

**—HITECHNIQUES LTD.**  
**01-4580725**

Fax: 01-4588296 Rathcoole, Co. Dublin  
E-Mail: [survey@iol.ie](mailto:survey@iol.ie)

**CST/berger**

CST Corporation  
450 S. CIPS Street  
Watseka, IL 60970 USA  
(815) 432-5237  
Toll Free US: (800) 435-1859  
FAX: (815) 432-5390

[www.cstsurvey.com](http://www.cstsurvey.com)  
[sales@cstsurvey.com](mailto:sales@cstsurvey.com)

Berger Instruments Division  
50 Messina Drive  
Braintree, MA 02184 USA  
(781) 848-7702  
Toll Free US: (800) 343-6853  
FAX: (781) 848-8022

[bergersales@cstsurvey.com](mailto:bergersales@cstsurvey.com)

Chicago Steel Tape

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Magna-Trak®

LaserMark®

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## INSTRUCTION MANUA

**LASERMARK®**  
**Gizmo**

**Gizmo II and III**  
**Laser Cross Levels**

**CST/berger**



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E-Mail: [survey@iol.ie](mailto:survey@iol.ie)

Thank you for purchasing the LaserMark® Gizmo. Please read this manual thoroughly before operation.

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## 1. LASERMARK FEATURES



## 2. LASER SAFETY

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

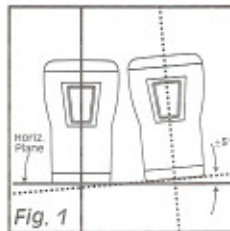
Do not stare into the laser beams. Do not disassemble the instrument or attempt to perform any internal servicing. Repair and servicing of this laser are to be performed only by CST or authorized service centers.

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.



## 3. OPERATION

- 1: Set the LaserMark® Gizmo (with or without mounting bracket) on a flat, smooth surface; this surface should be fairly level, as the self-leveling range of the instrument is within  $\pm 5^\circ$  (Fig. 1).
- 2: Turn the lasers on by pressing either one or both buttons on top of the unit. The red indicator lights show that the unit is "on".



If the laser lines do not appear, then the unit may have been placed on an uneven surface out of its self-leveling range. Bumping or tipping the unit out of level will also automatically shut off the lasers. Resume operation by moving the unit to a more level surface.

The use of optional laser glasses (CST #57-GLASSES) may aid in viewing the laser lines over longer distances or under bright light conditions.

3:

After use, press the button(s) again to shut the unit "off".

#### Using the Wall/Tripod Mounting Bracket

The LaserMark Gizmo may be placed within its bracket in order to mount the instrument onto a wall, tripod or LaserMark Laserpole (Cat. #58-LP12).

The holder has three screw eyes and can be attached to a wall or stud using screws or nails with a  $\pm \frac{3}{16}$ " (4-5mm) diameter.

The holder also has a  $\frac{5}{8}$ " x 11 mounting thread in order to connect it to a standard surveying-type tripod.

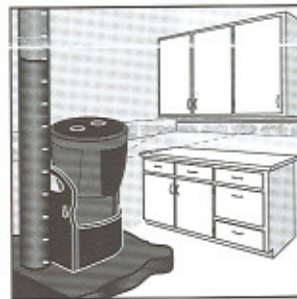
Make sure the instrument is positioned within its self-leveling range.

## 4. APPLICATIONS

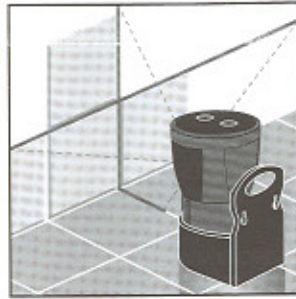
### USE FOR:

Interior Decorating  
Machinery Installation  
Floor & Wall Tiles  
Drop Ceiling Installation  
Wall Framing

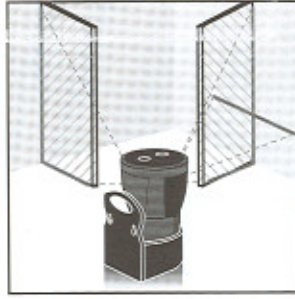
Aligning Wall Fixtures  
Wainscoting  
Aligning Cabinets and Shelves  
Grading  
AND MORE!



Gizmo II with level beam on  
(mounted on Laserpole)



Gizmo II with level & plumb beams  
on (or Gizmo III with laser cross on)



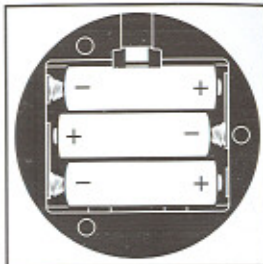
Gizmo III with laser cross and 90° /  
plumb reference beam on

## 5. POWER

Your LaserMark® Gizmo will provide approximately 15-25 hours of continuous use (variable with temperature and model) with three "AA" cell batteries. If your LaserMark emits dim laser beams, replace the batteries.

- 1:  
Remove the battery cover located within the base of the instrument.
- 2:  
Remove the old batteries and replace with three new "AA" cell batteries as illustrated (*Fig. 2*).
- 3:  
Snap the battery cover back into place.

**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.



*Fig. 2*



Please fill out and return the warranty registration card  
within 10 days of purchase to validate your warranty.

## WARRANTY REGISTRATION

Model Name/Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

County/State/Province Purchased: \_\_\_\_\_

Company Name: \_\_\_\_\_

Contact/Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_

State/Province: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone/Fax: \_\_\_\_\_

Dealer Name/Location: \_\_\_\_\_  
\_\_\_\_\_

What influenced you to purchase this  
equipment?

- |   |  |
|---|--|
| <input type="checkbox"/> Owned other<br>CST equipment | <input type="checkbox"/> National ad     |
| <input type="checkbox"/> Saw at trade show            | <input type="checkbox"/> Local dealer ad |
| <input type="checkbox"/> Recommended<br>by someone    | <input type="checkbox"/> Dealer          |
| <input type="checkbox"/> Other: _____                 |  |

Comments and  
Suggestions for Improvements:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CST Corporation  
P.O. Box 359  
Watseka, IL 60970-0359 USA

Place  
stamp  
here



## 6. TESTING ACCURACY OF INSTRUMENT

Periodically test the LaserMark Gizmo for accuracy by doing the following tests:

### Level Beam Accuracy (Instrument to target)

- 1:  
Put the instrument in its mounting bracket and set up the instrument centered between two walls approximately 16 ft. (5m) apart (*Fig. 3*).
- 2:  
Press both the horizontal and vertical plane buttons (or "Laser Cross" button only—Gizmo III) to project a laser cross on wall **A**. Mark point "**a<sub>1</sub>**" at the intersection of the beams. Turn the instrument 180° and repeat on wall **B**, marking point "**b<sub>1</sub>**" at the intersection of the beams.
- 3:  
Move the instrument to within 2 ft. (0.6m) of wall **A** and repeat step two, marking the intersections as "**a<sub>2</sub>**" and "**b<sub>2</sub>**" (*Fig. 4*).

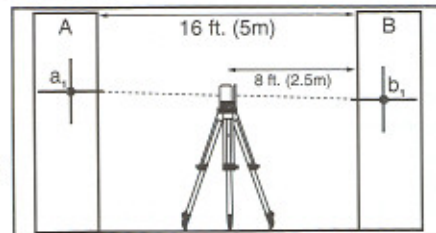


Fig. 3

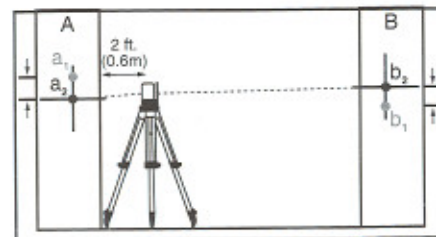


Fig. 4

Measure the distance between  $a_1$  and  $a_2$ , and  $b_1$  and  $b_2$ . Add these two numbers to get the total error in 16 ft. (5m):  $(a_1 \text{ to } a_2) + (b_1 \text{ to } b_2) = \text{ERROR}$

If the error is less than or equal to  $\frac{3}{32}$ " (2.4mm), the accuracy is within tolerance. Otherwise, contact CST or an authorized service center.

### Horizontal Beam Level (end to end)

- 1:  
Put the instrument in its mounting bracket and set up the instrument approximately 16 ft. (5m) from a wall.
- 2:  
Press both the horizontal and vertical plane buttons (or "Laser Cross" button only—Gizmo III) to project a laser cross on the wall. Mark point "A" at the intersection of the beams and point "M1" 8 ft. (2.5m) from point "A" on the horizontal beam (Fig. 5).

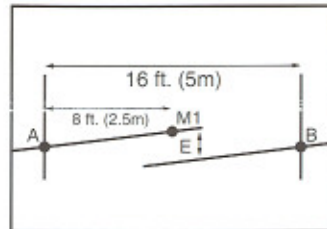


Fig. 5

- 3:  
Turn the instrument until the vertical beam has moved 16 ft. (5m), to point "B". Measure the distance "E". If "E" is less than or equal to  $\frac{7}{64}$ " (3mm), the accuracy is within tolerance. Otherwise, contact CST or an authorized service center.

### Vertical Beam Plumb (end to end)

For best results, mount onto a floor-to-ceiling leveling platform such as the LaserMark Laserpole (Cat. #58-LP12).

- 1:  
Put the instrument in its mounting bracket, attach to your leveling platform, and set up the instrument approximately 16 ft. (5m) from a wall. Lower the instrument as close as possible to the floor.
- 2:  
Press both the horizontal and vertical plane buttons (or "Laser Cross" button only—Gizmo III) to project a laser cross on the wall. Mark point "A" at the intersection of the beams and point "M1" 4 ft. (1.2m) from point "A" on the plumb beam (Fig. 6).
- 3:  
Raise the instrument until the vertical beam has moved 8 ft. (2.5m), to point "B". Measure the distance "E". If "E" is less than or equal to  $\frac{3}{64}$ " (1.2mm), the accuracy is within tolerance. Otherwise, contact CST or an authorized service center.

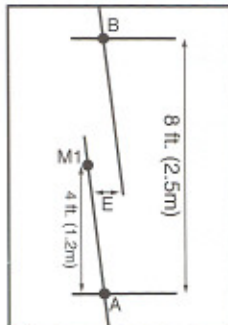


Fig. 6



### Checking 90° Reference Accuracy (Gizmo III Only)

You will need at least 16 square feet (1.5m<sup>2</sup>) of floor space and possibly an assistant for this check.

- 1: Place the instrument (without its mounting bracket) on a level floor, and turn on all beams.
- 2: Measure exactly 3 feet (.91m) out from the center of the instrument along the plumb beam of the laser cross.  
To easily reference the center of the instrument, you may start your measurement against the outer base of the instrument, measure out 3 feet, and subtract 1½" (3.81cm). Mark this point "A" (Fig. 7).
- 3: Measure exactly 4 feet (1.22m) out from the center of the instrument along the 90°/plumb reference beam, and mark this point "B".
- 4: Measure from point A to point B; this distance "C" should equal 5 feet (1.52m). You may wish to repeat steps 1 through 4 to recheck your measurements.

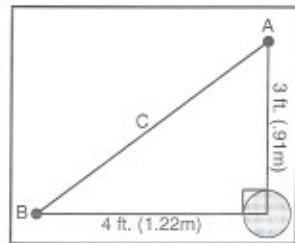


Fig. 7

## 7. CARE OF INSTRUMENT

Always clean the instrument after use. Use a soft, dry cloth to remove any dirt or moisture from the instrument. Do not use benzene, paint thinner, or other solvents to clean the instrument.

Keep the laser output window(s) clean by wiping gently with a lens cloth.

## 8. SPECIFICATIONS

### Accuracy:

Leveling: 1/8" at 30' (3mm at 9m)

Horizontal/Vertical Line (end to end): ±1/16" at 10' (±1.5mm at 3m)

90°/Plumb Reference (Vertical), Gizmo III: 1/8" at 30' (3mm at 9m)

Line Length: Approx. 45' at 30' (14m at 10m) target distance

Recommended Working Range: Up to 32' (10m),  
dependent upon illumination of work area

Laser Diode: 635nm. Gizmo II, Two diodes; Gizmo III, Three diodes

Fan Angle: 60°, Horizontal & Vertical

Self-Leveling Range: ±5°

Self-Leveling Speed: ≤3 seconds

**Weight:** Instrument & Mount, 1.8 lbs. (0.9kg); Carrying Case, 0.7 lbs. (0.3kg)

**Power:** Three (3) "AA" cell (Alkaline recommended)

**Battery Life:** Continuous use at 68°F (20°C), variable in colder temperatures:  
1 diode on, 25 hours; 2 diodes on, 20 hours; 3 diodes on (Gizmo III), 15 hours

*Specifications subject to change without notice.*

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## **9. WARRANTY**

This LaserMark® Gizmo Level 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 malfunction under normal and proper use within a period of 90 DAYS from the date of purchase without charge of parts and labor, once shipped and delivered 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 warranty registration card.**