

PITTSBURGH[®]

Self-leveling Laser Level

Item 69243

⚠ WARNING

Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.



When unpacking, make sure that the product is intact and undamaged.
If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: tech@harborfreight.com

Save This Manual

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



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.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

General Safety Warnings



WARNING! Read all safety warnings and instructions. Save all warnings and instructions for future reference.

1. Avoid direct eye exposure.
The included laser enhancement glasses are NOT intended to protect your eyes in any way.

2. **Do not direct the laser beam into the eyes of any person or animal.**
Doing so may cause severe eye injury or death.
3. Verify Laser Level is in the "Off" position before making any adjustments or changing the batteries.
4. Position batteries in proper polarity and do not install batteries of different types, charge levels, or capacities together.
5. Remove batteries if Laser Level is not to be used for a long period of time.
6. The Laser Level is a delicate instrument; do not drop or jar the Laser Level.
7. Keep work area clean and well lit.
8. This product is not a toy.
Keep it out of reach of children.
9. Keep children and bystanders away while operating Laser Level.
10. Inspect before every use; do not use if parts loose or damaged.
11. Stay alert, watch what you are doing and use common sense when operating Laser Level.
Do not use Laser Level while you are tired or under the influence of drugs, alcohol or medication.
12. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.
13. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
14. **WARNING:** This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)
15. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

Specifications

Laser Range	Projects Up to 40 ft.
Max. Tripod Height	48"
Self Leveling Range	6°
Batteries	(2) 'AA' (included)

⚠ WARNING
To prevent serious injury and blindness:
Do not use included goggles for eye protection. Read manual before use.

DANGER

LASER LIGHT
AVOID DIRECT EYE EXPOSURE

Max. Output: <5mW,
Wavelength: 650 nm ±10 nm
CLASS IIIa LASER PRODUCT

This product complies with 21 CFR 1040.10 and 1040.11
Diode Mfr.: Sean & Stephen Corp.
4F, NO3, Lane 335, Sec 4, Hsin-Yi Rd., Taipei, China
Manufacture Date: _____ 11k

Assembly



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn Line Buttons off before adjusting Laser Level.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

1. Remove the tripod from the case.
2. Open tripod's legs and adjust positioning of each leg until base is level. Use bubble level in tripod base as a guide.
3. Remove the Laser Level from the case.
4. Install batteries, making sure to align batteries according to indicated polarity.
5. Attach the Laser to the tripod base. Do this by threading the bolt at the top of the tripod through the holes at the center of the Laser Level's lower base.
6. Level the Laser by using the tri-brack adjustment screws until the bubbles are centered on the two levels.

7. Push the Pendulum Lock to the right to free the pendulum. See Figure 1.

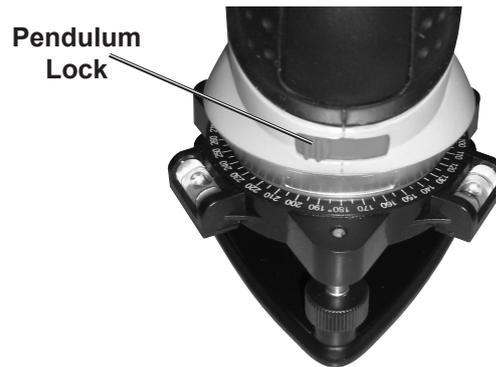


Figure 1

8. Turn on the Laser. Allow the laser lines to stabilize for 4 to 6 seconds before starting any measuring or leveling tasks.
9. To disassemble and store, move the pendulum lock to the left (see Figure 1) and follow the above directions in reverse.

NOTICE: If the pendulum lock is not engaged before movement, the level may be damaged.

Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn Line Buttons off before adjusting Level.

1. After removing the Laser from the Carrying Case, open the battery compartment, insert the two 'AA' Batteries into the battery compartment according to the polarity symbols shown inside, and close the battery compartment door.
2. Be sure to set the Laser on as flat a surface as possible. The tri-brack adjustment on the base of the level can be used to help level the unit. (Turn each of the knobs to either raise or lower that corner.) The self-leveling range of the Laser is within $\pm 6^\circ$. Use the 2 Vials on the base to verify that the base is level.



Figure 2

3. Push the Pendulum Lock to the right to free the pendulum. See Figure 1 on page 3.

4. Press the button for the desired line(s) on the top of the unit to switch "ON".



Figure 3

5. The Laser Level will work properly if it is positioned within its self-leveling range.
6. Allow 4-6 seconds for the horizontal and vertical Laser lines to be stabilized. After stabilization, the Laser lines can be used for measurement reference. Laser lines may swing slightly due to vibration from surroundings.
7. To prevent damage to the level, tighten the pendulum lock (see Figure 1 on page 3) after use and store in the carrying case.

NOTICE: If the pendulum lock is not engaged before movement, the level may be damaged.

After Using Laser

1. Detach Laser from Tripod.
2. Switch off both laser lines, horizontal and vertical. Check to see that both indicator LED's are off.
3. Engage Pendulum Lock by moving it to the left. See Figure 1 on page 3. After use the Pendulum Lock should be locked before the instrument is put away in the Carrying Case.

Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn Line Buttons off before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:
Do not use damaged equipment.
If abnormal noise or vibration occurs, have the problem corrected before further use.

Installing and Removing Batteries

1. Remove the Battery Cover (see Figure 2 on page 4) and insert two new 'AA' Batteries. Follow the polarity symbols so that the positive and negative ends of the batteries match the diagram.
2. **WARNING!** Do not mix old and new batteries. Remove batteries when storing Laser.

Replacement Parts

NOTE: Internal replacement parts are not available for this item.

Cleaning and Maintenance

1. **BEFORE EACH USE**, inspect the general condition Laser Level. Check for loose hardware, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation.
2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.
3. Store the Laser Level indoors and out of children's reach.

Accuracy Checking

NOTE: Due to the complicated, sensitive nature of these procedures, ordinarily only a qualified technician would attempt them.

Level Beam Accuracy

1. Set up the instrument with the Tripod centered between two walls approximately 16 ft. apart. Ensure the Rotary Base is level.
2. Push the Pendulum Lock to the right to free the pendulum. See Figure 1 on page 3.
3. Press both the horizontal and vertical buttons to project a laser cross on wall A. Mark point a_1 at the intersection of the beams. Turn the cross line laser 180° and repeat on wall B, marking point b_1 at the intersection of the beams, see Figure 4.

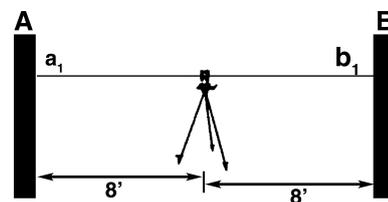


Figure 4

4. Move the instrument straight towards wall A to a point 2 ft. away and repeat step 2, marking the intersections as a_2 and b_2 , see Figure 5.

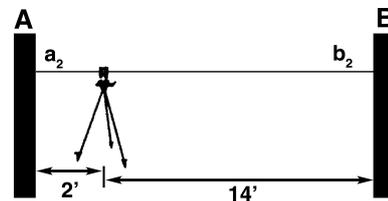


Figure 5

5. a distance $(d_a) = |a_1 - a_2|$
b distance $(d_b) = |b_1 - b_2|$
If $|d_a - d_b| < 1\text{mm}$, the accuracy is within tolerance. Otherwise, return the instrument to a qualified technician for repair.

Horizontal Beam Level Accuracy (End to End)

1. Set up the instrument with the Tripod approximately 16 ft. from the wall. Ensure the Rotary Base is level.
2. Push the Pendulum Lock to the right to free the pendulum. See Figure 1 on page 3.
3. Press both the horizontal and vertical buttons to project a laser cross on the wall, mark point **a** 8 ft. from the intersection of the beams to the right on the horizontal beam.
4. Turn the instrument until the vertical beam has moved 16 ft. to the right side, and mark **b** 8 ft. from the intersection of the beams to the left on the horizontal line. See Figure 6.

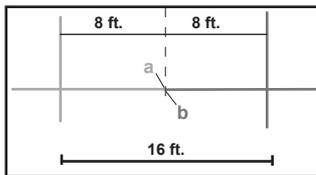


Figure 6

5. If the distance between **a** and **b** is less than or equal to 2mm, the accuracy is within tolerance. Otherwise, take the instrument to a qualified technician for repair.

Vertical Beam Level Accuracy (End to End)

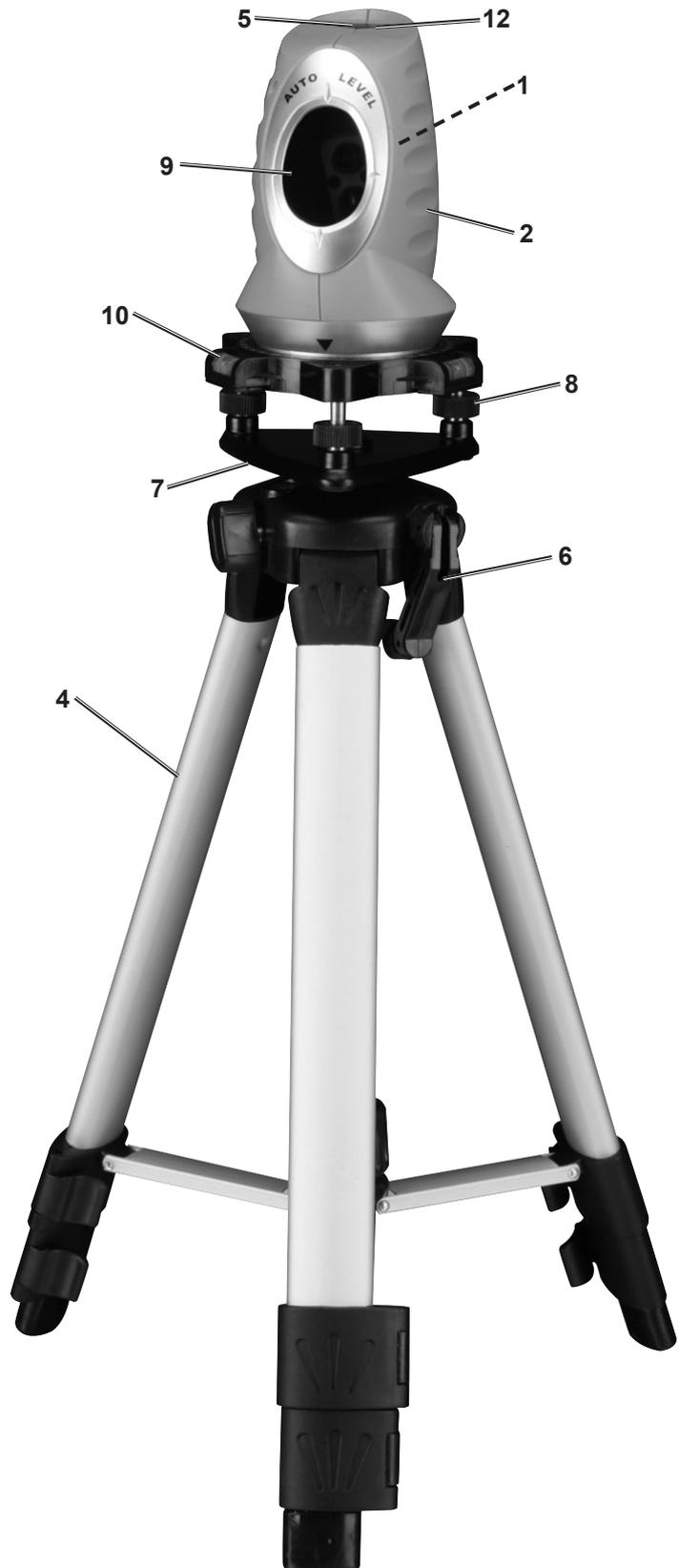
1. Set up the instrument with the Tripod, approximately 16 ft. from the wall. (The wall should be at least 17 ft. high). Please ensure the Rotary Base is approximately level.
2. Press both the horizontal and vertical buttons to project a laser cross on the wall, mark point A 8 ft. above the intersection of the beams on the vertical beam.
3. Use A as a starting point and nail one end of a string with plumb bob (not included) on A. The length of the string should be 16 ft.
4. Mark M1 16 ft. from point A on the string.
5. Mark M2 8 ft. below the intersection of the beams on the vertical line.
6. Measure the distance between M1 and M2.
7. If the distance is less than or equal to 2 mm, the accuracy is within tolerance. Otherwise, take the instrument to a qualified technician for repair.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List and Assembly Diagram

PART	DESCRIPTION	QUANTITY
1	Battery Cover (hidden)	1
2	Plastic Body	1
4	Tripod	1
5	Switch (Horizontal)	1
6	Adjustable Handle	1
7	Base	1
8	Tri-brack Screw	3
9	Laser Window	1
10	Bubble Vial	2
12	Switch (Vertical)	1



Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.
REV 07h

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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