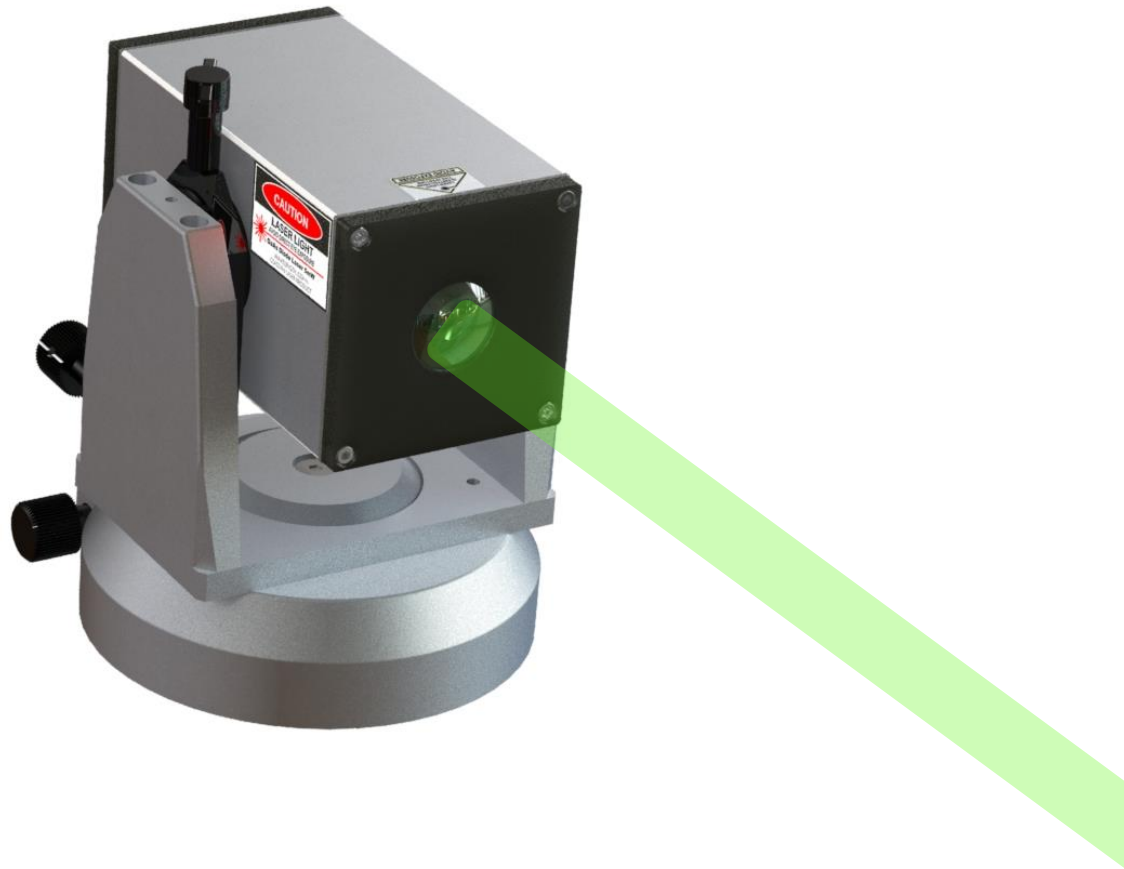


**LaserLine Mfg., Inc.**  
**GL3000PMT-S**  
**Owner's Manual**  
**Long Range Alignment Laser**



**L LASERLINE MFG., INC.**

1810 SE First Street, Suite H, Redmond, OR 97756  
Phone: 541-548-0882 • Fax: 541-548-0892 • Email: [laserline@laserline.net](mailto:laserline@laserline.net)  
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Rev. 4.2.24a

# Product Description

The GL3000PMT-S was designed for long range alignment applications and is a modular or “building block” design that allows the laser to be upgraded from its basic form. This enables the contractor to configure the laser based on the specific application and job site needs.

## Laser Certification, Safety and Maintenance

### Laser Product Certification

This laser product qualifies as ‘Class IIIa’ in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11



- **WARNING: LASER LIGHT, AVOID DIRECT EYE EXPOSURE!**

- ***Eye exposure to Class IIIa laser light can potentially present an eye (retinal) injury hazard, including spot blindness or other retinal injury\*\*.***

The maximum power output of this laser is less than 4.75mW for U.S. compliance. A laser safety kit is supplied with the GL3000PMT-S laser. The kit contains operator qualification cards and a sign that should be posted near the laser whenever it is in use. Observe the following operating rules:

- **NEVER** look directly into a laser beam or point the beam into the eyes of others, even at long distances.
- **NEVER** shine the laser at mirror like surfaces which can cause specular reflections of the beam.
- **ALWAYS** set the laser at a height and angle that prevents the beam from shining into people’s eyes.
- **IMMEDIATELY** terminate laser emissions if personnel, animals or reflective objects approach the beam.
- **ALWAYS** turn off laser when unattended.
- **DO NOT** remove any warning labels from the laser.
- **ONLY** properly trained laser operators are to use this product.
- **NEVER** allow beams to be aimed toward traffic, vehicles, or heavy equipment. Even when not damaging at long distances, the high brightness of lasers can distract or disrupt vehicle operations.
- **NEVER** point a laser at an aircraft or law enforcement personnel. This is considered a felony in most locations, with the possibility of jail time, heavy fines or both.
- **DO NOT** disassemble laser product, return to factory for all service procedures.

# Laser Certification, Safety and Maintenance (Cont'd)

*\*\* Note: Although all Class IIIa lasers should be respected as potentially hazardous and operated to avoid eye exposure to the beam or a direct specular reflection, as these are considered a theoretical eye hazard, in actuality confirmed rates of retinal eye injuries from visible CW (non-pulsed) lasers are exceedingly low and essentially non-existent after 50 years of global laser use.*

## Maintenance

The GL3000PMT-S requires no maintenance other than periodically cleaning the laser output lens. Use a soft cloth with Windex or alcohol.

***\*NOTE: Laser must be turned OFF when cleaning the lens, so as not to create unwanted laser refraction.***

**Warning** 

**Under no circumstances, attempt to open or disassemble the Laser Housing. Doing so may cause exposure to potentially hazardous levels of laser radiation. No user serviceable parts within. Unit is factory sealed.**

## Caution:

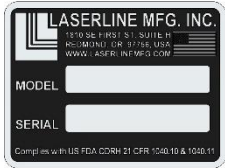
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

# GL3000PMT-S LABELS

The labels required for this product are:

**Do Not Open Valve**  
LASER IS PURGED AND  
NITROGEN CHARGED AT FACTORY

**Purge Valve Label**

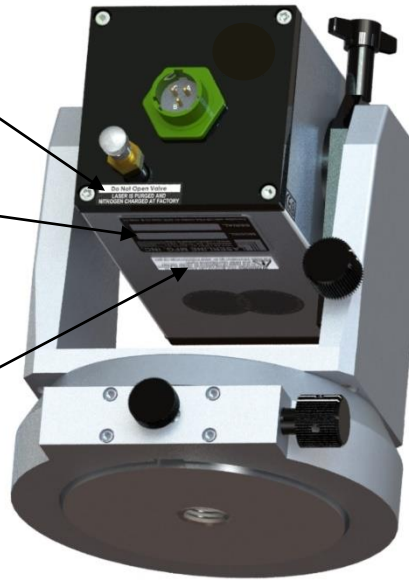


**Identification & Certification Label**

**WARNING:** This product can expose you to chemicals including cadmium which is known to the State of California to cause cancer and other reproductive harm.

For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**State of California Prop 65 Label**



**Warning Label Hazard**



**Aperture Label**



# OSHA REQUIRED (USA ONLY)

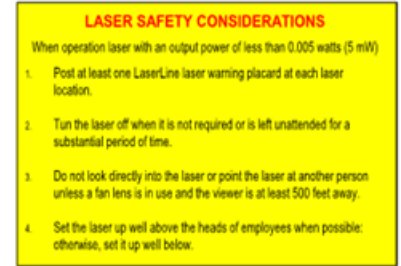
**Warning Plaque:** To be posted near laser



**Operator Card:** To be carried by laser operator



**Front**



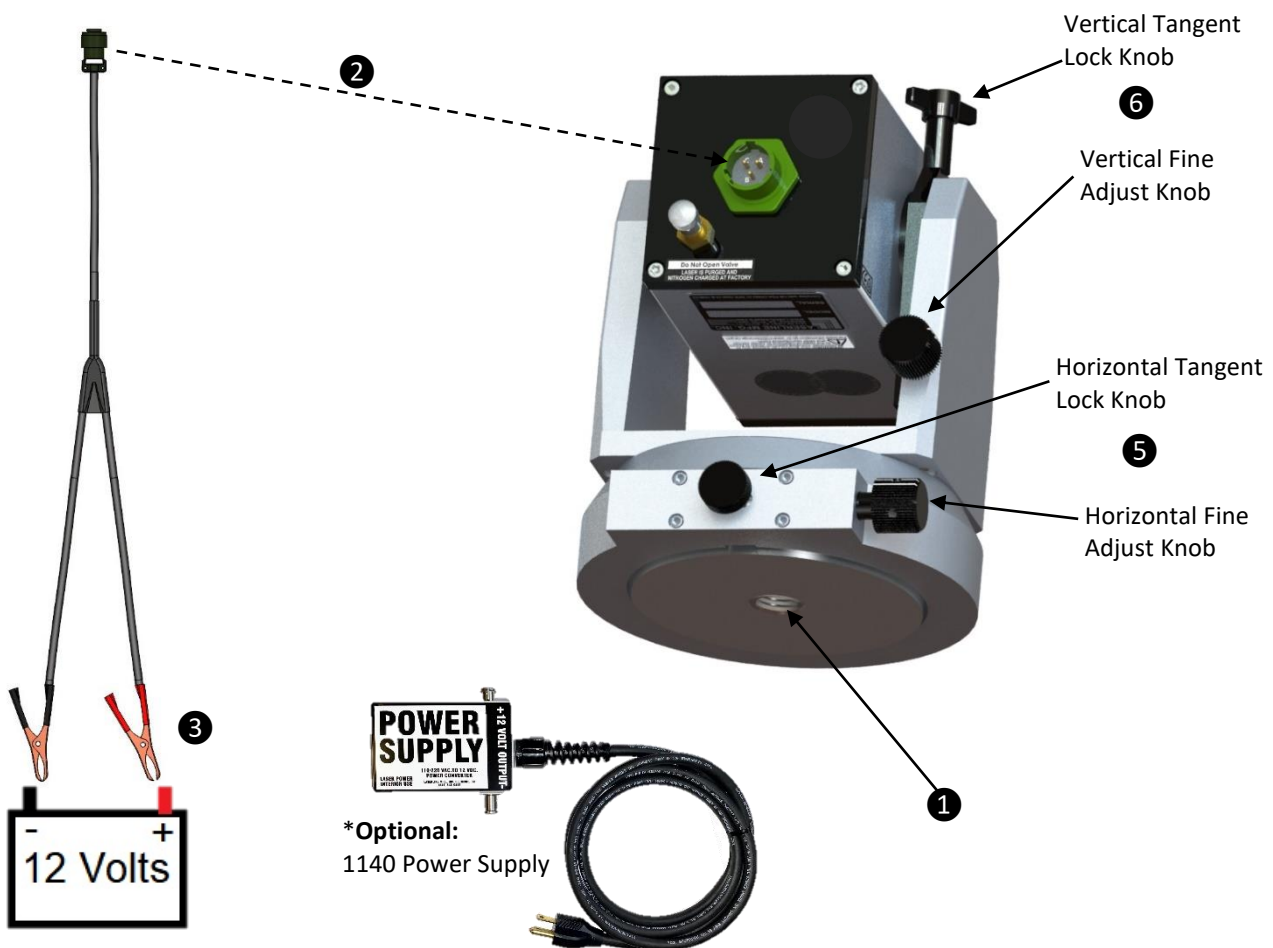
**Back**

## Precautions for Handling Instrument

1. Carry the instrument in its case whenever transporting it between jobs.
2. When carrying the instrument while on a tripod, do not carry it over the shoulder, but cradled in an underarm position. The instrument should never be lifted for carrying until a security check is made of all fasteners, especially the tripod head mounting bolt.
3. When setting up the instrument, be sure to spread the tripod legs sufficiently to guard against possible fall.
4. Particular care should be taken not to grasp any part which may put the instrument out of adjustment.
5. When leaving the instrument set up outdoors for long period of time, in applications like dredging, it is highly recommended that the laser be set up in an enclosure or "house" to protect it from the elements.
6. Upon completion of use, clean the instrument before returning it to its case. Clean the lens carefully with a soft lens tissue. When dust cannot be removed by that method, use several drops of alcohol on a lint free cloth or lens tissue and wipe it gently.
7. Never store laser in a damp dirty case!
8. Keep laser stored in dry secure place.

## Quick Start Set up and Operation

1. Mount the GL3000PMT-S on any flat surface using a 5/8-11 bolt through a plate. Be sure the engagement length of the threads does not exceed 7/16”.
2. Start power up procedure by connecting the military power cord connector to the 3-pin connector on the rear laser panel. *\*Note: The connectors are keyed, line up and twist ¼ turn to lock into place.*
3. On the opposite end of the power cord, connect the red clip to positive 12Vdc and the black clip to ground. (Or, connect to **optional** 1140 power converter) Laser turns on automatically, once connected to power.
4. Horizontal alignment is controlled by loosening the horizontal lock and rough aligning the laser beam to the far point. Tighten lock, then adjust the laser left and right using the fine adjustment tangent knob.
5. Vertical alignment is accomplished using the vertical lock and tangent in the same steps as the horizontal.



## Mechanical Features and Accessories

1. IP68 Rated-Waterproof-Purge valve filled w/ 7lbs of dry nitrogen

2. Military Spec ¼ turn 3-pin power connector 12Vdc

3. Instrument Mount 5/8-11

4. Horizontal lock knob

5. Horizontal tangent fine adjustment knob

6. Vertical lock knob

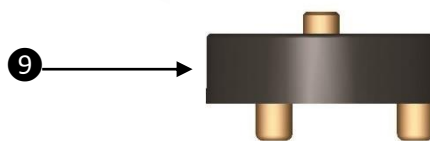
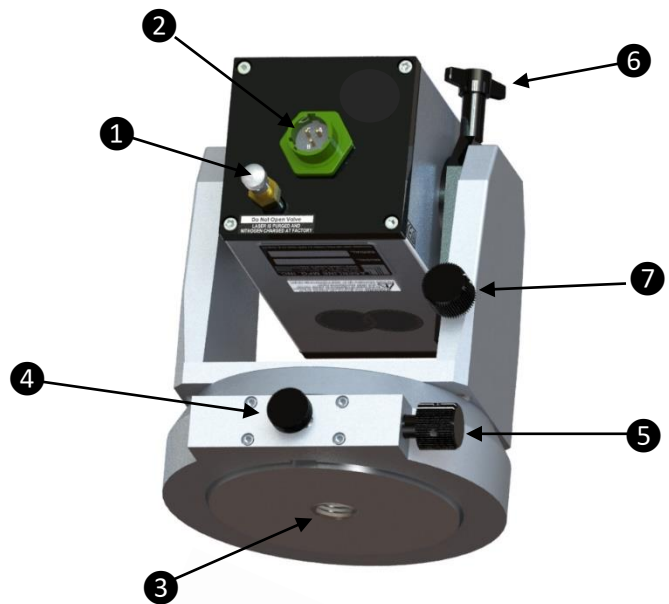
7. Vertical tangent fine adjustment knob

8. 15' Power Cable to Vehicle  
**12 or 24VDC**  
 Red Clip=Positive  
 Black Clip=Ground

9. **\*Optional:** Tribrach adaptor  
 (required to adapt tribrach)

10. **\*Optional:** Optical plummet tribrach mount with fine adjust leveling screws and circular leveling vial.  
 (Level sensitivity of 10 minutes/2mm)

11. **\*Optional:** The 1140 Power Converter will run your laser at 12 VDC with 110 to 220 VAC.



# Specifications

## Laser

- Laser Wavelength 515-520nm
- Laser Power: 4.75mW
- U.S.A: 'Class IIIa' in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11
- This product is ANSI Z136 compliant and should be operated under the terms of ANSI Z136.1 (Visit [www.ANSI.org](http://www.ANSI.org) or [www.lia.org](http://www.lia.org) for more in-depth information)
- Operational Life: 20,000 hrs. MTBF

## Environment

- Operating Temperature: -40°F to 122°F (-40° to 50°C)
- Enclosure Rating: Hermetically sealed, outdoor dust and water rated to IP68 (*Purged and dry nitrogen filled*)
- Vibration compliant per MIL-STD-810F method 5145 and truck assurance level 2, schedule E

## Electronic

- Power Source: 12 or 24 vdc
- Power Draw: 0.2A at 12vdc in
- Reverse Polarity and Spike Protected
- Over Temperature Protection Circuit
- Automatic Power Control: (APC) Keeps laser power stabilized through ambient temperature changes

## Mechanical

- ¼" thick hard coat anodized aluminum housing
- Smooth, precise 80 pitch horizontal and vertical tangents for aiming left/right and up/down
- Heavy duty ¼ turn military spec connector
- **Dimensions:**
  - Length: 6"-1/8
  - Width: 5"-1/2
  - Height: 7"-3/8
  - Weight: 3.65 lbs.

**Warranty: 12 Months Parts and Labor**



## **Warranty**

This product is guaranteed against defects in materials and workmanship for both parts and labor, under normal working conditions for 1 year from the date of purchase, except as noted herein. LaserLine Mfg., Inc. liability under this warranty is limited to repairing or replacing any product returned to an authorized service center for that purpose. Any evidence of attempts to repair this unit by other than factory authorized personnel automatically voids the warranty. LaserLine Mfg., Inc. does not take liability for any damages caused by non-accuracy of this product. Before using the product always check for accuracy per the enclosed instructions in this manual.

### **Factory Service Center**

LaserLine MFG., INC.  
1810 S.E. First Street, Suite H,  
Redmond, OR 97756  
(P) 541-548-0882  
(F) 541-548-0892  
(Email) [laserline@laserline.net](mailto:laserline@laserline.net)

**For all Warranty:** Call Order Processing for RMA # at 541-548-0882. The Unit will be repaired and returned by prepaid freight.

### **All Non-Warranty Repairs:**

Send to: LaserLine MFG., INC. at above address

**Out of Warranty Repairs:** 1 Year on replacement parts, 90 days on labor.

**LaserLine Mfg., Inc.**

1810 SE First Street Ste. H  
Redmond, OR 97756

**Phone:** 541-548-0882

**Email:** [laserline@laserline.net](mailto:laserline@laserline.net)

**Website:** [www.laserlinemfg.com](http://www.laserlinemfg.com)