

# **GEN-TECH™**

## **16" LASER LEVEL WITH 360° ROTATING HEAD**

### **Model 90980**

#### **ASSEMBLY & OPERATING INSTRUCTIONS**



3491 Mission Oaks Blvd., Camarillo, CA 93011  
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**For technical questions and replacement parts please call 1-800-444-3353.**

THANK YOU for choosing a **HARBOR FREIGHT TOOLS** product. For future reference, please complete the owner's record below:

Model \_\_\_\_\_ Serial No. \_\_\_\_\_ Purchase Date \_\_\_\_\_

SAVE THE RECEIPT, WARRANTY AND THESE INSTRUCTIONS. It is important that you read the entire manual to become familiar with the unit BEFORE you begin assembly.

### Technical Specifications



**LASER RADIATION**  
AVOID DIRECT EYE EXPOSURE

Maximum Output <5 mW,  
Wavelength = 650 nm ±10 nm

CLASS IIIa LASER PRODUCT

This product complies with 21 CFR chapter 1,  
subchapter J

Accession Number: 0310974-00

Construction: Machined aluminum housing with 3 vials; horizontal, vertical and bulls-eye.  
Level Dimensions: 15-5/8" L x 13/16" W x 2" H  
Diode Wave Length: 650 +/- 10 N.M.  
FDA Approved: Class III-A, Certification #0310974-00  
Batteries: (2) "AAA" included  
Tripod: 41" folding  
Laser Accuracy: +/- .05% approximately  
Features: Projects up to 1,500 ft. (Laser dot is visible up to 1500 Ft.)\*  
\*Dependent on illumination of work area.



**READ ALL INSTRUCTIONS BEFORE USING THIS PRODUCT!**  
**Safety Warnings and Precautions**

**WARNING:** When using product, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

### **Read all instructions before using this product!**

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Keep work area well lit.
3. **Store idle equipment.** When not in use, products must be stored in a dry location to inhibit damage from moisture and salt air.
4. **Check for damaged parts.** Before using any product, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for any broken or damaged parts and any other conditions that may affect its operation. Replace or repair damaged or worn parts immediately.
5. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
6. **Always check hardware and assembled parts after assembling.** All connections should be tight and hardware tightened.
7. **Keep children away.** Children must never be allowed in the work area. Do not let them handle the Laser Level.
8. **Do not direct the laser beam into the eyes of any person or animal, this may cause severe injury to the eye.** Do not look directly into the beam during operation.
9. **Laser light when reflected off of a mirrorlike surface can cause serious eye damage.**
10. **Use only Batteries of the type recommended-size "AAA".**
11. **Do not mix old and new batteries.** Do not use different types of batteries; do not use rechargeable with alkaline batteries.

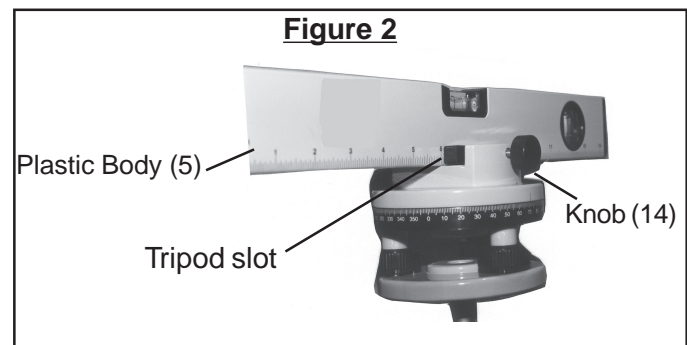
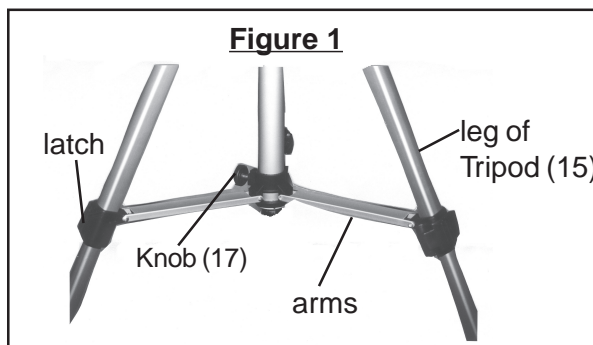
12. **Make certain to switch the Laser Level to the “OFF” position when adjusting or when changing the batteries.**
13. **Use the right tool for the job.** There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
14. **Remove batteries if the Laser Level is not used for a long period of time.**
15. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

**Note:** Always switch to a fresh battery when tool performance begins to diminish. This is a delicate instrument, do not drop or jar the Laser Level.

**Warning:** The warnings, cautions, 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.

### Assembly/ Operation

Your Laser Level will require some assembly prior to use. It is important that you read the entire manual to become familiar with the product BEFORE you use the Laser Level. Before assembling and operating the Laser Level be sure that you have all parts described in the *Parts List and Assembly Diagram* located on the last pages of this manual.

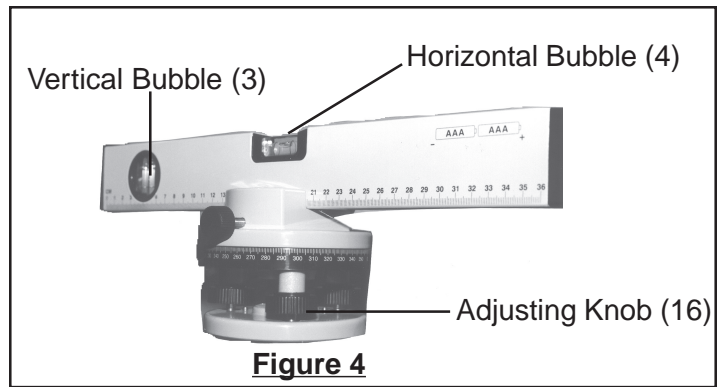
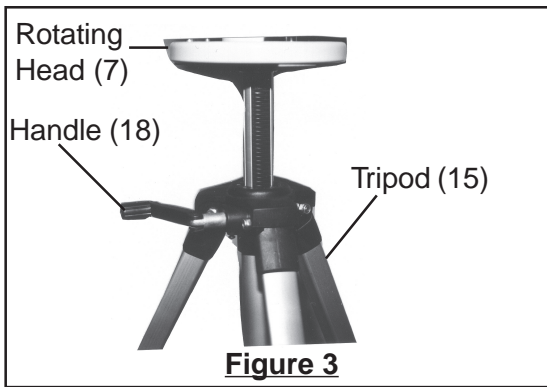


1. Unfold the Tripod (15) by pulling out on the Tripod arms. Turn the Knob (17) to lock the arms in place-see *Figure 1*.
2. The legs of the Tripod (15) can be raised or lowered by lifting the latch on the body of the Tripod (15) and sliding the leg in or out to the desired height-see *Figure 1*. Push the latch down into place to secure the Leg into position. Repeat for the remaining two legs.
3. Set the Tripod on a flat surface. Once the Tripod (15) is set up, you can raise and lower the Rotating Head (7) by turning the Handle (18) located at the top of the Tripod (15) -see *Figure 3*. Wind the Handle (18) clockwise to raise the Rotating Head (7) and counterclockwise to lower the Rotating Head (7) -see *Figure 3*.

#### 4. **Initial Leveling of the Rotating Head (7):**

Turn the three Adjusting Knobs (16) one at a time to level the Rotating Head (7). Keep turning the Adjusting Knobs (16) until the Bulls-Eye Bubble (19) floats exactly in the center of the circle. If you are out of level, the air bubble will float to the side of the Bulls-Eye Bubble-see *Figure 4*.

**Note: The Bulls-Eye Bubble (19) is intended for initial leveling of the Rotating Head (7) only. After placing the Plastic Body (5) into the tripod slot, further leveling should be done using the Horizontal Bubble (4) as a reference.**



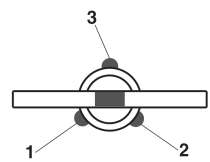
5. Set the Plastic Body (5) into the slot in the Tripod-see *Figure 2*. Tighten down the Knob (14) on the top of the Tripod to secure the Plastic Body (5) in place-see *Figure 2*, page 3.

6. **How to Level the Laser:**

**Note:** The numbers here are only for reference, the knobs are not numbered.

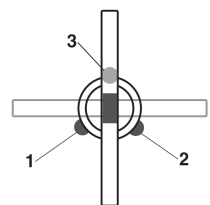
- a. Set the level parallel to knobs '1' and '2' as shown in *Leveling A*. Adjust knobs '1' and '2' until the Horizontal Bubble (4) is in the center.
- b. Turn the level 90°. It should now be over knob '3' as shown in *Leveling B*. Adjust knob '3' until the Horizontal Bubble (4) is again in the center.
- c. Turn the level back 90°, to the position shown in *Leveling B*. The Horizontal Bubble (4) should still be in the center. If it is not, repeat the steps above. If, after repeated attempts, the level is still uneven check all mountings to ensure nothing is loose and that the Plastic Body (5) is properly seated in the tripod slot.

**Leveling A**

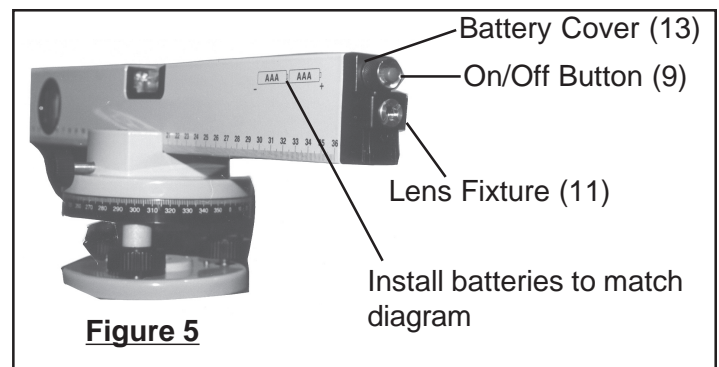


7. Once the Laser Level is set in the Tripod, you may set the laser to the type of beam you wish to use. The laser projects up to 1,500 feet. Set the Lens Fixture (11) "Down"; and this mode will fix the Level Laser beam to a beam splitter (-) mode. The beam splitter mode will project a horizontal line. Set the Lens Fixture (11) to the top mode and this mode will set the Laser Level beam to a dot (.)-see *Figure 5*. Turn the Laser Level "ON" by pressing the "ON/OFF" button (9) -see *Figure 5*. Be careful not to point the Laser Level at anyone.

**Leveling B**



8. Once you have leveled the Level Laser in the Tripod (15), you can use it for many applications. Rotating the Rotating Head (7) with the laser ON and set to the beam splitter (-) mode, you can set a line of equal height in a room to verify alignment of pictures, electrical plugs, or shelving. The Laser Level can also be used to set a level for any surface while providing a bright beam to mark your settings by.



**PLEASE READ THE FOLLOWING CAREFULLY**

**THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR 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.**

**Warning:** Always make certain the laser is off before adjusting or changing batteries.

Installing and Removing Batteries

1. The Laser Level uses two (2) “AAA” batteries. Remove the Battery Cover (13) located under the On/Off Button (9) -see Figure 5. Remove the old batteries and insert two new batteries. Line the batteries up the same way, so that positive and negative ends match the diagram on the end of the Laser Level. Replace the Battery Cover (13).

**Warning:** People with pacemakers should consult with their physician before using this product; operation of equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

**Warning:** This product contains or 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.)

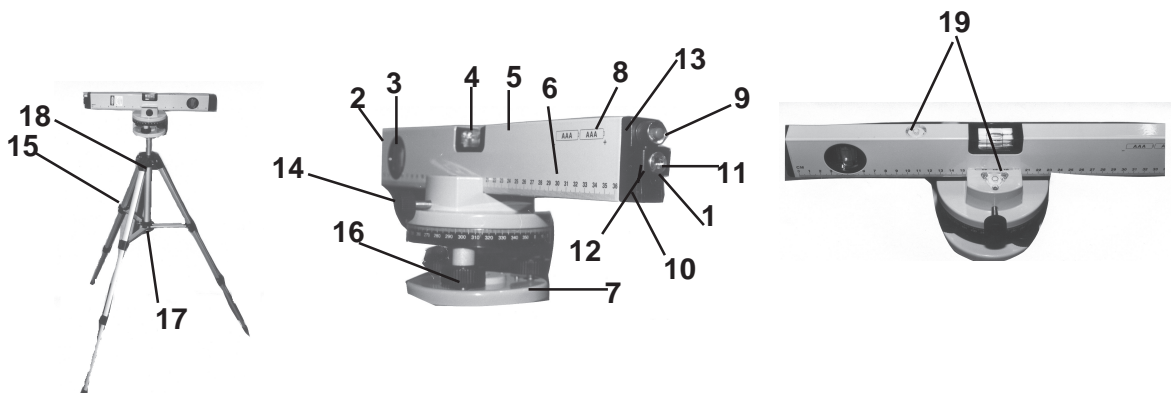
Unpacking

When unpacking your 16" Laser Level with 360° Rotating Leveling Head, check to make sure the following parts are included. If any parts are missing or broken, please call **HARBOR FREIGHT TOOLS** at **1-800-444-3353**.

Parts List

Part #	Description	Quantity	Part #	Description	Quantity
1	Laser Aperture	1	10	Front Cover	1
2	Back Cover	1	11	Lens Fixture	1
3	Vertical Bubble	1	12	Fan Lens	1
4	Horizontal Bubble	1	13	Battery Cover	1
5	Plastic Body	1	14	Knob	1
6	Laser Modules	1	15	Tripod	3
7	Rotating Head	1	16	Adjusting Knob	3
8	Battery Spring	1	17	Knob	1
9	On/Off Button	1	18	Handle	1
			19	Bulls-Eye Bubble	2

Assembly/Parts Diagram



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

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