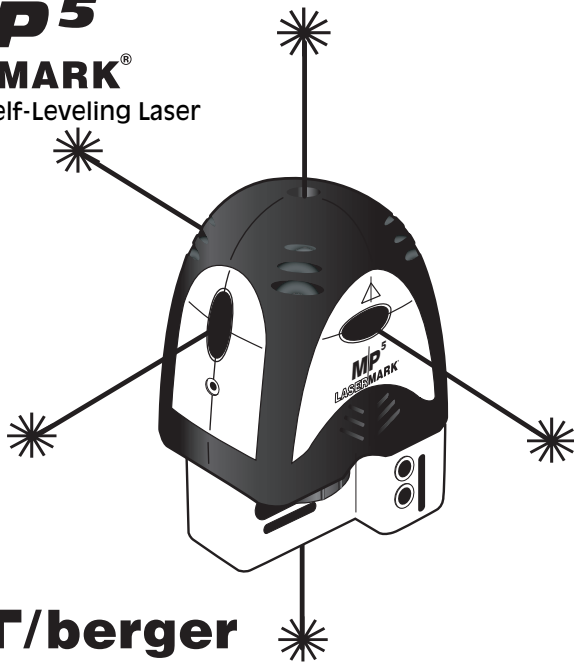


INSTRUCTION MANUAL

MP⁵ **LASERMARK[®]** Five Beam Self-Leveling Laser



CST/berger

Thank you for purchasing the LaserMark MP5 Five Beam Self-Leveling Laser. Please read this manual thoroughly before operation.

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PATENT PENDING

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LASER SAFETY

The use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

Do not stare into the laser beams. Do not disassemble the instrument or attempt to perform any internal servicing.

Repair and servicing of this laser are to be performed only by CST or authorized service centers.

This laser complies with all applicable portions of title of the Code of Federal Regulations set by the Dept. of Health, Education, and Welfare, the Food and Drug Administration, the Center for Devices, and the Bureau of Radiological Health.



FEATURES

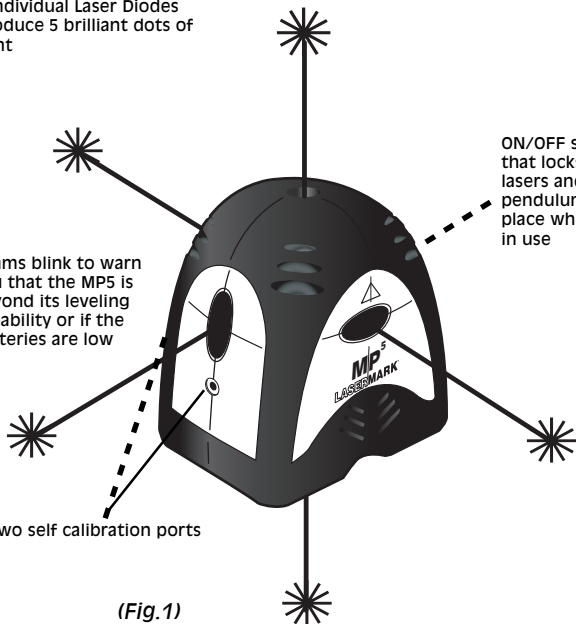
5 Individual Laser Diodes produce 5 brilliant dots of light

Beams blink to warn you that the MP5 is beyond its leveling capability or if the batteries are low

Two self calibration ports

ON/OFF switch that locks the lasers and pendulum in place when not in use

(Fig.1)



ON/OFF SWITCH

The ON/OFF switch serves two purposes. Not only does it turn the power off and on, it also locks the lasers in place. This provides protection to the instrument during transportation.

OUT OF LEVEL INDICATOR

The MP5 has a warning to let you know that the unit is out of level beyond its self-leveling capability. If the lasers start blinking quickly, just move the MP5 to a more level position.

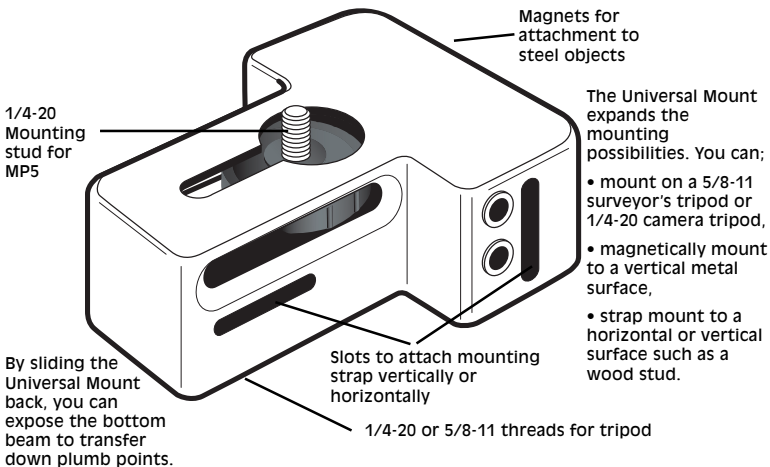
LOW BATTERY INDICATOR

The laser will blink on and off 4 times every 8 seconds when there is approximately 2 hours of battery life remaining. Average life of the 3 "AA" batteries is +/- 15 hours of intermittent use. It is always a good idea to put extra batteries in the carrying case. There is enough space in the case for a spare set of batteries.

ACCESSORIES

UNIVERSAL MOUNT

Once this is attached to the bottom of the MP5, the unit can be mounted on a 1/4-20 thread camera tripod, a 5/8-11 thread surveyor's tripod or attached to any ferrous metal surface (such as steel studs) using magnets (thread assembled into one side of the tripod mount), or a strap (supplied) for wood studs, etc.



TARGET

This target is used for enhancing the visibility of the laser dot.

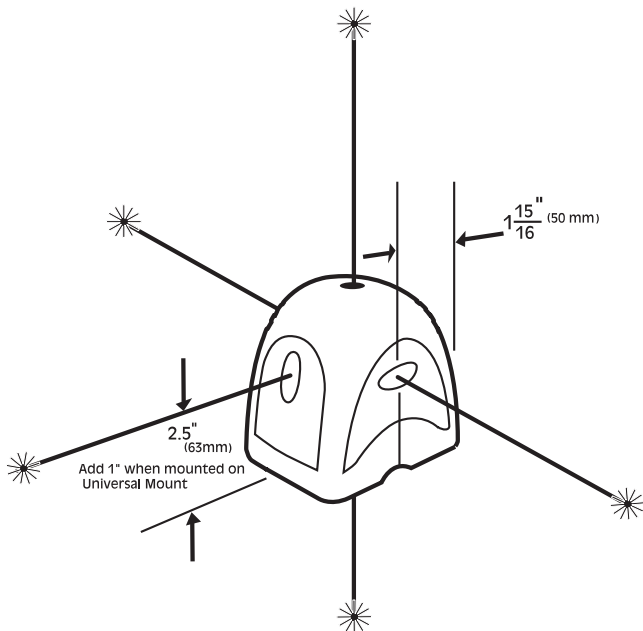
STRAP

This strap is used for mounting the universal base to any object 7 inches or smaller in diameter. Very useful when you don't have a free hand to hold the MP5.

CARRYING CASE

The soft sided carrying case provides ample storage for the MP5, targets, universal mount, laser glasses, manual 2 sets of batteries and adjusting wrench. The case can be belt mounted or comes with a carrying strap and handle for easy handling.

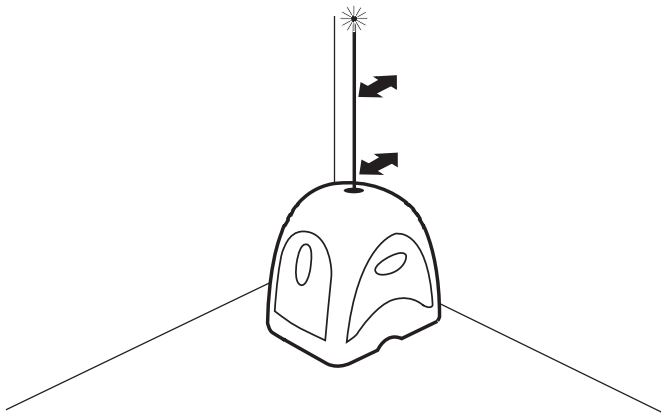
LASER BEAM LOCATIONS



APPLICATIONS

PLUMB

Place the MP5 on the floor or a fairly level surface near the object to be plumbed. Measure from the surface being plumbed to the laser beam at two points. One point near the MP5 and at another point farther away. (Note: the greater the distance between the two points, the greater the possible accuracy.)



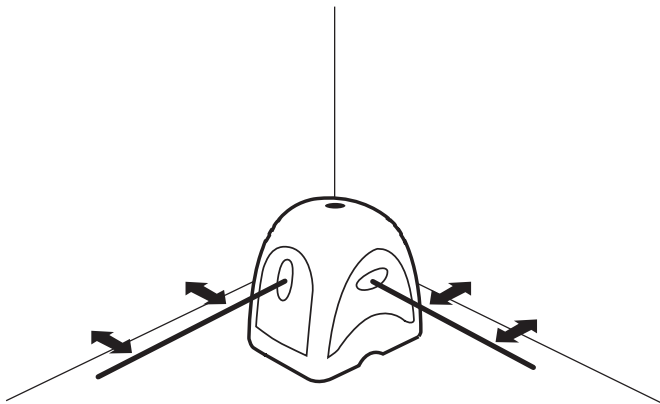
If the measurements of the two points are the same, then the surface is plumb. If not, pull the surface in or push it out until the upper and lower measurements are equal.

If you want to transfer a point from the floor to a point on the ceiling or vice versa, mount the MP5 on the universal mount as shown. Move the MP5 until the point you wish to transfer is centered on the laser dot. Mark the other point as required.



SQUARE

Place the MP5 on the floor or a fairly level surface near the objects to be squared. Measure from one surface to the laser beam at two points. One point near the MP5 and at another point farther away. (Note: the greater the distance between the two points, the greater the possible accuracy.) Rotate the MP5 until the two measurements are equal. Do not move the



MP5 until the rest of the measuring is completed. Now take two measurements from the other surface to that laser beam. If the measurements of these two points are the same, then the surfaces are square. If they are not equal, move the surface until the two measurements are equal.

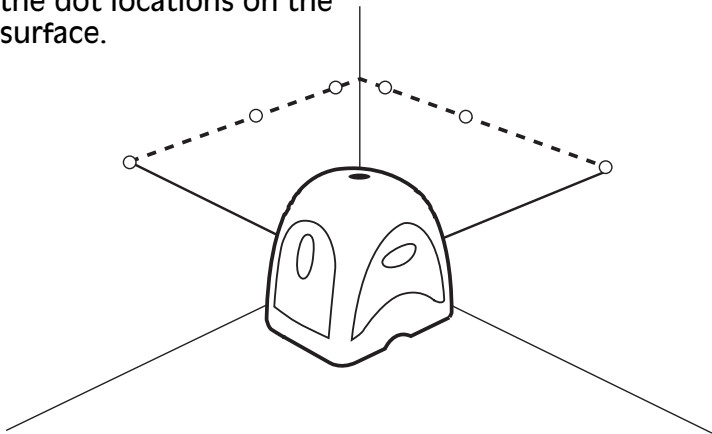
You can also square vertical surfaces to horizontal surfaces by using a plumb beam and a level beam.

LEVEL

Set the MP5 on a surface that is at a convenient height for marking a level reference plane on walls or other surfaces. Mark the laser dot's location. You can now turn the MP5 to move the laser dot to another location and continue marking. These marks can then be connected together with a straight edge to give you a level line.

Be careful not to change the height of the MP5 during the process or your level line will vary in height.

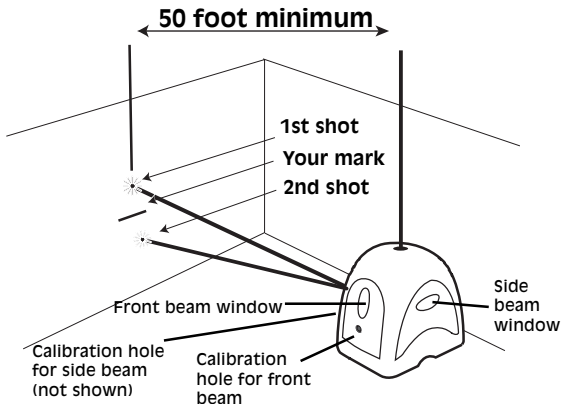
Rotate the MP5 and mark
the dot locations on the
surface.



CALIBRATION

The MP5 is a precision instrument and needs to be handled carefully. If the MP5 is treated roughly or accidentally dropped, it may need to be re-calibrated. If the need arises, calibration is easy to check and correct.

1. Put the MP5 on a stable, smooth surface and turn it on. Aim one of the side beams at a vertical surface that is at least 50 feet away from the MP5. Mark the beam's location on the wall.
2. Turn the MP5 180 ° so the other side beam is now aimed at the original spot. Mark this new spot. If the two spots are at the same height, then move on to step 4.
3. If the two spots are at different heights, mark a spot half way between the two. Remove the two calibration hole covers. Use the appropriate adjusting tool (screwdriver) to insert in the side calibration hole and turn the adjusting screw until the laser dot is on the new mark you made. (see "self calibration ports" on Fig.1, page 2)



3. Turn the MP5 so the front beam is pointed at the mark you made. If the laser dot is not lined up with the mark, insert the adjusting wrench in the front calibration hole and turn the adjusting screw until the laser dot is on the mark you made.
5. Start at step 1 again and re-check your adjustments. If the three laser dots stay on the same mark, then calibration is complete.
6. Push on the calibration port covers.

Your MP5 is calibrated and ready to go.

SPECIFICATIONS

Accuracy:	±1/4" at 100' (6mm at 30 meters)
Visibility Range:	Up to 100' (30 meters) (depending upon ambient lighting conditions)
Self-leveling Range:	
Side to Side-	±5 °
Front to Back-	±5°
Indicating lights	
Low Power-	Laser Blinks 4 Times Every 8 Seconds
Out Of Level-	Laser Blinks Rapidly
Power Requirements:	3 "AA" batteries (4.5VDC)
Laser Output:	5 Laser Diodes, 650nm at ≥.8-2.0mW Each Class II or Class IIIA
Weight:	1lb.3.2 OZ. Batteries Included (545 gms)
Universal Base	7.1 OZ. (202 gms.)

CARE AND USE

It will pay dividends to treat your precision instrument well.

- The MP5 is not waterproof. Do not allow the unit to get wet. Damage to internal circuits will result.
- Do not leave the MP5 out in direct sunlight or expose it to high temperatures. The housing and some internal parts are made from plastic and may become deformed at high temperatures.
- Do not store the MP5 in a cold environment. Moisture will form on interior parts when warming. This moisture could fog up laser windows and cause corrosion of internal circuit boards.
- Store your MP5 in its case when not in use.
- When working in dusty locations, some dirt will collect on the laser windows. Never scrub the dirt off, but rather dust it off with a clean soft rag. If further cleaning is required, use alcohol and a cotton swab.
- The MP5 produces laser radiation so extreme care should be used when this product is around small children.

WARRANTY

CST/Berger (seller) warrants the equipment of its manufacture to be free of defects in workmanship and material of a period of one year from the date of purchase. If within such one year period, the original purchaser (buyer) notifies seller, in writing, that the equipment purchased is not as warranted, and provides a bill of sale, receipt, or other proof as to the date of purchase, the seller will, at seller's option, adjust, repair or replace the whole or any part of the equipment which seller finds to be defective, provided:

- A)** The equipment is returned transportation prepaid to seller or its designated warranty service center.
- B)** The equipment is in original condition except for ordinary wear from normal usage.
- C)** The seller has received prompt written notification and substantiation that the equipment has been stored, operated and maintained in accordance with the recommendation of the manufacturer and has not been subjected to service by other than seller or an authorized service center.

Warranty service does not include cleaning or adjustments of the equipment unless required as a result of a workmanship or material defect of the equipment. If, upon examination of the equipment, the seller determines that such cleaning or adjusting

is required other than by reason of the warranty claim, seller shall notify buyer of the charges for same and after authorization is received from buyer, seller shall perform such additional service(s) on behalf of the buyer at its standard charges then in effect and the buyer shall be responsible for the payment of such charges in addition to the other charges and expenses referred to above. In all cases, buyer is responsible for transportation charges for return of goods from seller to buyer.

Seller's liability to buyer (whether in contract or in tort) arising hereunder as a result of any claimed defect or for any other cause, is hereby expressly limited to correcting the equipment upon the terms and conditions stated above. All liability hereunder shall terminate upon expiration of the applicable warranty period. In no event shall seller be liable for any loss, expense or damage direct, indirect, inconsequential, or special arising from the sale or use of the equipment delivered hereunder.

The foregoing warranty states that seller's full liability in connection with the purchase of this equipment, accessories and parts and is in lieu of and supersedes any and all other warranties and representations, if any, expressed or implied, including merchantability or fitness for purpose, and shall be void if repairs have been made or attempted by persons other than the seller's factory personnel or designated authorized repair center.

This warranty is not transferrable.