SE-10 Solar Energy Installation System™
Specifications and Operator Instructions

Warning

Do Not Direct the Laser Light into The Eye!

GLX350-10 Specifications 520nm Green Beam, Class IIIa Diode Laser, IEC 3R
<5 mw Maximum Output
6 Size “AA” Alkaline Batteries
Battery Life:> 40 hours Green Beam Continuous Use
Range: >1000 ft.
Dimension: Length 17” (43.18cm) x Diameter 1” (2.54cm)
Weight: 3 lbs.

Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. [CDRH: Battery ON/OFF end cap is an alternative to the beam on indicator and beam attenuator requirement.]

Permissible model GLX350-10 (Optional) MSHA **Approval Number**: 18-A070010-0

Constructed from solid brass with an "O" ring seal, the GLX350-10 Alignment Laser is IP65 water resistant. The laser beam is concentric to the outside diameter of the battery compartment. When properly maintained, the GLX350-10 has a continuous operating time of over 40 hours using 6- 1.5 Volt size "AA” Procell Alkaline Batteries.
The **SE-10 Solar Energy Installation System™** is a kit that consists of the model GLX350-10 Green Laser Technology™ Alignment Laser, the AP351- 1” Ring Set, an AP353A Magnetic Mounting Base Plate, the AP1000 Tripod Leveling Adaptor Plate and AP46 Foam Filled Carrying Case. Accessories are listed below the Operation Instructions.

OPERATION for the GLX350-10 Alignment Laser

Operation of the laser is simple and straightforward. The laser is shipped with an insulator to prevent the batteries from powering the unit and discharging during shipment and storage. It must be removed from under the Battery End Cap prior to use.

To Initiate First Power: Remove the insulator by unscrewing the battery end cap completely. Remove the cardboard insulator and replace the end cap. The end cap is turned in the clockwise direction until the laser is powered ON. **Do not over tighten**. Turn the battery end cap in the counterclockwise direction to turn the unit OFF. When the laser fails to power up, the batteries will need to be replaced.

To Replace the Batteries: Unscrew the battery end cap completely. Remove the old batteries and inspect the interior of the battery compartment for signs of dirt, moisture or leakage from the previous batteries. Correct any problems with acid leakage or case sealing before installing new batteries. See *Cleaning Suggestions*. When replacing the batteries, the negative end goes into the laser first. All positive ends must point towards the end cap. All batteries must be replaced at the same time. Do not attempt to reuse batteries or mix batteries of different manufacturers or types. Always replace the batteries in **FRESH AIR ONLY!**
Battery Note: Replacement of the batteries must be performed in fresh air **ONLY**. When replacing the batteries, the negative end goes into the laser first. All positive ends must point towards the battery end cap. All batteries must be replaced at the same time. Never attempt to reuse batteries. Do not mix batteries of different manufacturers or types. Do not store tool with batteries inside as corrosion can happen and cause defects to the tool. Other than the batteries, there are no user serviceable parts on the laser.

The AP351 1" Ring Set and AP353A Magnetic Mounting Base Plate secure the GLX350-10 green beam laser assembly to the AP1000 Leveling Adapter Plate. The AP1000 Leveling Adapter Plate provides horizontal azimuth and vertical micrometer adjustments for precise laser beam alignment reference between slew motors and bear bores. See AP1000 Leveling Adapter Plate Instructions attached. Check pile heights and straightness over the job site. Check torsion bar alignment and straightness by shooting laser beams parallel but offset to the torsion bar. Measure from the laser beam to the center of the Slew motor and bearings for straightness.

Cleaning Suggestions: The brass laser case can be cleaned with a metal polish from local store named Brasso®. Polish with a soft fabric until the desired shine of brass is achieved. For inside the laser's brass case; a 1" barrel cleaner adaptor from any Universal Gun Cleaning kit can be used. Do Not use polish or solvent inside the laser's case. Q-tip with Windex can be used on lens.

Lubricating the Battery Cap "O" Ring: This can be done with a silicone-based spray lubricant or grease. Apply directly to the "O" ring and **DO NOT** allow the lubricants to enter the inside the laser's case or coat the batteries.

This product is warranted for a period of one year from the date of purchase for manufacturing defects. The manufacturer reserves the right to repair or replace this product if it fails due to manufacturing defects during the warranty period. ***Abuse, neglect or disassembly of the laser voids this warranty***. Like any other tool, the service that this product will provide is dependent on the care it receives. Please return to the Manufacture addressed below, with proper contact information, for Service and Repair.

SE-10 Solar Energy Installation System Includes:

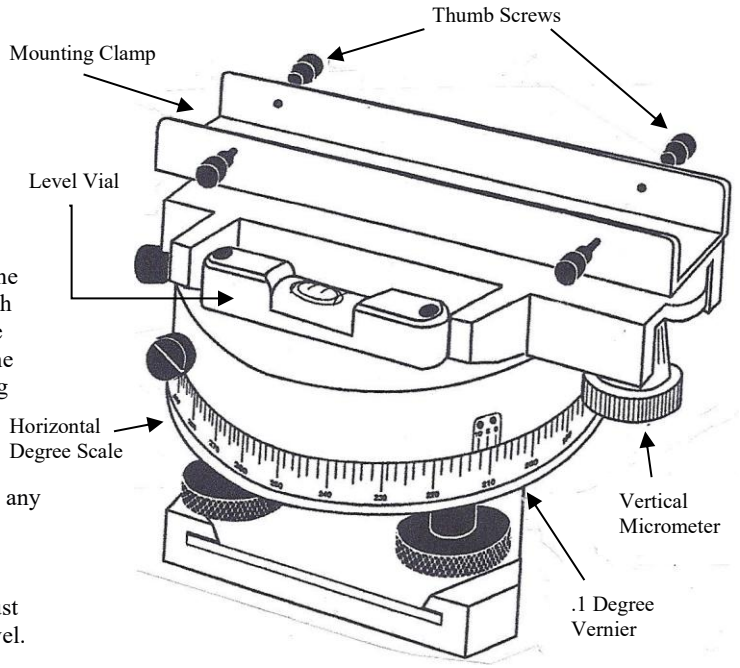
Model GLX350-10	Green Laser Technology™ Alignment Laser complete with 6 AA Alkaline Batteries and Battery End Cap Switch with O ring.
Model AP1000	Tripod Leveling Adapter Plate includes 30 Arc min. leveling vial with a 5 Arc min. resolution, two sets of thumb screws along the outside edge of the mounting cradle to hold the laser in position, vertical micrometer, horizontal tangent screw, degree scale with .1° vernier and three leveling legs.
Model AP353A	Magnetic Dovetail Base Mount that sets inside the AP1000 Mounting Clamp
Model AP351	1" Ring set of clamps that holds the laser to the AP353A
Model AP46	Extra Large Foam Filled Carrying Case

Optional Accessories

GDT 250	Dual Magnetic Target 4” x 8” with retro-reflective green film and magnetic spot target
SE-4X32	4 Power Optical Scope for viewing laser dot on target. Includes windage and elevation finger adjustments. No tools are required.
GL1000	Optional Cylindrical Lens Line Generator. Used with GL700 and GLX70012V-PV Alignment Lasers. Projects a 10-foot line from a distance of 100 feet.
Model AP45	Optional Soft Carrying Case 21” Long. Plush Lined and Padded with Full Length Zipper.
Model AP46	Hard Shell Carrying Case 26” x 8” x 10”
Model AP90C	Beam Bender™
Model AP180C	Beam Spreader™

AP 1000 Operating Instructions

The AP1000 Transit Adapter provides a premium leveling support for use during horizontal and vertical layouts. The horizontal layout scale is marked in 360-degree increments and includes a .1-degree vernier scale for fine azimuth adjustments. The vertical adjustment is a precision micrometer that provides 1/16" resolution @ 100 feet for slope and grade positioning. One complete revolution of the vertical micrometer in either direction is equal to 1% of grade change.



How to use the AP 1000 Transit Adapter:

l. Mount the AP1000 to a construction grade tripod with a 5/8"-11tpi mounting thread.

2. Level the bubble on the AP1000 Transit Adapter by positioning the bubble parallel to two of the leveling feet and adjusting either or both of the leveling feet to bring the bubble to center. Rotate the top plate 90 degrees in either direction (the level vial should be in line with the third leveling foot) and center the bubble within the vial by adjusting the third leveling foot.

3. Repeat step 2. until the bubble stays centered in both positions. The bubble should now stay centered when the top plate is turned to any position.

4. Mount a laser level to the API000 Mounting clamp, position the laser level over the third leveling foot used in step 2. above and adjust the vertical micrometer so the bubble within the laser level reads level.

5. Swivel the laser level 180 degrees and check the bubble. If the bubble is slightly *out* of level, adjust the vertical micrometer to bring the bubble half-way to center and then adjust the third leveling foot to bring the bubble completely to center. In other words, adjust for each half of the error with the vertical micrometer and third leveling foot respectively.
Note: The zero mark on the vertical micrometer scale won't necessarily line up with the index mark after the laser is leveled. Just note the number position on the micrometer for a "Home" level reference and work from there.

How to operate:

The horizontal degree scale is read using the .1-degree index mark on the side of the top plate. The. l degree vernier is used by adjusting each progressive .1 (0-10) degree index mark to the next full degree mark on the horizontal azimuth ring. Precise positioning is obtained by locking the top plate to the stationary bottom plate with the locking knob then using the fine horizontal adjustment knob.

The vertical micrometer is designed so that one complete revolution of the micrometer is equal to 1% of grade change. Each increment of the micrometer is equivalent to a ¼” change at 100 feet. The total adjustment range is approximately +/- *5* degrees of angle.

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