Laser Reference, Inc.
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PRO SHOT™ Alpha-v Vertical plumb laser

Operations Guide

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Specifications

Measurement range up	100 meters (330 feet)
Measurement range down	5 meters (16 feet)
Beam accuracy up / down	±5 arc sec. / ±1 arc min.
Self-leveling range / type	±4 Degrees / servo motor
Up beam spot dia. (nom.)	At exit: 9.5mm / at 100M: 12mm exit: 3/8in. / at 330ft.: 7/16in.
Down beam spot dia. (nom.)	At exit: 3.0mm / at 5M: 4.8mm exit: 1/8in. / at 16ft.: 3/16in.
Power Supply	Four C-cell Alkaline batteries
Run time: down beam on	65 hrs. (continuous)
down beam flashing	100 hrs. (continuous)
Automatic Shut-off	If off-level for more than 3 min.
Dust and water sealed	To international standard IP56
Operating Temperature	-10ºc to +50ºc (14ºf to +122ºf)
Storage Temperature	-40ºc to +60ºc (-40ºf to +140ºf)
Laser type	Diode: 635nM high visibility
Laser output power (typ.)	Up: 2.25mW / Down: 2.25mW
Laser classification	CDRH (USA) Class 3A IEC 825-1 Class 3R
Height / Weight	6.5in (16.5cm) / 4.0lbs (1.8kg)

24 month warranty coverage

The Alpha-v laser transmitter is warranted for twenty-four (24) months from the date of new equipment purchase from an authorized dealer. During the warranty period, Laser Reference, or its authorized service center, will repair or replace, at Laser Reference's sole discretion, the Alpha-v laser transmitter free of charge, (except for transportation costs) if the products are found by Laser Reference, or its authorized service center, to be defective in either materials or workmanship. Maintaining the calibration of the product is not the responsibility of Laser Reference or its authorized service centers. If service is needed, the product(s) must be sent FREIGHT PREPAID to the nearest authorized service center or to Laser Reference.

Operating the Alpha-v

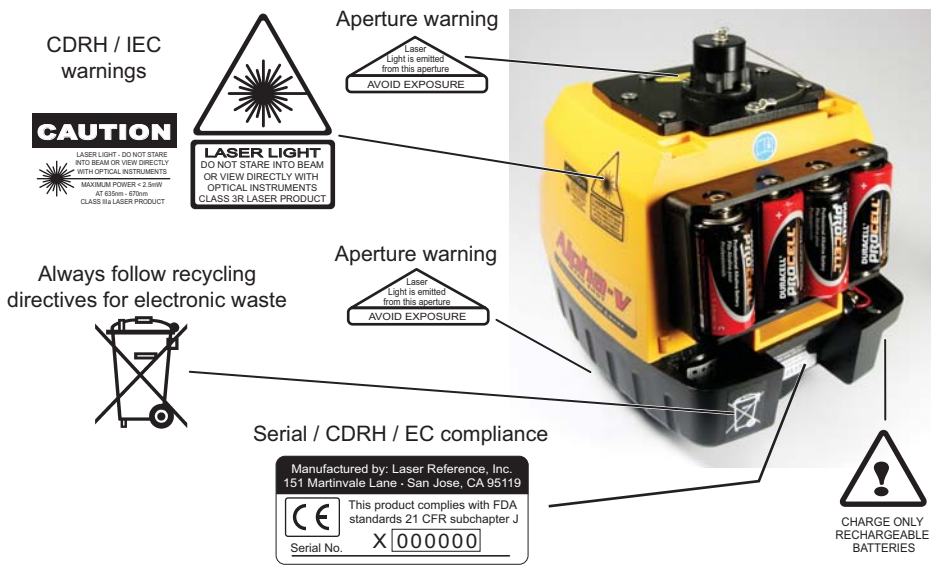
Press the power button to begin the self-leveling process. The green L.E.D.s turn on when the leveling system is active. Constant lights indicate the laser is coarse leveling, flashing lights indicate the laser is almost level. Once the laser is level, the vertical and plumb laser beams come on, the power indicator L.E.D.s come on and the leveling L.E.D.s turn off. If the laser cannot reach level, red L.E.D.s will flash. This indicates the laser mounting setup must be made closer to level (within ± 5º) in order for the laser to operate. About five seconds after the laser finishes leveling, a feature called “Height of Instrument alert” (H.I. alert) activates. When the laser enters H.I. alert mode, the top leveling indicator will flash five times. Once H.I. alert is active, if the laser is moved or bumped, the laser beam will shut-off and the red and green leveling indicator L.E.D.s will flash alternately. This provides a warning to re-check your setup before proceeding and prevents errors that could occur if the laser was simply allowed to re-level. To clear an H.I. alert, simply turn the laser off, then on again. ***CAUTION: You must re-check your setup before continuing your work to avoid errors.***

Once the laser is operating, pressing the down beam mode button will make the down beam flash to conserve battery life, but still allow for checking setup alignment. Pressing the button a second time will turn the down beam off for even more battery life and pressing it a third time will turn the beam on constantly again.

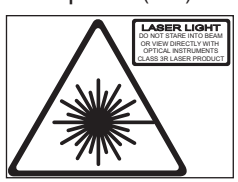
Checking calibration in the field

Find an area where you can set-up a flat-head tripod and project a beam upward for at least 10M (33ft.). Accurately level the head of the tripod. Place the Alpha-v on the tripod without tightening the attachment screw. Turn on the laser and allow it to fully level. Be sure the down-beam is visible at the surface the tripod rests on. Mark the position of the down-beam for reference. Also, mark the position of the up beam. *Note: the most accurate way to mark beam position is by drawing a circle around the beam spot*. Rotate the entire laser on the tripod 180º and make sure the down-beam is still centered in the first mark you made. Make a new mark for the up-beam and check to see if there is any error relative to the first mark you made for it. If there is a difference, half way between the two marks is true vertical. The actual calibration error is from true vertical to either mark (half the distance between the two marks). If you find any error from true vertical, and it is enough to cause your work to be out of tolerance, return the laser to your dealer for calibration.

Compliance and warning label locations • Alpha-v



Alpha-v (IEC)



Alpha-v (CDRH)

A warning placard is included with each laser and can be attached to the outside of the carrying case. The case can then be placed in a visible location near where the laser is being used in order to meet jobsite posting requirements.