INSTRUCTION MANUAL

LASERMARK®
Wizard
Rotary Laser

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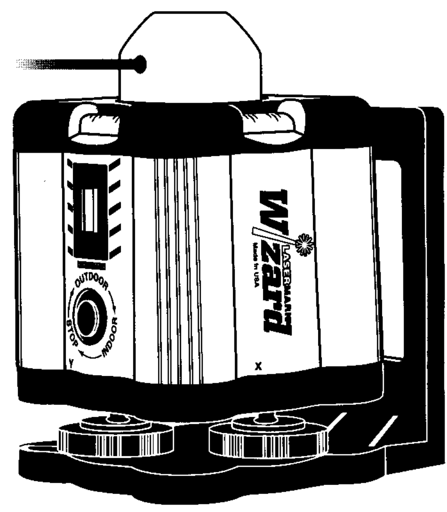
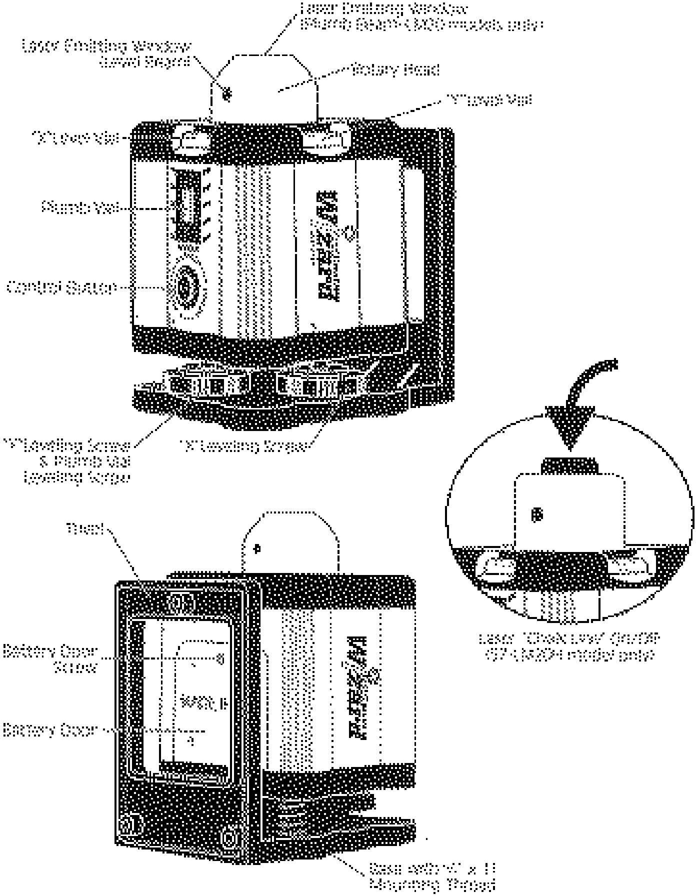


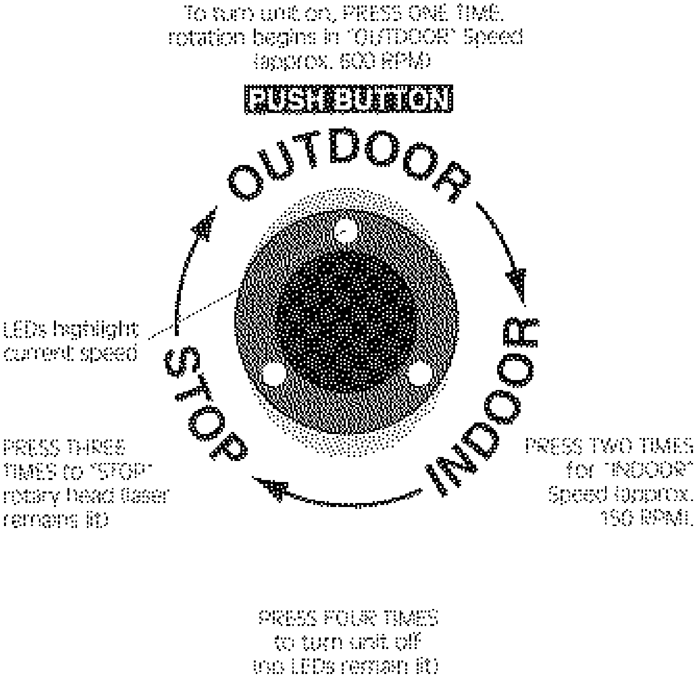
CST/berger

1. FEATURES



Rotary Head
'Y' Level Vial
'X' Level Vial
Plumb Vial
Control Button
Battery Door

2. CONTROL BUTTON OPERATION



3. 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 21 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.

4. OPERATION

4.1 Leveling

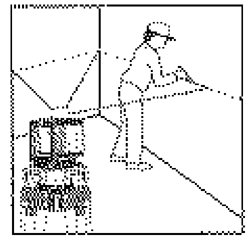


Fig. 1

1.
Set the LaserMark® Wizard on any smooth surface or mount to a 5/8" x 11 tripod.

2.
Use the leveling screws and level vials to level the instrument. Each leveling screw controls the vial opposite the screw (the front leveling screw controls the "Y" axis, and the side leveling screw controls the "X" axis).

NOTE: The more accurately the vial bubbles are centered, the more accurate the laser beam will be for referencing level.

3.
Turn power on and press the control button until you reach your desired speed, and mark the desired position (*Fig. 1*).

4.2 Plumbing

1.
On a flat surface, place the LaserMark® Wizard on its back using the built-in trivet (control button facing upwards).

2.
Level the instrument by viewing the plumb vial and turning the "Y" (front) leveling screw until the plumb vial bubble is centered (*Fig. 2*).

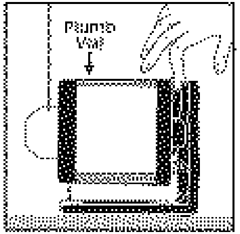


Fig. 2

3.
Turn power on and press the control button until you reach your desired speed, and mark the desired position.

4.3 Stopping the Rotary Head

It is possible to stop rotation of the head in order to manually direct the laser beam towards your target.

1.
Turn the unit on by pressing the control button.

2.
Press two more times until the "STOP" LED is lit. The rotary head will stop turning.

3.
Align the laser beam to your target by turning the head manually.

4.4 #57-LM20 models

In addition to the level beam, the LM20 emits a perpendicular plumb beam from the top of the rotary head, especially useful for checking 90° joints and edges, plus other alignment work.

Model **#57-LM20M** features a built-in laser "chalk line", an elongated horizontal reference line for the leveling or plumbing of shelves, cabinets, wall hangings, etc. The laser chalk line is accurate to within ¼" at 15 feet, with a maximum 15 foot working range.

To use the chalk line feature:

1.
Place the unit in "STOP" mode using the control button.

2.
While holding the base of the rotary head, grasp the top section of the rotary head and turn counterclockwise (*Fig. 3*).

3.
Mark the desired position. For a vertical chalk line, place and level the unit on its trivet.

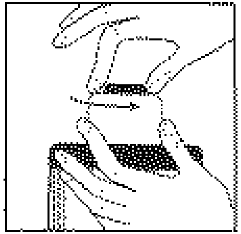


Fig. 3

The length of the reference line may be controlled by moving the Wizard closer to or away from the target. However, for greatest accuracy, use only the middle 10 feet (5 feet on either side of target center) of the line as your reference area.

NOTE: The laser dot and the "chalk line" feature are individual tools, calibrated independently of one another. To prevent possible error in measurement, these features should not be used together.

5. APPLICATIONS

With **WALL/CEILING MOUNT:** Install Drop Ceiling Tiles (*Fig. 4*)

INDOOR LEVELING/PLUMBING: Window Frames, Cabinets & Shelves, Doors & Windows, Erecting Walls & Partitions, Aligning 90° Joints & Edges, Floors, Tile Work (*Fig. 5*)

OUTDOOR LEVELING/PLUMBING: Porches & Decks, Fencing, Flag-poles, Batterboards, Landscaping (*Fig. 6*)

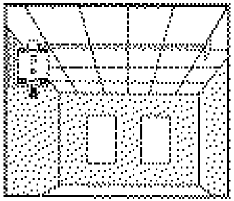
Fig. 4


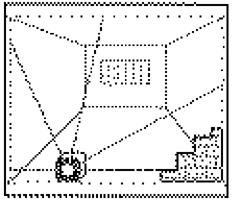
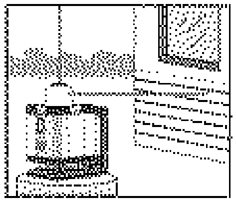
Fig. 5


Fig. 6


6. POWER

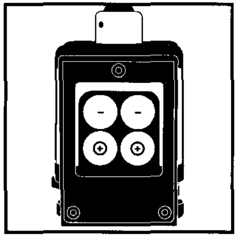


Fig. 7

Your LaserMark® Wizard will provide ±60 hours of intermittent use. If your Wizard fails to emit laser beams, but still has functioning LEDs and rotation, your batteries may be low; try replacing the batteries before contacting a service center. Replacement batteries must be **all new** batteries; alkalines provide the best performance. Replace the batteries as follows:

1:
Remove the battery cover by turning the battery cover screw counter-clockwise.

2:
Remove the old batteries and replace with four new "C" cell batteries as illustrated (***Fig. 7***), and replace the battery cover.

NOTE: Do not mix old and new batteries. Replace all batteries at the same time with new batteries. Remove batteries before storage of the instrument.

7. CALIBRATION

7.1 Checking Horizontal Rotation Error

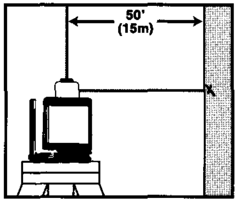


Fig. 8

1:
Mount and level the LaserMark® Wizard on a tripod and place approximately 50 feet (15m) away from a wall. Face the front (control button) to the wall (***Fig. 8***).

2:
Turn power on and place the unit in "STOP" mode.

3:
Manually rotate the laser beam onto the wall and mark as point A.

4:
Loosen the Wizard from the tripod and rotate the instrument 180° so that the back (battery side) now faces the wall. Secure and re-level the instrument.

5:
Again rotate the laser beam onto the wall and mark its position as point B.

No adjustment is necessary if the vertical difference between points A and B is $\frac{1}{8}$ inch (3mm) or less. Otherwise, adjust as follows.

7.1.1 Correcting Horizontal Rotation Error

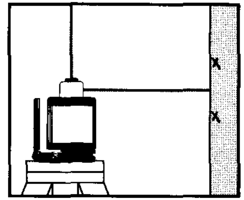


Fig. 9

1:
Adjust the "Y" leveling screw until the laser beam rests midway between A and B (***Fig. 9***). This will cause the "Y" vial bubble to shift from center. Clockwise rotation will raise the beam; counterclockwise rotation will lower the beam.

2:
Center the "Y" vial bubble by adjusting the vial leveling screws with a $\frac{1}{32}$" hex key.

3:
Recheck the accuracy of horizontal rotation by repeating steps 1-5 in section 7.1. Readjust as necessary.

Repeat the above checking and adjusting procedures using the left and right sides of instrument, adjusting the "X" leveling screw and "X" vial as necessary.

7.2 Checking Vertical Rotation Error

1:
Set the instrument on its trivet (control button upward) on a floor approximately 100 feet (30m) from the base of a wall. The right side of the instrument should face the wall. Level the unit by adjusting the "Y" leveling screw.

2:
Turn power on and place the unit in "STOP" mode.

3:
Mark a control point "A" on the wall (***Fig. 10***). Turn the rotary head

manually until the laser beam hits point A on the wall.

4:
Turn the rotary head to move the laser beam 30 feet (9m) upward on the wall and mark this as point B.

5:
Turn the instrument 180° and align the beam to point A, re-leveling if necessary.

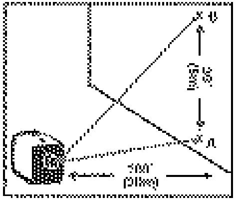


Fig. 10

6:
Turn the rotary head to move the laser beam to the same height as point B, and mark as point C (*Fig. 11*).

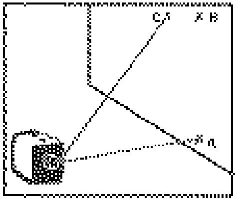


Fig. 11

No adjustment is necessary if the difference between points B and C is ⅛ inch (3mm) or less. Otherwise, adjust as follows.

7.2.1 Correcting Vertical Rotation Error

1:
Adjust the "Y" leveling screw until the laser beam rests midway between points B and C. This will cause the plumb vial bubble to shift from center.

2:
Center the plumb vial bubble by adjusting the vial leveling screws with a 5/64" hex key.

3:
Recheck the accuracy of vertical rotation by repeating steps 1-6 in section 7.2. Readjust as necessary.

8. MAINTENANCE

Always clean the instrument after use. Use a soft, dry cloth to remove any dirt or moisture from the instrument. Store the unit in its case when not in use.

Do not use benzene, paint thinner or other solvents to clean the instrument.

9. SPECIFICATIONS

Approximate Rotation Speed: 600 RPM–OUTDOOR; 150 RPM–INDOOR. When using optional detector, highest RPM mode ("OUTDOOR") is recommended

Accuracy: ¼" at 100 feet (6mm at 30m);
57-LM20H "CHALK LINE": ¼" at 15 feet (6mm at 4.5m)

Range: Up to 200 feet (60m) diameter interior, up to 800 feet (240m) diameter exterior with optional laser detector

Level & Plumb Vial Sensitivity: Level, 8 minutes; plumb, 15 minutes

Mounting Screw: ⅝" x 11 for standard tripods, dome or flat head

Weight: Under 3 lbs. (1.4kg) with batteries

Power: Four "C" cell batteries provide 180 hours of intermittent use

Specifications subject to change without notice.

10. WARRANTY

The LaserMark® Wizard Rotary Laser is warranted to the original purchaser to be free from defects in workmanship and material. CST Corporation will repair or replace any defective part which may develop under normal and proper use within a period of ONE YEAR from the date of purchase without charge of parts and labor, once delivered and shipped prepaid to CST together with proof of date and place of purchase. This warranty is not subject to misuse, abuse, assignment, or transfer. The exclusive remedy under any and all warrants and guarantees, expressed or implied, is limited to repair and/or replacement as provided herein, and CST shall not be liable for damages from loss or delay of equipment uses, consequential, or incidental damage.

Please fill out and return the attached warranty registration card.