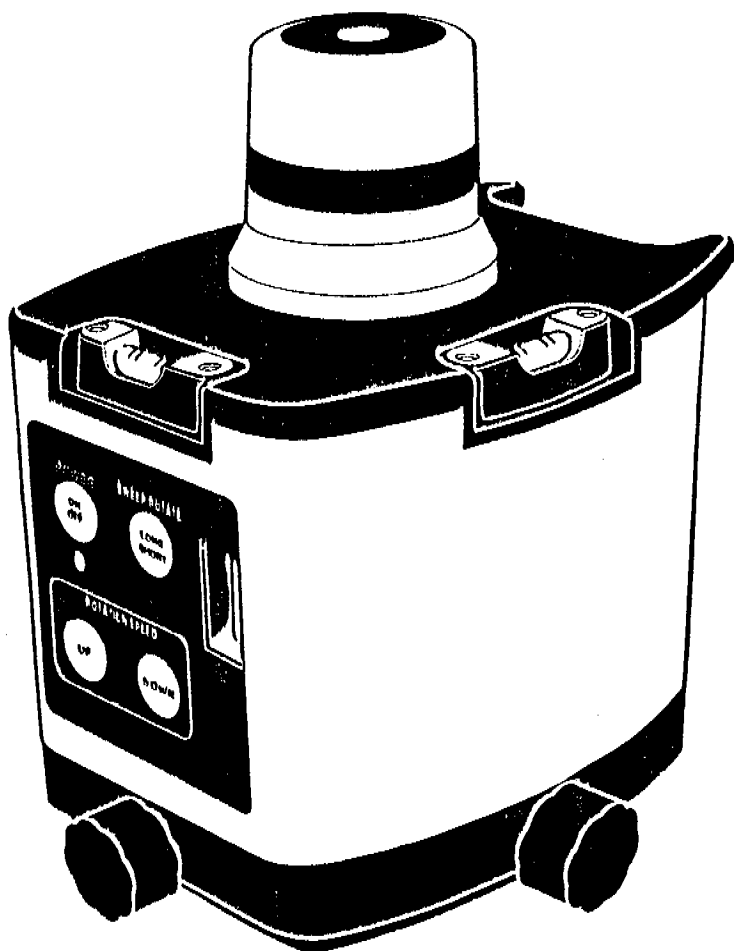


PENTAX

MLP-200 INSTRUCTION MANUAL



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FEATURES

Laser Emitting Window
Plumb Beam

Rotary Head

Laser Emitting Window
Level Beam

Level Vials

Sweep/Rotate Button
Sweep mode: use to create a laser "chalk line"
Rotate mode: use to rotate laser 360°

ON/OFF Power Button

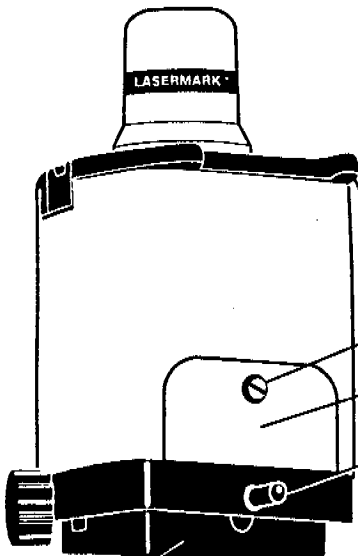
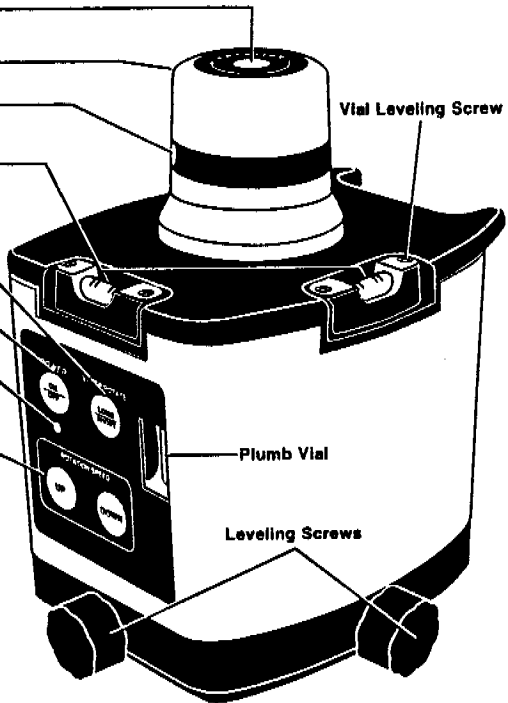
LED Power Indicator

Rotation Speed Adjustment Buttons
Use to speed up or slow down rotation of rotary head
(max. 250 RPM, min. 0 RPM)

Vial Leveling Screw

Plumb Vial

Leveling Screws



Built-in Trivet
for vertical applications

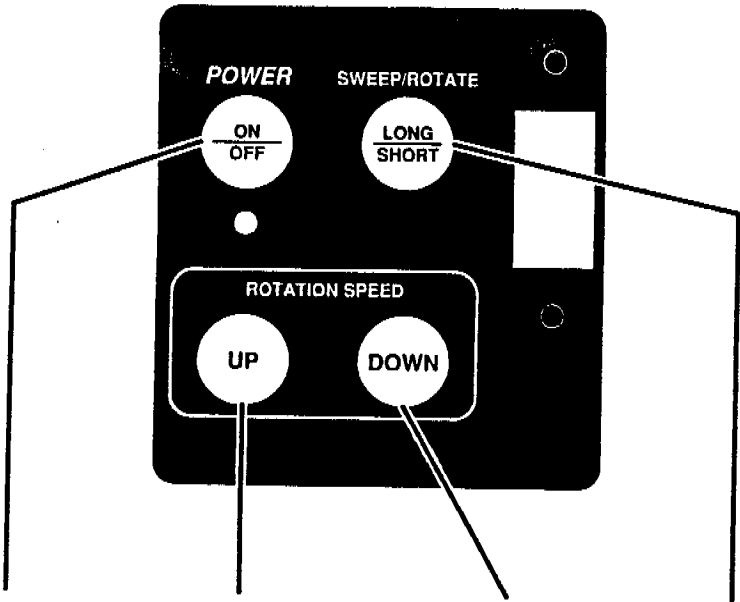
Battery Door
Screw

Battery Door

Adjustable
Trivet Peg

Instrument Base
Includes 5/8 x 11 tripod mount

CONTROLS



POWER:
Cycles between ON and OFF modes.

UP ROTATION SPEED:
Increases speed in rotate mode up to 250 rpm.

DOWN ROTATION SPEED:
Decreases speed in rotate mode down to 0 rpm.

SWEEP/ROTATE:
Cycles through short sweep, long sweep, and rotate modes. Head may be manually rotated during sweep mode to direct the level beam towards target.

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 Pentax 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.



HOW TO OPERATE Level Plane

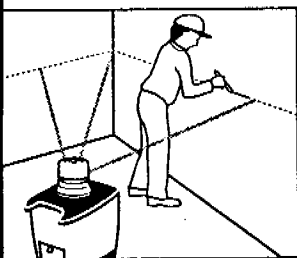


Fig. 1

1:
Set the MLP-200 on any smooth surface or mount to a standard 5/8x11 tripod. Use the leveling screws and level vials to level the instrument. Each leveling screw controls the level vial directly above it. The vial bubble will move in whatever direction the leveling screw below it is turned (for example: a clockwise turn will move the bubble to the right).

Note:
Accuracy is directly related to how well the vial bubbles are centered.

2:
Press the POWER button.

3:
Use the sweep/rotate and rotation speed buttons to adjust the rotation to suit your purpose

4:
Mark the desired position (Fig. 1)

HOW TO OPERATE

Vertical Plane

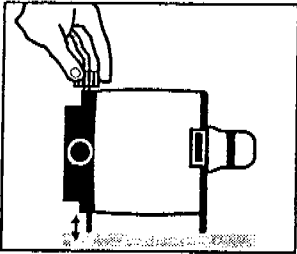


Fig. 2

- 1:**
On a flat surface, place the MLP-200, control panel up, on the built-in trivet.
- 2:**
Level the instrument by viewing the plumb vial and turning the front (control panel side) leveling screw; this screw adjusts the height of the trivet peg (Fig. 2).
Turning the leveling screw clockwise will shorten the trivet peg and move the plumb vial bubble towards the top of the instrument. A counterclockwise turn will move the bubble towards the base of the instrument.

- 3:**
Turn the power ON.

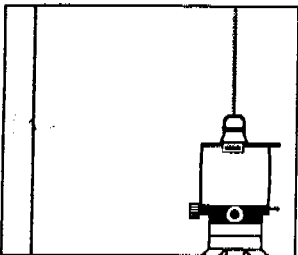
- 4:**
Press the "down" rotation speed button to stop the rotation of the head.

- 5:**
Align the laser beam to your control point by turning the head manually.

- 6:**
Use the sweep/rotate and rotation speed buttons to adjust the rotation to suit your purpose.

HOW TO OPERATE

Plumb Beam



- 1:**
Set the MLP-200 on any smooth surface or mount to a standard 5/8x11 tripod. Use the leveling screws and level vials to level the instrument. Each leveling screw controls the level vial directly above it. The vial bubble will move in whatever direction the leveling screw below it is turned (for example: a clockwise turn will move the bubble to the right).

- 2:**
Press the POWER button.

- 3:**
Mark the desired position

OPERATION EXAMPLES

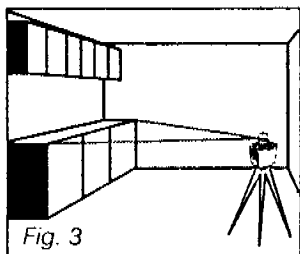


Fig. 3

LEVELING / ALIGNING:

Window Frames, Cabinets & Shelves, Doors & Windows, Porches & Decks, Floors, Batterboards, Tile Work, Landscaping (Fig. 3)

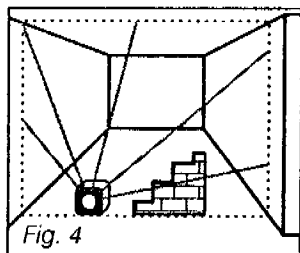


Fig. 4

PLUMBING:

Erecting Walls & Partitions, Aligning 90° Joints & Edges, Fencing, Flagpoles (Fig. 4)

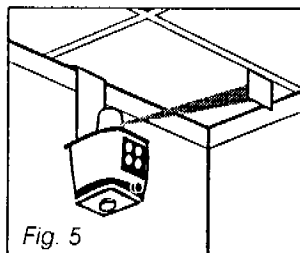


Fig. 5

CEILING MOUNT BRACKET:

Install Drop Ceiling Tiles (Fig. 5)

BATTERY REPLACE

When your MLP-200 fails to rotate at a steady speed or emits dim laser beams, replace the batteries.

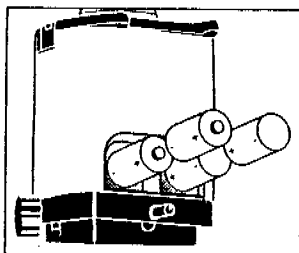


Fig. 6

1:
Remove the battery cover by turning the battery cover screw counterclockwise.

2:
Remove the old batteries and replace with four new "C" cell Alkaline batteries (Fig. 6).

3:
Replace the battery cover. **NOTE:** Do not mix old and new batteries.

CHECK & ADJUST

Horizontal Plane

CHECKING -

1:
Mount the MLP-200 on a tripod and place approximately 50 feet (15m) away from a wall. Face the front (control panel) to the wall (Fig. 7).

2:
Level the instrument using the level vials and leveling screws, then power ON.

3:
Mark the position of the laser beam on the wall.

4:
Rotate the instrument 180° so that the back (battery side) now faces the wall.

5:
Level the instrument again.

6:
Again mark the position of the laser beam on the wall. No adjustment is necessary if the vertical difference between the first mark and second mark is less than 1/8 inch (3mm).

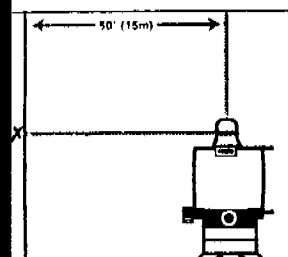


Fig. 7

ADJUSTING -

1:
Adjust the leveling screw on the side until the laser beam rests midway between the two marks (Fig. 8). Clockwise rotation will raise the beam; counterclockwise rotation will lower the beam.
Note: This will cause the front vial bubble to shift from center. Relevel it and repeat 1.

2:
Center the side vial bubble by adjusting the vial screws with a 3/32" hex key.

3:
Recheck by repeating steps 1-6
Repeat the above checking and adjust procedure using the sides of the instrument and adjusting the front vial.

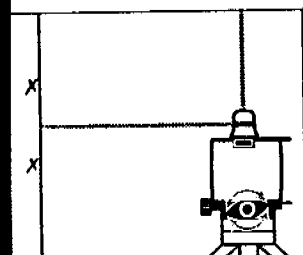


Fig. 8

CHECK Conical Error

Horizontal plane must be in adjustment before proceeding with this section.

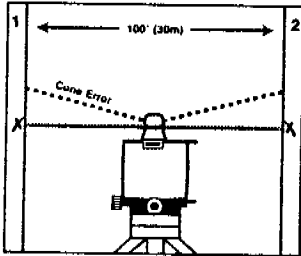


Fig. 10

1:
Mount the MLP-200 on a tripod located midpoint between two walls approximately 100 feet (30m) from each other. Face the front side to wall 1, and the back side to wall 2 (Fig. 10).

2:
Level the instrument using the level vials and leveling screws, then power ON.

3:
Mark the position of the laser beam on walls 1 (point 1A) and 2 (point 2A) as a horizontal line.

4:
Reposition the MLP-200 3-6 feet (1-2m) away from wall 1 with the front side still facing wall 1.

5:
Repeat 2: and 3: marking points 1B and 2B. Measure, with a ruler, 1A to 1B and 2A to 2B. Compare the 1A/1B measurement to the 2A/2B measurement.

If the difference exceeds 5/32", contact Pentax or an authorized service center.

CHECK & ADJUST Vertical Plane

CHECKING -

1:
Set the instrument on the trivet (control panel facing upward) on a floor approximately 100 feet (30m) from the base of a wall. One side of the instrument should face the wall. Level the instrument by adjusting the front leveling screw (trivet peg).

2:
Turn power ON. Press the "down" rotation speed button to stop the rotation of the head.

3:
Turn the head manually until the laser beam hits point A on the wall. Mark a control point "A" on the wall as illustrated (Fig. 11).

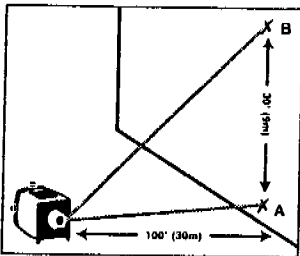


Fig. 11

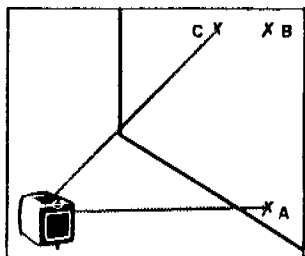


Fig. 12

4:
Manually turn the 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.

6:
Manually turn the head to move the laser beam to the same height as point B and mark as point C (Fig. 12).

No adjustment is necessary if the difference between points B and C is less than 1/8 inch (3mm). Otherwise, adjust as follows.

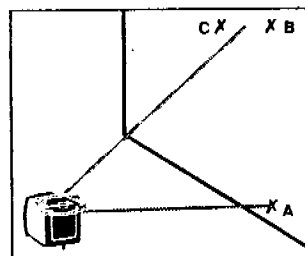


Fig. 13

ADJUSTING -

1:
Adjust the trivet peg by turning the front leveling screw until the laser beam rests midway between points B and C (Fig. 13). This will cause the plumb vial to shift from center.

2:
Center the plumb vial bubble by adjusting the vial screws with a 3/32" hex key.

3:
Recheck by repeating 1-6 in the "CHECKING" section. Readjust if necessary.

INSTRUMENT CARE

Always clean the instrument after use. Use a soft, dry cloth to remove any dirt or moisture from the instrument.

Do not use any type of solvents.

SPECS

Accuracy:

¼" at 100 feet (5mm at 30m)

Range:

Up to 200 feet (60m) diameter interior

800 feet (250m) diameter exterior with detector

Vial Sensitivity:

Two minutes

Mounting Screw:

5/8x11 - Flat or Dome tripod

Weight w/batteries:

3.75 lbs. (1.7kg)

Power:

Four "C" cell Alkaline batteries

Battery Life:

125 hrs. continuous - spot beam

40 hrs. continuous - fast rotation

Rotation Speed:

0-250 RPM variable

Specifications subject to change without notice
