WARNING
VISIBLE BEAM LASER LEVEL

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. **IF** any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

⚠ **WARNING:** Plastic cases and product plastic housings made from polycarbonate or other plastics can expose you to chemicals including bisphenol A, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to **www.P65warnings.ca.gov**

- **Use the Product only as specified or hazardous laser radiation exposure can occur.**
- **Do not look into the laser. Do not point laser directly at persons or animals or indirectly off reflective surfaces.**
- **Do not look directly into the laser with optical tools (for example, binoculars, telescopes, microscopes). Optical tools can focus the laser and be dangerous to the eye.**
- **Do not open the Product. The laser beam is dangerous to eyes.**
- **Batteries contain hazardous chemicals that can cause burns or explode. If exposure to chemicals occurs, clean with water and get medical aid.**
- **Do not disassemble the battery.**
- **Repair the Product before use if the battery leaks.**
- **The battery door must be closed and locked before you operate the Product.**
- **Remove the batteries if the Product is not used for an extended period of time, or if stored in temperatures above 50 °C. If the batteries are not removed, battery leakage can damage the Product.**
- **Replace the batteries when the low battery indicator shows to prevent incorrect measurements.**
- **Be sure that the battery polarity is correct to prevent battery leakage.**
- **Use only Fluke approved power adapters to charge the battery.**
- **Do not short the battery terminals together.**
- **Do not disassemble or crush battery cells and battery packs.**
- **Do not keep cells or batteries in a container where the terminals can be shorted.**
- **Do not put battery cells and battery packs near heat or fire. Do not put in sunlight.**

Table 1 is a list of the symbols that can be used on the Product or in this manual.

Table 1. Symbols

Symbol	Description	Symbol	Description
	Consult user documentation.	CE	Conforms to European Union directives.
⚠	WARNING. RISK OF DANGER		Conforms to relevant Australian Safety and EMC standards.
	WARNING. LASER RADIATION. Risk of eye damage.		Conforms to relevant South Korean EMC Standards.

Table 1. Symbols (cont.)

Symbol	Description	Symbol	Description
	Battery or battery compartment		Low battery indicator.
	This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste.		
LASER 2	Indicates a Class 2 laser. DO NOT STARE INTO BEAM The following text may appear with the symbol on the product label: "IEC/EN 60825-1:2014. Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice 50, dated June 24, 2007." In addition, the following pattern on the label will indicate wavelength and optical power: λ = xxxnm, x.xxmW.		

Note

In colder climates, the Product needs sufficient time to warm up to achieve the stated accuracy measurements. Turn on the Product and wait 3 minutes before you take a measurement. When you move the Product between environments with large differences in ambient temperature, allow for an additional adjustment time.

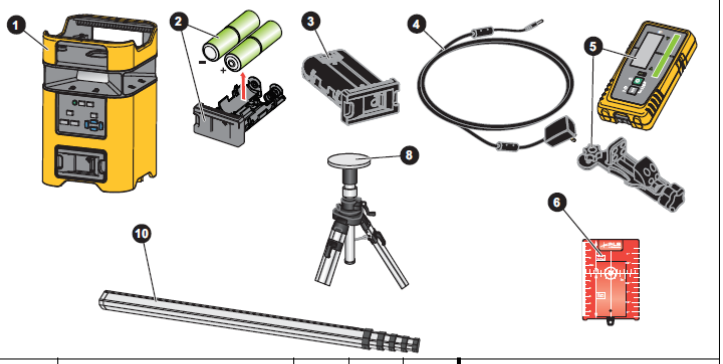
Product Familiarization

The manual explains features for multiple models. Because models have different features and accessories, not all of the information in the manual may apply to your Product.

Features

Use Table 2 to identify the features and standard accessories of your Product.

Table 2. Features

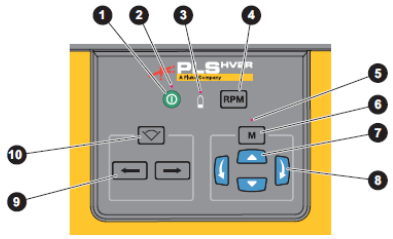


Item	Description		H2 SYS	H2 KIT
1	The Product		•	•
2	Alkaline battery compartment and 4 D batteries		•	•
3	Rechargeable battery		•	•
4	Ac battery charger		•	•
5	Rotary laser detector and clamp		•	•
6	Magnetic reflective target (red)		•	•
8	Elevating tripod			•
10	Grade rod			•
Not shown	Carrying case		•	•

Product Controls

Table 3 lists the Controls of the Product.

Table 3. Controls



Item	Description	Function
1	Power button	Push and hold to turn on or off the Product.
2	Power LED	Indicates the state of the Product. See *Power LED*.
3	Battery LED	Indicates the battery level. See *Batteries*.
4	RPM button	Cycles through rotational speeds.See *Revolutions Per Minute (RPM)*.
5	Manual mode LED	Lights solid green when the Product is in manual mode.
6	Manual mode button	Turns on and off manual mode.See *Manual Mode*.
7	X axis buttons	With manual mode enabled, pivots the rotary laser up or down. See *Manual Mode*.
8	Y axis buttons	With manual mode enabled, rolls the rotary laser left or right. See *Manual Mode*.
9	Scan angle adjustment buttons	With scan mode enabled, moves the position of the laser beam clockwise or counterclockwise by one scan unit. See *Scan Mode*.
10	Scan mode button	Turns on scan mode and cycles through different arc lengths. See *Scan Mode*.

Mount the Product

Use the Product in an upright position, so the laser rotates horizontally.

Figure 1 shows how to mount the Product.

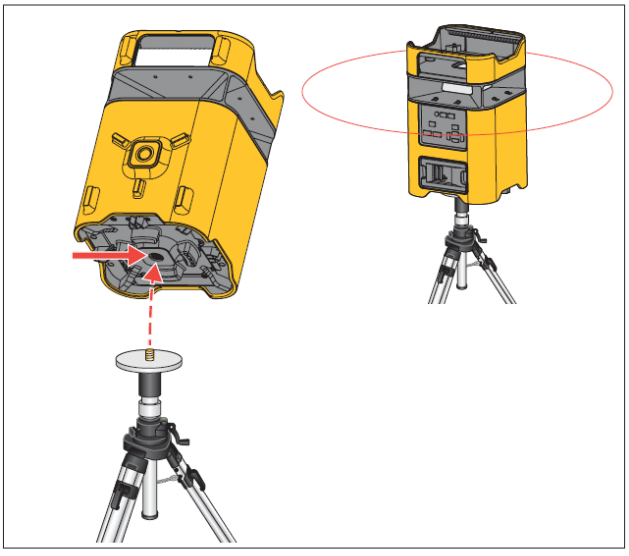


Figure 1. Accessory Mount

Power LED

The power LED indicates the state of the Product:

- Lights solid green when the Product is on.
- Blinks green at 1 second intervals after the Product runs, gets disrupted or bumped, and cannot self-level. Push ⏻ on the Product twice to turn off and on the Product to reset the rotary laser.
- Blinks green at 10 second intervals when the Product is in standby mode. Push ⏻ on the remote to turn on and off standby mode.

Revolutions Per Minute (RPM)

Figure 2 shows how many times to push RPM to cycle through the possible RPM settings.The default speed is 600 RPM.

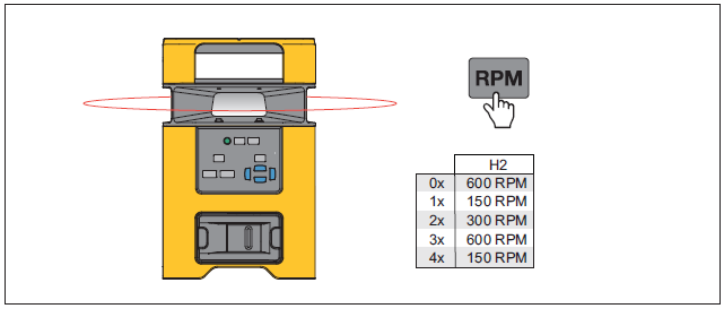


Figure 2. Revolutions Per Minute (RPM)

Manual Mode

Use manual mode to keep the lasers visible when you tilt the Product >5 ° or to enable the x axis and y axis buttons to align items diagonally, such as a stair rail. The laser does not self-level in manual mode.

To use manual mode, push M. The manual mode LED lights green. See Figure 3.

To use the x axis and y axis buttons to adjust the angle of the rotary laser:

1. Turn on manual mode.
2. Push:
   - to pivot the rotary laser up.
   - to pivot the rotary laser down
   - to roll the rotary laser to the left.
   - to roll the rotary laser to the right.
3. To return to self-leveling mode, push M to turn off manual mode.

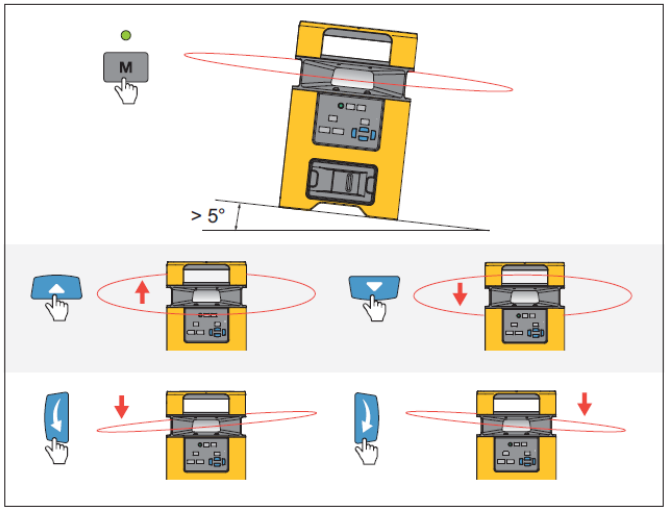


Figure 3. Manual Mode

Scan Mode

Use scan mode to set the rotary laser to oscillate at an arc less than 360 °. The default arc is 10 °.

To use scan mode:

1. Push to enable scan mode and to set the arc length. Figure 4 shows how many times to push to cycle through the possible arc lengths.

Note

When used in 0 ° point mode, the Product automatically reduces the maximum power of the laser for safety.

2. Push or to move the position of the laser counterclockwise or clockwise by one arc length, respectively.
3. Push RPM to disable scan mode to use the Product in full rotary laser mode.

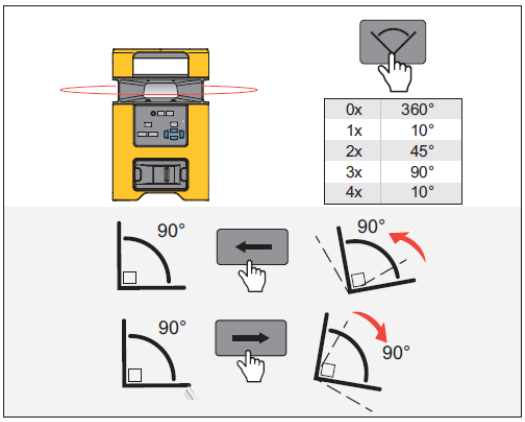


Figure 4. Scan Mode

Level Marks

New Level or Grade Marks

To identify new level and grade marks:

1. Put the bottom of the Product on a stable surface. See Figure 5.
2. Place a mark at the level or grade point on the target area.
3. Repeat for each point as needed.

Note

When the Product is mounted on a tripod, make sure the tripod head is perfectly level. Errors in marks can result if a tripod is out of level.

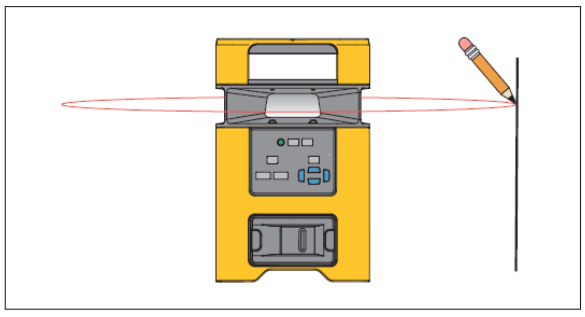


Figure 5. New Level Mark

Existing Item Level Check

To determine if an existing item is level:

1. Point the horizontal laser at the target area.
2. Measure the distance from the item to the laser. See Figure 6.
3. Repeat step 3 at various distances from the Product.

   If the measurements are the same from each distance from the Product, the condition is level.

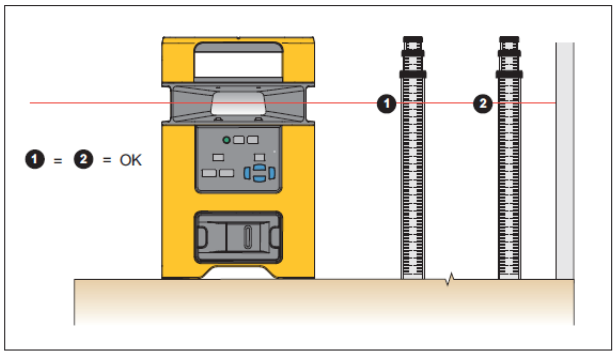


Figure 6. Level of Existing Item

Batteries

The power LED indicates the state of the Product:

- Does not emit light when the battery power is ≥20 % or when the battery power falls below the low battery threshold. When the battery falls below the low battery threshold, the Product turns off.
- The battery LED Blinks red between 20 % battery power and the low battery threshold. The Product still functions accurately.

Replace or charge the batteries when the battery LED blinks red.

To install or replace the batteries (see Figure 8):

1. Remove the alkaline battery compartment or the rechargeable battery.
2. Install 4 D batteries. Observe the correct polarity.

   Or,

   Charge the rechargeable battery for 8 hours.
3. Replace the battery compartment or rechargeable battery.

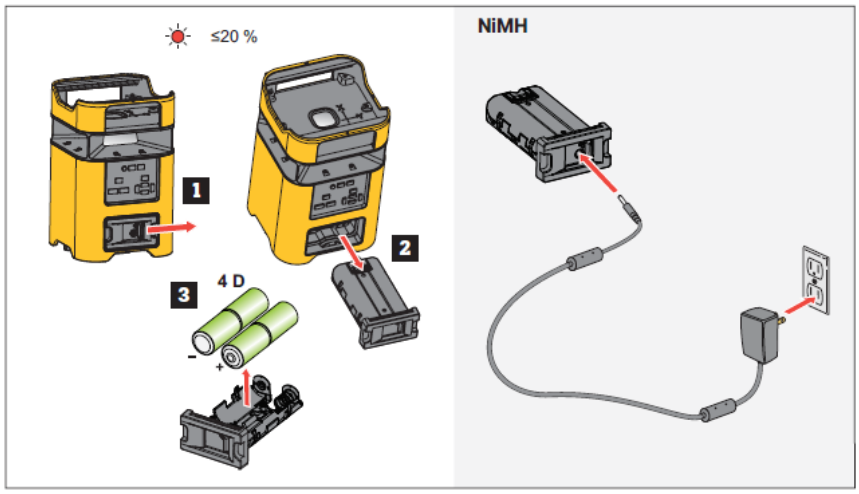


Figure 8. Battery Replacement and Charging

Keep these instructions with the instrument.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. **IF** there is any doubt as to the operation or safety of the equipment, **DO NOT USE!!! CALL A TOOL SHED IMMEDIATELY!!! FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**