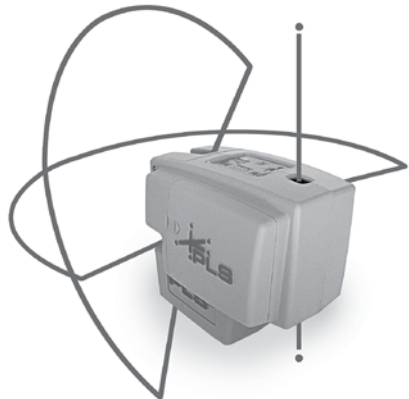


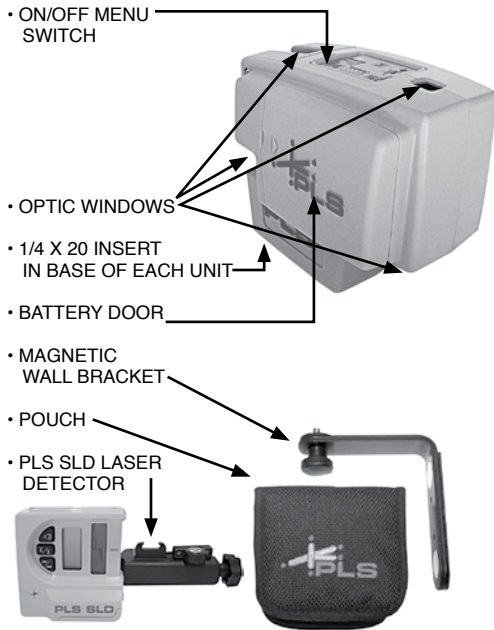
PLS 4



PACIFIC LASER SYSTEMS

The Professional Standard

FEATURES



PLS4 is a registered trademark of PLS • PACIFIC LASER SYSTEMS

MENU SWITCH

Lines

Press "on/off" to scroll through the menu. The numbers indicate menu functions:

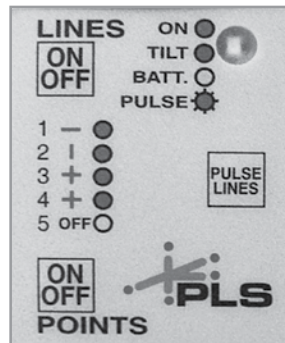
1. Level/horizontal beam / green LED
2. Plumb / vertical beam / green LED
3. Both beams - self-leveling / green LED
4. Both beams - fixed / red LED
5. Off

- Unless the PLS4 is on number 4 mode, unit will not operate if tilt exceeds 6° out of level.
- Amber led = low battery
- Press "Pulse Line" button to activate pulsed line beams to use outdoors with PLS SLD Laser detector.
- Flashing LED indicates laser is pulsing and can be used with PLS SLD laser detector.
- Pulsed beam will be less bright than non-pulsed beam.

Points

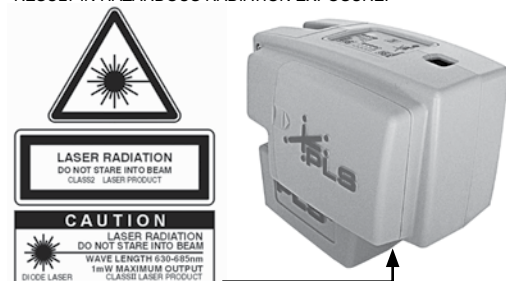
- Press "on/off" for up-down points / green LED
- Beams will not operate if tilt exceeds 6° / red LED
- Points will not pulse

Points and lines can be used simultaneously



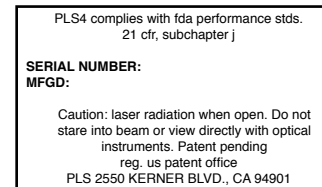
SAFETY LABEL

CAUTION: USE OF CONTROLS, ADJUSTMENTS OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.



PLS4 complies with US FDA standards, 21 CFR, Subchapter J.

These labels are attached to every PLS laser. These are not to be removed or defaced.



Avoid Exposure Laser radiation emitted from this aperture

CHECK LEVEL LINES

We recommend that you check your PLS4 periodically in order to assure its accuracy.

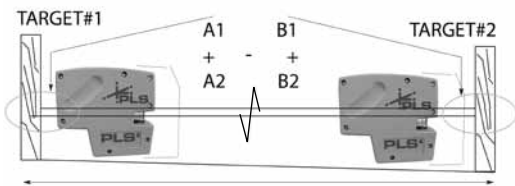
TO CHECK LEVEL:

Choose two interior walls approximately 15'-0" apart (see Fig. 1). You can use 2 x 4s for targets.

Turn on the PLS4 to setting #1 (level). With the PLS4 six inches away from and facing target #1, carefully mark the center of the line. Label this mark A1. Swivel the laser 180° and mark the center of the line on target #2. Label this mark B1.

Move the PLS4 six inches away from and facing target #2. Carefully mark the center of the line. Label this mark B2. Swivel the laser 180° and mark the center of the line on target #1. Label this mark A2.

You now have two centers of elevation at each target. Carefully measure the distance between centers of each set of marks. If there is a difference, subtract one measurement from the other. This calibration method magnifies any error by a factor of two. Therefore divide any difference by two to find the true error. Your PLS4 should have an error of no greater than 1/8 in. within 30ft.

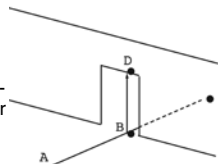


CHECK PLUMB

Lines

Choose a door jamb with 8'-0" clear on each side of the door. Turn on your PLS4 laser to setting #2 (plumb). With your laser at point A, make two marks on the floor: the first at 8'-0" from point A centered on door header above (mark this point B), the second 16'-0" from point A (mark this point C). Without moving the laser, make a third mark on the door header (mark this point D).

If level & plumb are within specification, square will be in specification.

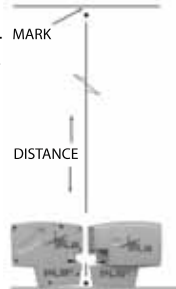


Move the laser to point C, exactly align the beam with point B, and notice where the beam falls at point D. If it is within a "light" 1/16" of point D, the laser is in calibration.

Points

Check of Plumb Accuracy. This requires significant vertical height (minimum 10'-0") and the ability to mark at that height. Place the unit with the down beam exactly centered on both axes over a cross mark. At the surface above, mark both axes of up beam. Rotate the laser 180° and place the down beam exactly centered on the original mark. The up beam should be exactly over the original mark.

If there is a difference between marks the error of the plumb beam is one half that difference.



NORTH AMERICAN WARRANTY

This product is warranted by PLS - Pacific Laser Systems to the original purchaser to be free from defects in material and workmanship under normal use for a period of three years from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at our option), without charge for either parts or labor, through PLS. The purchaser shall bear all shipping, packing and insurance costs. Upon completion of the repair or replacement, the unit will be returned to the customer, freight prepaid. The warranty will not apply to this product if it has been misused, abused or altered. Without limiting the foregoing, battery leakage, dents or gouges to the plastic housing, broken optic windows, damage to the switch/LED membrane are presumed to result from misuse or abuse. Tampering with or removal of the caution or certification labels voids this warranty.

Neither this warranty nor any other warranty, express or implied, including implied warranties of merchantability, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

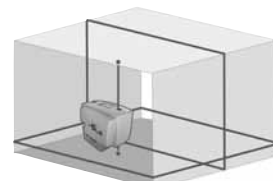


PLS LAB TECHNICIANS

SPECIFICATIONS

Light source:	Semiconductor laser diode 635-670 nm, visible
Working range:	+/- 100 feet (outdoor w/detector)
Cross line accuracy:	+/- 1/8" @ 30 feet (+/- 3mm @ 10 meters)
Point-to-point accuracy:	+/- 1/4" @ 100 feet (+/- 6mm @ 30 meters)
Leveling:	Automatic
Leveling range:	+/- 6°
Power supply:	3AA batteries alkaline or rechargeable
Operating time:	+25 hours continuous use with single beam; 12.5 hours both beams
Operating temp:	0° F to 122° F (-18° C to 50° C)
Storage temp:	-40° F to 158° F (-40° C to 70° C)
Indicator:	Green light: ON Red light: EXCEEDS TILT/ tilt override #4 Amber light: Battery Low Flashing: pulse beam-lines
Environment:	Water resistant; not submersible
Dimensions:	2" x 2.5" x 4-3/8"
Weight:	16 oz. (.45kg) (including batteries)

PULSE PLS4 W/DETECTOR
Average distance
and horizontal-
vertical line
length using PLS
SLD Laser Detector



Fan Angle 180° +

Distance	Line Length	Accuracy
30ft	75ft +	1/8"
100ft	125ft +	3/8"