nm-530nm
Wavelength: 600nm-680nm

LASER RADIATION:

DO NOT STARE INTO THE BEAM.
DO NOT EXPOSURE YOUR EYES DIRECT TO THE LASER BEAM.
AVOID VIEW WITH OPTICAL INSTRUMENTS.



IEC/EN60825-1:2014

ATTENTION:

Read all instructions prior to operating this laser tool. Do not remove any labels from the tool.

• Why Class 3R?

This power level ensures the laser line remains visible indoors and outdoor areas—essential for construction layout tasks. Lower-power Class 2 lasers (≤ 1 mW) are adequate only for dark indoor use and cannot be seen in daylight or bright conditions.

• ⚠ CAUTION: Class 3R laser product.

While in operation, avoid direct eye exposure to the laser beam. Do not stare into the beam or view directly with binoculars or telescopes.

• **⚠ WARNING - Eye Exposure Hazard:**

Never point this Class 3R laser at anyone's eyes, including your own. Direct beam exposure can cause temporary flash blindness, afterimages, or permanent retinal damage depending on exposure duration and distance.

• **⚠ WARNING - Specular Reflections:**

This Class 3R laser beam can reflect off shiny or mirror-like surfaces (such as glass, metal, water, polished floors, or painted walls) and remain hazardous. Avoid directing the beam toward reflective surfaces or areas where unintended reflections may occur. Be aware of your surroundings and keep the beam path clear of people, pets, and reflective objects.

• **⚠ CHILD SAFETY:**

Keep away from children. Do not allow children under 14 years old to operate this device. Adult supervision is required for users under 18. Misuse by untrained operators, including inappropriate aiming, extended exposure, or modification of safety features, may result in serious eye injury.

• **⚠ SAFETY WARNING - Proper Use Required:**

Improper use of this Class 3R laser product may cause eye injury. Always follow operating instructions and avoid direct beam exposure to eyes or reflective surfaces.

• **⚠ WARNING - Device Integrity:**

Do not disassemble or modify this Class 3R laser product in any way. Removal of safety interlocks, adjustment of optical components, or unauthorized repairs may result in hazardous laser radiation exposure.

• **⚠ IMPORTANT - Safety Markings:**

The following label and print samples are placed on this device to indicate the laser class for your convenience and safety. Please locate and review these markings before operation. Ensure all warning labels remain legible and intact. Missing or damaged labels may result in misuse or inadequate protection.



User Guide, Maintenance and Care

- The laser tool is sealed and calibrated at the plant to the accuracy specified. It's recommended to carry out a condition and accuracy check before its first use and periodic checks during future use especially for precise layouts.
- Do not touch the Laser exit aperture glass in case leaving any finger print on the window, which may affect the performance of the laser, Keep clean to avoid measurement errors.
- Before using the laser, make sure the tool is positioned on a secure surface. If mounting on an adapter/tripod, check that the tool is screwed on securely.

- Maintain the tool carefully. Although the tool is designed for the tough conditions of job site use, as with other optical and electronic instruments (e.g. binoculars, spectacles, cameras) it should be treated with care. Do not store the laser tool in direct sunlight or expose it to high temperatures. The housing and some internal parts are made of plastics and may become deformed at high temperatures. Exterior plastic parts may be cleaned with a damp cloth, NEVER use solvents. Use a soft, dry cloth to remove moisture from the tool before storage.

- Store the tool in its case when not in use. If storing for extended time, remove batteries before storage to prevent possible damage.

- Do not dispose of this product with household waste.

- Always dispose of batteries per local code.

- Please recycle in line with local provisions for the collection and disposal of electrical and electronic waste under the WEEE Directive.

Charging and Battery Safety

Please read thoroughly and comply with the battery safety instructions and precautions before charging. Failure to read and follow the instructions on battery usage, failure to charge correctly and/or improper use may result in personal injury, fire, and / or property damages.

Charging Precautions:

- The battery cannot be charged while installed in the rotary laser level. Remove the battery and charge it separately using the provided adapter and charging cable by the manufacturer.

- It is recommended to charge it for more than 6 hours before first use. Normal charge time is approximately 4 hours. Do not charge it for more than 24 hours.
- If the battery is not going to be used for an extended time, please charge it every 6 months, each charge should last no less than 5 hours.
- Optimal charging temperature is between 15°C to 20°C (59°F to 68°F).

Battery Indicators Guide:

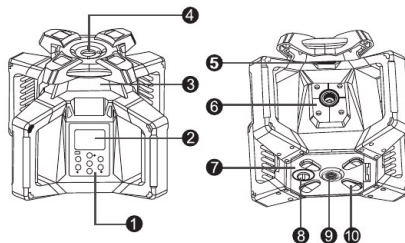
- **Solid Red:** Charging in progress
- **Solid Blue:** Charging complete / Fully charged
- **Off:** No power Connect / Fault condition

Note: Disconnect the charger when the blue indicator illuminates to preserve battery life.

Battery Safety:

- AVOID SHORT CIRCUIT. They may cause fire, and injury!
- Do not leave batteries unattended while charging.
- Do not disassemble or modify the battery.
- Keep the battery away from children, and pets.
- Do not incinerate the product even if it is severely damaged.
The product can explode in a fire.
- Keep the charger away from rain or moisture.
Water permeation increases the risk of electric shock.

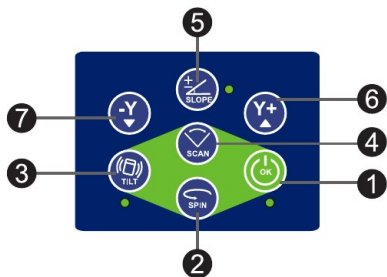
- Stop using the battery immediately if the battery appears abnormal or deformed (emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way). Please contact the manufacturer for a replacement.
- Never charge or store the batteries in a van or a car. Extreme temperatures (low or high) can ignite the battery and cause a fire.
- Do not place the battery in high-pressure containers, microwave ovens, or on induction cookware.
- Do not carry, or store the batteries together with hairpins, necklaces, or other metal objects.
- Battery electrolytes leakage: after contact with skin, wash with plenty of water immediately. If eye contact occurs, flush eyes with water for at least 15 minutes, and seek medical treatment.



Product Overview

The RL450HVG3-2S / RL400HV3-2S are rotating laser tools featuring a visible rotating beam and two fixed reference dots positioned at 90° to the main beam, can be used horizontally, vertically and for inclinations in one or two planes, to determine, transfer and check levels, slopes and right angles, can vertically auto align on reference points, can set out specific slope.

Number	Section
1	Buttons
2	LCD Display
3	Laser Window
4	Upper Laser Dot Window
5	Laser Blocker
6	Holder & 5/8"-11 Threaded Mount
7	Battery Compartment
8	Screw Knob
9	5/8"-11 Threaded Mount & Down Laser Dot Window
10	Rubber Feet



Buttons	LED Indicator
① Power ON /OFF and Digital Slope Confirm (Short press power on / digital slope confirm, long press power off)	Green Or Red
② Spin Speed Switch	N/A
③ Shock Warning Alert / Tilt Alert (Auto-activation, manual deactivation)	Green Or Red
④ Scan Angle Switch (Long press to switch to / off the shield mode)	N/A
⑤ Slope Mode Switch / Digital Slope X / Y Axis Switch (Long press to switch to self-leveling mode)	Green Or Blue Or Red
⑥ Y Axis Plus / Increase LCD brightness in Self-Leveling Mode	N/A
⑦ Y Axis Minus/ Decrease LCD Brightness in Self-Leveling Mode	N/A

1. LED Indicator Guide



① Power/Status Indication

Blink in Green: On Self-Leveling.
Solid in Green: Finish Leveling.
Blink in Red: Out of Level Range.
Flash in Red: Low Battery Status.

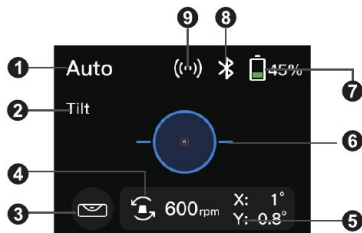
② Tilt Alert Status Indication

Solid in Red: Tilt Mode Off.
Solid in Green: Tilt Mode Activated.
Blink in Green: Countdown initiated.
for Tilt Mode active.
Flash in Red: Triggered the Tilt Alarm.

③ Slope Status Indication

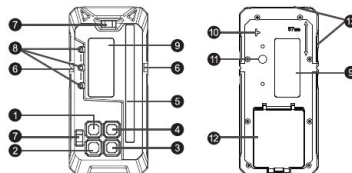
Solid in Green: Manual Mode.
Solid in Red: Digital Slope Mode.
Blink in Blue: Auto Alignment Mode.
Off: Self -Leveling Mode.

2. LCD Screen



Number	Icon
1	Mode Indication
2	Tilt Status Indication
3	Mode Dynamic Indication
4	Spin Speed Status
5	Device Angle
6	Mode Status Indication
7	Power Indication
8	App Connection Status
9	Remote Controller / Laser Receiver Connection Status

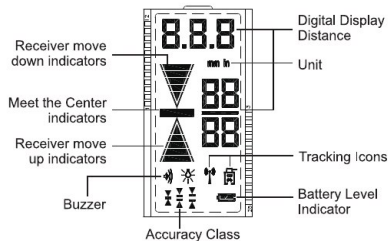
Laser Receiver



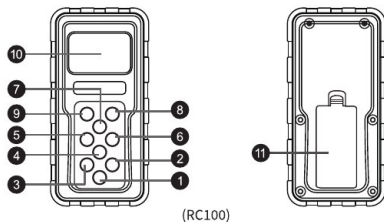
(RLRD400GT/RLRD400RT)

Instruction	Number
Power ON / OFF / Turn on the LCD backlight (Short press to power-on and light the LCD backlight, long press to turn off the power)	1
Accuracy Switch	2
Alignment Mode button (Short press to turn on the mode, press again to start the Alignment mode, long press to turn off the mode)	3
Buzzer Level (short press) / Unit Switch (long press)	4
Laser Receiver Window	5
Center Mark	6
Bubbles	7
LED Indicators	8
LCD Display	9
Speaker	10
1/4"-20 mount hole	11
Battery Compartment (AAA*4)	12
Magnets	13

LCD Indicators



Remote Controller



Instruction

Power ON / OFF Button

①

Scan Angle Button

(Long press to Switch to / off the Shield mode)

②

Spin Speed Button

③

Manual Mode / XY Axis Switch Button

(Long press to switch to self-leveling mode)

④

- Minus Button

(Decrease LCD brightness in self-leveling mode)

⑤

+ Plus Button

(Increase LCD brightness in self-leveling mode)

⑥

Digital Slope Button

(Short press again to confirm and start the slope, Long press to switch to self-leveling mode)

⑦

Counterclockwise Spin Button

⑧

Clockwise Spin Button

⑨

LCD Display

⑩

Battery Compartment (AAA*2)

⑪

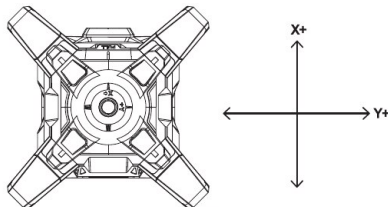
Battery

① Battery indicator

② Type-C Charging Port on Battery



X/Y Axis Indicators

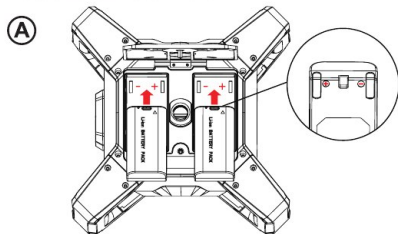


Set Up

The rotary laser level kit features versatile mounting options:

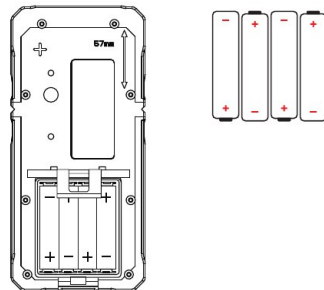
- The rotary level is equipped with a 5/8"-11 mounting hole on the bottom and the side, which allows securing the device to the Tripod/Holder Mount when using the Horizontal scan or Vertical scan. One metal screw knob tightens the battery cover to ensure it can withstand the physical shock.
- The Laser Receiver is equipped with powerful magnets on both the top and side surfaces, it can be securely attached to metal surfaces for hands-free operation. It also has a 1/4-inch mounting hole on the back, which allows you to secure the receiver to the mounting rod and placement frame. Additionally, the universal clamp interface allows seamless attachment to measuring rods, poles, or compatible devices.

Batteries Installation

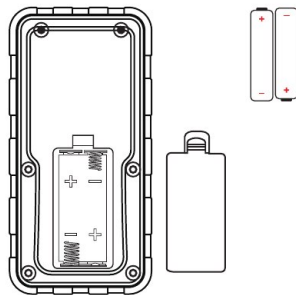


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(B)

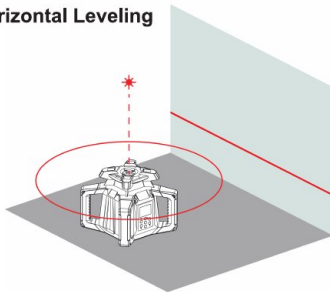


(C)

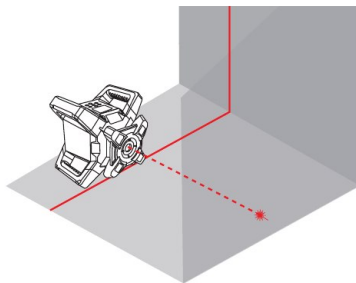


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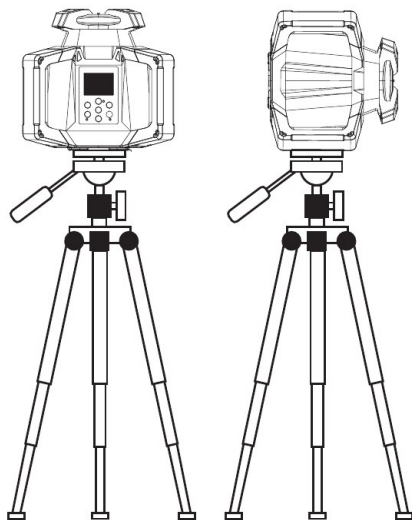
Ⓓ Horizontal Leveling



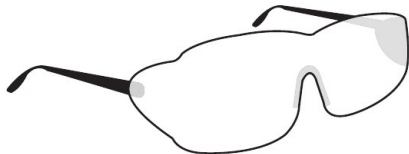
Ⓔ Vertical Leveling



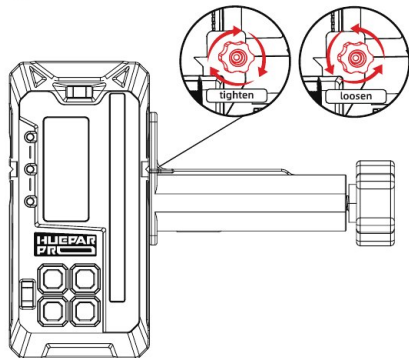
Ⓕ



G



H



Feature & Operation

This rotary laser level kit includes an LCD display on each component—the level, receiver, and remote control—with the level itself featuring a high-definition color screen. A built-in wireless module provides a seamless connection to the HUEPAR app, allowing users to remotely control the device and monitor real-time data, such as operating mode, grade, angle, rotation speed, and battery level.

Overview of general symbols

Function	UI Icon for Rotary level	UI Icon for Remote Control	Description
Automatic Level Mode			/
Out of the Level Angle Range			/
Manual Slope Mode			/
Out of the slope limit Range			/

Function	UI Icon for Rotary level	UI Icon for Remote Control	Description
Auto Digital Slope Mode	Slope X:0.00% Y:0.00% 	Slope X:0.00% Y:0.00% 	The third icon flashes when the laser head starts moving to the preset position, and stays solid when complete.
Laser Shield Mode			/
Auto Alignment Mode	  		Rotary Level: 1st Icon: ON tracking Second Icon : Align Success Third Icon : Align Fail
Shock-Warning / Tilt Alert Mode	Tilt 	Tilt 	/

Function	UI Icon for Rotary level	UI Icon for Remote Control	Description
Spin Speed	 600 rpm	 600 rpm	/
Scan Angle	 45°	 45°	/
Device Angle	X: 8° Y:-0.8°	NA	/
Bluetooth		NA	/
RF		  No Connection	/
Battery	 45%		/
Low Battery Indicate		 Low Battery	/

Power On / Off

Briefly press the  button to turn on the automatic leveling mode (default). The LED indicator and LCD display will light up.

Press and hold the button  to turn off the device. The power indicator will turn off.

✕ Note:

- The laser head will rotate at the speed of 600r.p.m in default.
- The Shock Warning Function will automatically activate each time the rotary level is powered on.
- Verify the tool's accuracy before critical use, particularly if it has been dropped or exposed to abnormal stress or impact. (Refer to the "Accuracy Check" section below.)

Automatic Mode

- The RL4 series rotary laser always starts in automatic mode.
When in automatic mode, the rotary laser will self-level within a 5° range. The leveling process takes approximately 15 seconds.
- The device supports both horizontal and vertical leveling. For Vertical operation, position the device according to the silk print mark indicates indication on the housing surface.

Automatic Mode Indication

Unit	Picture	Operation & Status
Level Device	 	• Press the button  briefly to turn on the device. The device will enter the AUTO mode by default, and the indicator light below the button will turn green. • Position the rotary laser level in a plane within 5° angle, view the current angle on the right bottom of the LCD display. • The  icon color indicate: - Leveling in blue - complete level in green - out of angle range in red • The  icon flashes when leveling, and stays solid when complete. • When in slope mode, long press the slope Button  to switch to Auto mode. • In AUTO Mode, short press   to increase/decrease LCD display brightness.
Remote control	 	You can also use the remote control to switch modes • The  icon flashes when leveling, and stays solid when complete. • When in slope mode, long press the slope Button  to switch to Auto mode.

※ **Note:**

- When using automatic leveling mode, please place this device on a level surface.
- In Vertical Scan operation, only the Y-axis maintains self-leveling as the reference, the X-axis adjusts in conjunction with Y-axis orientation for alignment.
- The Auto Alignment function only can be activated when in Automatic Mode.

Spinning Speed Indication

Unit	Operation & Status
Level Device	Briefly press the button  to switch the speed, in sequence: 600-1000-0-300-600rpm cycle.
Remote control	Briefly press the button  to switch the speed, in sequence: 600-1000-0-300-600rpm cycle.

※ **Note:**

- The Spinning Speed applies to all modes on this device.
- At 1000 RPM, the laser line is more easily detected by both the human eye and the laser receiver.

Scan Angle Indication

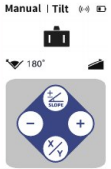
Unit	Operation & Status
Level Device	• Briefly press the button  to switch the scan angle, in sequence : 0°, 10, 45°, 90°, 180°cycle. • Briefly press the speed button  to switch to 360° scan angle.
Remote control	• Briefly press the button  to switch the scan angle, in sequence : 0°, 10°, 45°, 90°, 180°cycle. • Briefly press the speed button  to switch to 360° scan angle.
Level Device	• Long press the button  switch to the shield mode. • In shield mode, Briefly press the button switch the scan angle in sequence: 90°-180°-270°-360° to cycle. • Long press the button  again switch off the shield mode.
Remote control	• Long press the button  switch to the shield mode. • In shield mode, Briefly the button switch the scan angle in sequence: 90°-180°-270°-360°cycle. • Long press the button  again to switch off the shield mode.

※ **Note:**

- The scan angle applies to all modes on this device.

Manual Slope Mode

- In Manual Slope Mode, the laser head continues to rotate and project the beam, allowing users to adjust the slope value in real time for rapid setup.
- In Manual Slope Mode, Self-leveling will be deactivated. Press the + or - buttons to raise or lower the horizontal plane within a 16% grade range.

Unit	Picture	Operation & Status
Level Device		• When in AUTO Mode, briefly press the button  switch to the Manual Mode, the LED at the right side of the button light up in green. • In Manual Mode, press buttons   to adjust the Y-axis tilt angle in real time. • Long press the button  switch to AUTO Mode.
Remote control		• When in AUTO Mode, briefly press the button  switch to the Manual Mode. • In Manual Mode, press buttons   to adjust the Y-axis tilt angle in real time. • Briefly press the button  to switch the X/Y Axis. • Long press the button  switch to AUTO Mode.

※Note:

- For optimal accuracy and stability, use single-axis slope adjustment whenever possible. Avoid simultaneous dual-axis adjustment, as it may compromise performance.
- Before switching to the manual mode, place the device on a level surface and finish the level itself to insure the manual single Axis reaches 16% grade.

ADS/Auto Digital Slope Mode

- ADS mode provides precise and efficient grade control for slope applications, eliminating manual calculation errors and ensuring consistent results in complex leveling tasks.
- When ADS mode is activated, self-leveling is disabled.
- ADS automatically maintains preset slopes from -8% to +8% on single axes, with a high-precision accuracy of $\pm 0.03\%$ grade ($\pm 3\text{mm}/10\text{m}$) per axis.

Unit	Picture	Operation & Status
Level Device		• When in AUTO Mode, Briefly press the button  two times to switch to the ADS Mode, the LED at the right side of the button light up in Red. • In ADS Mode, press buttons   to adjust the target tilt angle, press the button  to switch the X/Y Axis. • After setting the target angle, press the button  to start the tilt climbing. • Long press the button  to switch to AUTO Mode.

Unit	Picture	Operation & Status
Remote control		- When in AUTO Mode, Briefly press the button to switch to the ADS Mode. - In ADS Mode, press buttons and to adjust target angle. - Short press the button to switch the X/Y Axis. - After setting the target angle, press the button to start the tilt climbing. - Long press the button switch back to AUTO Mode.

※Note:

- For optimal accuracy, single-axis slope adjustment is recommended whenever possible. Avoid simultaneous dual-axis adjustment, as it may affect precision and stability.
Once the target angle is set and confirmed, the laser head will first return to its horizontal reference before beginning to tilt to the desired angle. The entire process takes approximately 30 seconds.
- Memory Function: User settings are stored in the device's internal memory, allowing seamless mode switching without reconfiguration. After a power cycle, the incline resets to zero. The companion app can save up to three recent settings, which can be quickly recalled for convenience.
- ADS mode is not available when the device is in vertical scanning mode.

Auto Alignment / Self-Tracking Mode

- When used with the included receiver, the rotary laser provides automatic alignment tracking with $\pm 0.01\%$ grade ($\pm 1\text{mm}/10\text{m}$) accuracy over a range of 30 meters.
- The auto-alignment function is restricted to single-axis Y-axis movement only; X-axis is not available.
- Setup procedure.
- Position the rotary laser properly and ensure successful auto-leveling.
- Mount or hold the laser receiver with the center marking notch at the desired alignment point, and the laser detection window facing the laser. Ensure the receiver's bubble level is centered.
- Press the button once to enter auto alignment mode. Press again to begin tracking.
- For vertical point-to-point alignment, tilt the beam blocker upward on the laser housing to narrow the beam to a smaller sector. This helps isolate the Y-axis center point and establish the first reference position near the laser.

Unit	Picture	Operation & Status
Level Device		- Ensure the rotary laser is in AUTO Mode before switching to AUTO Alignment Mode. - When in AUTO Alignment Mode, the LED on the right side of the slope button light up in blue.

Unit	Picture	Operation & Status
Laser Receiver		- Briefly press the button  to turn on the AUTO Alignment Mode, icon  light up in the LCD display. - Press the button  again to start the auto alignment, icon  will light up and flash. - When the alignment complete, the icon  stays solid. - When the alignment fail, the icon  will light up and flash, and the speaker alarm to alert - Briefly press the button  to clear the alarm and restart the alignment. - Long press the button  to turn off the AUTO Alignment Mode.

⚠ Note:

- Tracking may take up to 45 seconds to 1 minute. Properly positioning the rotary laser can reduce this time and increase the success rate.
- Tracking angle limited to 16°, Ensure proper device alignment.
- When In Vertical Scan, if the "out of level"  alarm appears, press and hold the Y+  or Y-  button to cancel the alarm, adjust the device to a proper position, and then restart the tracking to resume operation.

Shock-Warning / Tilt Alert Mode

- The Tilt Alert Function detects external shock or sudden movement during operation, triggering audible/visual warnings and stopping rotation to prevent errors from propagating across layout work.
- The Tilt Alert Function turns on automatically every time the rotary level is power on, the LED below the tilt button lights up in green.
- After mode configuration, if no operation occurs within 30 seconds, the device automatically enters tilt alert standby. This function is active in Automatic Mode, Manual slope & ADS Mode, and Auto Alignment Modes.
- Upon detection of external disturbance (impact or wind gust), the system initiates alert protocol: rotation stops, an audible warning activates, and the tilt status LED flashes red rapidly.
- Press the button  to clear the alarm and if no operation occurs within 30 seconds, the device automatically enters tilt alert standby.
- Press the button  to turn off the Tilt Alert mode, the LED below the tilt button lights up in red.

Sleep Mode & Auto Power Off

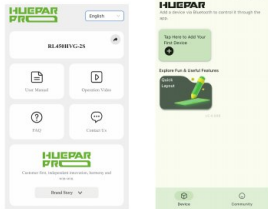
- The rotary laser, laser receiver, and remote control are all equipped with auto-sleep and auto-power-off functions.
- Rotary laser: The auto sleep and power-off delay can be customized via the app.
- Laser receiver & remote control: After 60 seconds of inactivity, the device enters Sleep Mode to conserve power. Press any button to activate it.

- After 5 minutes of inactivity, the device automatically powers off completely.
- To manually activate sleep mode on both the rotary level and the remote control, press and hold the power button on the remote. Press any button to resume operation.

Wireless Connection / APP

Once the device is paired with the app, you can remotely switch the rotary laser level's functions from your phone/pad easily and more intuitively.

- Download the Huepar APP () from APP store.
- Click the "Add Devices" part () to search the devices.
- Choose the device which shows on the " Available Devices" part to connect.
- Click the picture of the device to enter the main operating page.
- Follow the instruction on the main operating page to view and switch the function steady without touching the device.



Remote Control



- **Long-Range Wireless Control:**
The handheld remote features a high-contrast monochrome display and is powered by two AA batteries. Operate the rotary laser functions from up to 100 meters away in clear line-of-sight conditions—actual range depends on ambient interference and obstacles.
- The remote is factory-paired to a dedicated RF channel. To connect, verify that the rotary laser's wireless mode is active.
RF is enabled by default at power-on but can be turned off through the companion app to extend battery life.

Laser Receiver

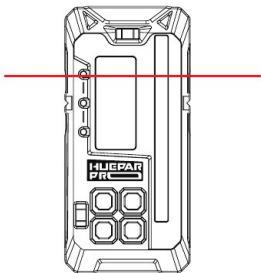
- Two large graphic Backlit LCD displays on front and back show precise mm/in elevation deviation. Large, easy-to-read numerics keep you on grade at a glance. This ensures efficient operation and quick laser detection.
- The laser receiver features triple-indicator guidance: Tri-color LEDs, LCD directional arrows, and three-tone audio cues—providing comprehensive on-grade assistance.

Indicator	Move Up	Move Down	On Grade
Audio	Rapid / fast beep	Slow pulse beep	Solid / continuous beep
LED light	red blink	yellow blink	solid green
LCD Icon			

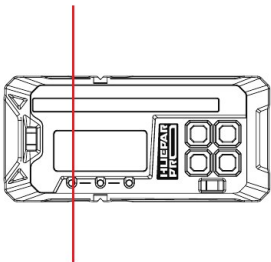
- Briefly press the button () to turn on the device, and long press to turn off the device. When power on, briefly press to light up the backlit for 60 seconds.
- Long press the button () to switch the units: mm, inch, fractional inch.
- Briefly press the button () to switch the four level Buzzer Level: Loud() / Normal() /Low() /Mute.
- Briefly press the button () to switch the three accuracy modes: Fine / Medium / Coarse.

FINE	MEDIUM	COARSE
		
1 mm	5mm	10mm
0.05in	0.25in	0.5in
1/16 in	1/8 in	1/4 in

- Coarse: Use in high-vibration environments (near heavy machinery, traffic) where stable beam detection is difficult.
- Medium: Optimal for long-range applications where atmospheric conditions or ground vibration may interfere with beam stability.
- Fine: Stable conditions—ideal for precise finishing and final grade control.
- Once the laser beam has been detected, mark the position shown at the edge of the clamp.



Detector position for horizontal beam



Detector position for vertical beam

✕ **Note:**

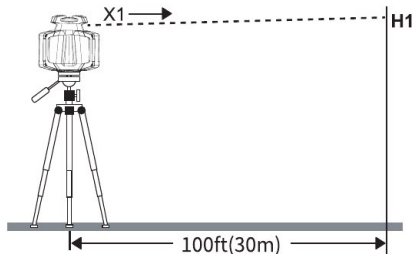
- Position the receiver at least 17ft (5m) away from the laser level.
- With the receiver on, position it to where the laser beam can reach the laser reception window. Align the receiver so that the laser beam can run laterally through the laser reception window.
- Use the bubble vial to maintain a level plane with the receiver.
- Be sure that the laser reception window is facing the direction of the laser beam.
- When using a measuring rod to locate the laser beam, slightly loosen the adjusting knob to move the receiver up or down more easily. Once the laser beam is found, tighten the clamp to secure the receiver on the rod.
- When marking, take care to align the tool exactly vertical (for horizontal laser beam), or horizontal (for vertical laser beam), otherwise, the marks will be offset from the laser beam.
- Be sure to refer to the back of the receiver for the measurement of the compensation value (the distance from the top of the receiver to the center mark), if the top of the receiver is used as a marking position.

Accuracy Check

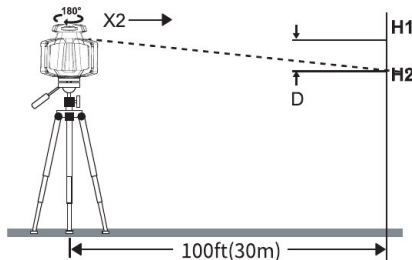
The ambient temperature has the greatest influence. Especially temperature differences occurring from the ground upward can divert the laser beam. The deviations play a role in excess of approx. 65ft (20m) measuring distance and can easily reach two to four times the deviation at 330ft (100m). Because the largest difference in temperature layers is close to the ground, the instrument should always be mounted on a tripod when measuring distances exceeding 65ft (20m). If possible, also set up the laser in the center of the work area.

Checking the Leveling Accuracy

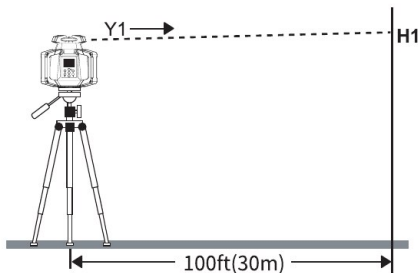
Apart from exterior influences, device-specific influences (such as heavy impact or falling down) can lead to deviations. Therefore, check the accuracy of the instrument each time before starting your work. A free measuring distance of 100ft (30m) on a firm surface is required for the check. A reversal measurement must be carried out over both axes X and Y (each positive and negative; 4 complete measurements).



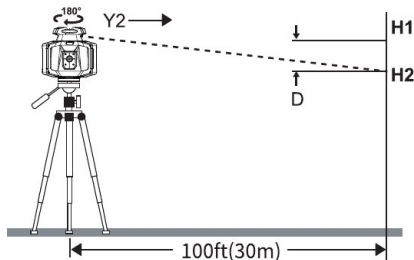
- After the leveling, mark the center of the laser beam on wall (point H1).
- Rotate the instrument by 180°, allow it to level in and mark the center point of the laser beam on the wall (point H2).



- The difference D of both marked points H1 and H2 on wall is the actual deviation of the instrument for the measured axis. The value of D (deviation) should be less than $\frac{3}{16}$ in (5mm).
- Repeat the measuring procedure for the Y-axis. Position the Y-axis to aim to a wall or target plate.



- After the leveling, mark the center of the laser beam on wall (point H1).
- Rotate the instrument by 180, allow it to level in and mark the center point of the laser beam on the wall (point H2).

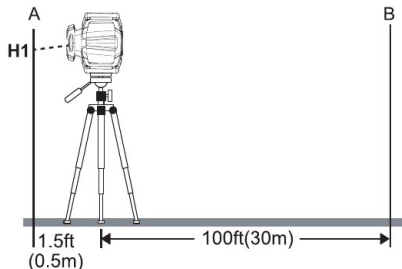


The difference D of both marked points H1 and H2 on wall is the actual deviation of the instrument for the measured axis. The value of D (deviation) in either axis should be less than $\frac{3}{16}$ in (5mm).

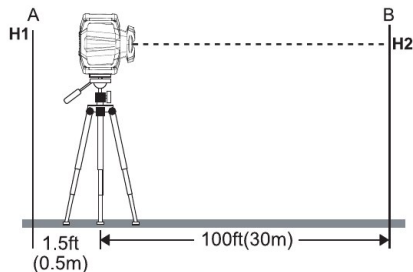
Checking the Vertical Alignment

A free measuring distance of 100ft (30m) on a firm surface between two walls or targets A and B is required for the check. Place the laser instrument in the lay down position on a flat, level surface.

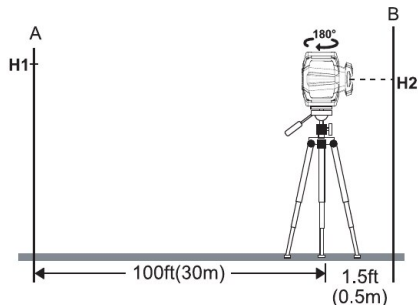
- Mount the instrument in the vertical position onto a tripod using mount accessory or place it on a firm and level surface near wall.
- Switch the instrument on. Position the up beam to aim at wall A or target plate.



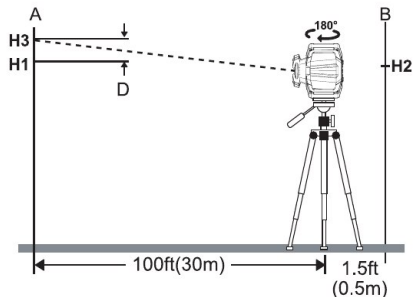
- After the leveling, mark the center of the laser beam on wall A (point H1).
- Rotate the instrument by 180° (without changing the height), allow it to level and mark the center point of the laser beam on wall B (point H2).



- Without turning the instrument, position it close to wall B by moving the tripod.



- After instrument levels, align the height of the instrument so that the center point of laser beam is exactly on point H2 of wall B.
- Rotate the instrument by 180° (without changing the height), allow it to level and mark the center point of the laser beam on wall A (point H3).
- The mark of point H3 should be marked in such a way that it is as vertical as possible (above or below) of point H1.



The difference D of both marked points H1 and H3 on wall A is the actual deviation of the instrument for the measured axis. The value of D (deviation) should be less than 1/4 in (6mm).

Calibration

- The laser level features built-in calibration programs for both the angle sensor ($\begin{matrix} X \\ Y \end{matrix} \begin{matrix} 0 \\ -0.5 \end{matrix}$) and laser beam level accuracy, allowing users to perform calibration operations following predefined steps and conditions.
- As the calibration process requires professional equipment and platforms, self-calibration is not recommended. Please contact the Huepar After-Sales Service Center for more information.

Specifications

Rotary Laser Level		
Model	RL450HVG3-2S	RL400HV3-2S
Laser Class	Class 3R (IEC/EN60825-1/2014), <5mW	Class 3R (IEC/EN60825-1/2014), <5mW
Laser Wavelength	505nm-530nm	600nm-680nm
Leveling Accuracy (Horizontal Scan)	±0.75mm/10m (15 arc second)	±0.75mm/10m (15 arc second)
Leveling Accuracy (Vertical Scan)	±1mm/10m (20 arc second)	±1mm/10m (20 arc second)
Auto Digital Slope Accuracy	±3mm/10m (60 arc second) single axis	±3mm/10m (60 arc second) single axis
Auto Alignment Accuracy	±1mm/10m (20 arc second)	±1mm/10m (20 arc second)
Leveling / Compensation Range	≥5°	≥5°
Levelling time	<18S	<18S
R.P.M Option	0/300/600 /1000RPM	0/300/600 /1000RPM
Scanning Option	0°, 10°, 45°, 90°, 180°	0°, 10°, 45°, 90°, 180°

Model	RL450HVG3-2S	RL400HV3-2S
Masking / shield option mode	Yes	Yes
Anti-shock alert	Yes	Yes
LCD display	Yes	Yes
Wireless APP Connect	Yes	Yes
Single Axis Reference Working Distance(100lux)	30m/98ft	30m/98ft
Single Axis Reference Working Distance (with Laser Receiver)	300-450m / 984-1476ft	300-400m / 984-1312ft
Reference Operating Time	Approx 34hrs	Approx 34hrs
Power Source	2 X 3.7V / 2600mAh Li-ion battery	2 X 3.7V / 2600mAh Li-ion battery
Female Threaded Size	2 X 5/8"-20	2 X 5/8"-20
IP Rating	IP66	IP66
Operation Temperature Range	-10°C ~ +50°C	-10°C ~ +50°C
Storage Temperature Range	-20°C ~ +50°C	-20°C ~ +50°C

Battery	
Model	DP-02
Quantity	2
Power Source	7.4V / 2600mAh Li-ion battery
Charging Port	Type-C
Power Adapter	5V=1A
Charging Time	About 3 hours

Remote Control	
Model	RC100
Power Source	2*AA alkaline battery
LCD display	Yes
Reference Working Distance	> 100m
Reference Operating Time	30 hours

Laser Receiver	
Model	RLRD400GT/RLRD400RT
Accuracy	High: $\leq 1\text{mm @}10\text{m}$ Low: $\leq 5\text{mm @}10\text{m}$ Coarse: $\leq 10\text{mm @}10\text{m}$ (May differ due to the working range and laser power)
Reference Auto Alignment Distance	30m/98ft
Reference working Distance	300-450m/ 984-1476ft
Receiving Frequency	10K Hz
Automatic Power OFF	Automatic shutdown after 30 minutes of no signal
Power Source	4*AA alkaline battery
LCD Display	Yes
LED Display	Yes
Speaker	Yes

Auto Alignment	Yes
Protection Grade	IP66
Operating Temperature Range	-10°C ~ 50°C
Storage Temperature Range	-20°C ~ 70°C

※ **Note:**

- The working distance and detection accuracy will be affected by the operating environment.
- Appearance and specifications may differ due to the device improvement.

Warranty

The tool passed a rigorous and comprehensive product inspection. We are confident in the quality of our products and provide excellent guarantee for professional users of the products.

We offer Two Year Warranty from date of purchase including that:

- Proof of purchase is provided.
- Any damage is fair wear and tear.
- The product has not been repaired by unauthorized persons.
- The product has not been misused.

Defective products will be repaired or replaced at our discretion free of charge if sent together with proof of purchase to our authorized distributor(s).

The Warranty does not cover:

- Failure to use the product according to manufacturers' instructions.
- Defects caused by maintenance or renovation without our authorization.
- Calibration and care.

✕ **Note:**

- To the extent permitted by law, we shall not be liable under this Warranty for indirect or consequential loss resulting from faults in this product.
- Repair or replacement under this Warranty does not affect the expiry date of the Warranty.

- This Warranty is limited to paying customers, it is not permissible to transfer the Warranty to other third parties.
- This Warranty may not be varied without our authorization.

Please scan the QR code to register this product and enjoy a 5-year warranty.



Read the full user manual detail in different languageTo view or download, scan the QR code.



If you have any questions or concerns about the product, please feel free to contact us at: cs@hueparpro.com