

Maintenance

- Storage Guidelines: Prolonged storage of the instrument in high-temperature or high-humidity environments is strictly prohibited to prevent damage. When not in use for extended periods, remove the batteries and store the instrument in its provided cover in a cool, dry location to ensure long-term functionality.
- Cleaning Procedures: Maintain the instrument's surface cleanliness by wiping away dust with a damp, soft cloth. Avoid using corrosive cleaning agents to prevent surface degradation. Clean the laser window and focusing lens using methods suitable for optical components to preserve measurement accuracy.

Specific Declarations:

Our company bears no responsibility for outcomes arising from the use of this product's output as direct or indirect evidence. We reserve the right to modify product design and specifications without prior notice, ensuring adaptability to technological advancements and user needs

Particulars Furnished

The company accepts no legal responsibility for any consequences arising from the use of this product. The company reserves the right to modify product design or manual content at any time without prior notice.

Part Number : 7603201

GTIN: 6298043998277



MarMonix[®]

MLD 60 Laser Distance Meter

Instruction Manual



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Introduction

This Laser Distance Meter employs advanced laser technology to deliver precise distance measurements with exceptional accuracy. Its lightweight, compact design ensures portability, while the intuitive operation enables rapid, reliable results, optimizing efficiency in professional applications.

Safety Precautions

Prior to initial use of the Laser Distance Meter, thoroughly review the safety regulations and operational guidelines to ensure proper handling.

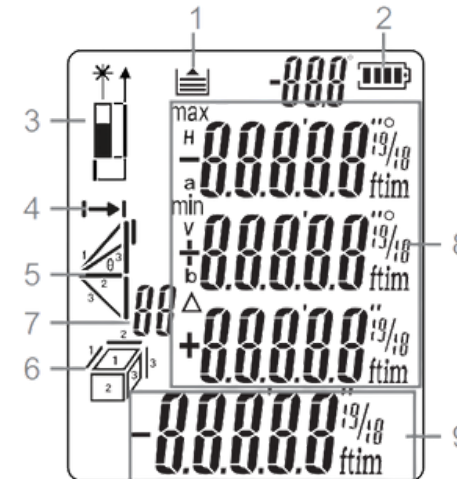
1. Unauthorized disassembly or repair of the instrument is strictly prohibited, as is any modification to the laser emitter's performance, to maintain safety and functionality. Store the device securely, out of reach of children, to prevent misuse by unauthorized individuals.
2. Directing the laser at the eyes or other body parts of yourself or others is strictly forbidden due to the risk of injury. Avoid aiming the laser at highly reflective surfaces to prevent unintended reflections.
3. The instrument's electromagnetic emissions may interfere with sensitive equipment. Refrain from using it near aircraft, medical devices, or in flammable or explosive environments to ensure safety and compliance.

Features

- Single and Continuous Measurement Modes
- Area, Volume, and Pythagorean Calculations
- Cumulative and Subtractive Measurement
- Maximum/Minimum Value Display in Continuous Mode
- Measurement Reference Selection
- Unit Switching Capability
- Integrated Spirit Level
- Data Storage Capacity
- Data Management Functions

LCD Display

1. Data Storage
2. Battery Level
3. Laser/Measurement Reference Indicator
4. Continuous Measurement Mode
5. Pythagorean Measurement Mode
6. Area/Volume Measurement Mode
7. Data Serial Number
8. Secondary Display Area:
 - (1) Displays recorded data during single measurement
 - (2) Displays maximum/minimum values during continuous measurement
 - (3) Displays calculated values for cumulative/subtractive/area/volume/Pythagorean calculations
9. Main Display Area:
 - (1) Displays the last recorded data during single measurement
 - (2) Displays the current measurement data during continuous measurement
 - (3) Displays the calculation results for cumulative/subtractive/area/volume/Pythagorean calculations



Component Introduction

1. Display Screen
2. Power On/Record Data Button
3. Cumulative/Next Data Button
4. Area/Volume/Pythagorean Measurement Mode Switch Button
5. Subtractive/Previous Data Button
6. Measurement Reference Selection/Sound Button
7. Power Off/Data Delete Button
8. Unit Switch/Data View Button
9. Spirit Level
10. Buzzer
11. Battery Compartment
12. Laser Emitter



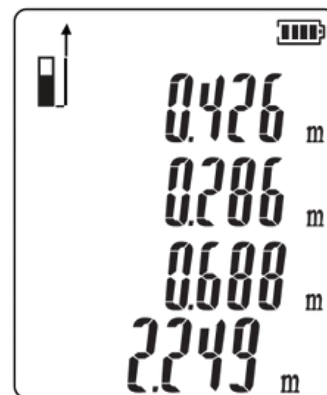
Operation Instructions

1. Power On/Off

- (1) Power On: Initiate operation by short-pressing the READ button. If activation fails, replace batteries and retry to ensure reliable startup.
- (2) Power Off: Long-press the OFF/CLEAR button to deactivate the device from any interface, providing user-controlled shutdown
- (3) Auto Power Off: The device automatically shuts down after approximately 180 seconds of inactivity (no button inputs), optimizing energy efficiency.

2. Single/Continuous Measurement

- (1) Single Measurement: Upon activation, the device defaults to single measurement mode, with the LCD displaying [----]. Short-press the READ button to capture the first data point; subsequent short presses record additional points. Clear the current data point by short-pressing the OFF/CLEAR button; repeat to clear the previous data point, ensuring precise data management.
- (2) Continuous Measurement: After powering on, long-press the READ button until the LCD displays "I→I", indicating entry into continuous measurement mode. Release the button and maneuver the device to initiate measurements. The LCD displays real-time maximum and minimum values during operation. Short-press the READ button to pause continuous measurement; short-press the OFF/CLEAR button to exit, providing seamless control and accurate tracking of dynamic measurements.



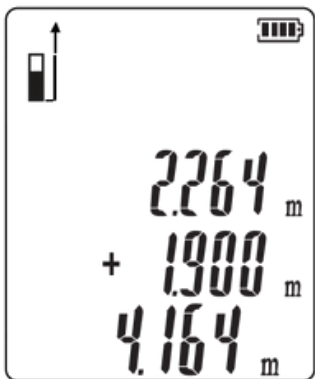
Single Measurement



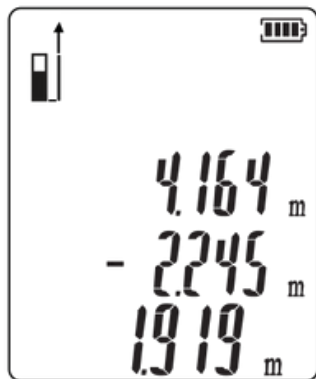
Continuous Measurement

3. Cumulative/Subtractive Measurement

After powering on, short-press the + button (or - button) to enter addition (or subtraction) mode, indicated by [+] (or [-]) on the LCD's secondary display. Short-press the READ button to capture the first data point; a subsequent short press records the second data point, with the main display showing the cumulative (or subtractive) result. Additional short presses of the READ button continue calculations based on the prior result. Switch between addition and subtraction by short-pressing the - button (or + button) as needed. Note: After capturing the first data point, short-press the OFF/CLEAR button to clear it. After two data points, short-press the OFF/CLEAR button twice to clear all data and revert to single measurement mode, ensuring precise control and efficient data reset.



Cumulative Measurement



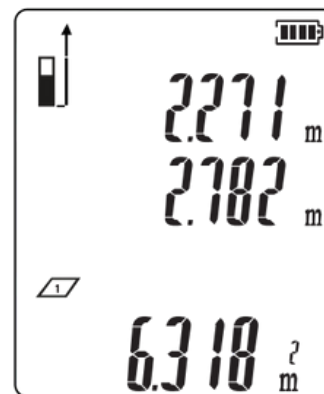
Subtractive Measurement

4. Area/Volume/Pythagorean Measurement

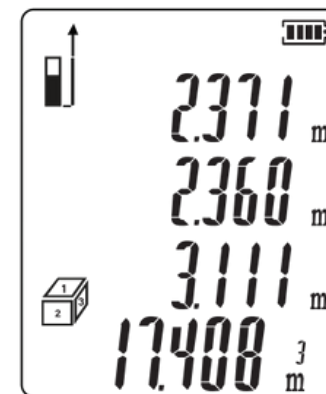
After powering on, short-press the " [] " mode selection button to cycle through the following modes sequentially: Area → Volume → Pythagorean 1 → Pythagorean 2 → Pythagorean 3. In each mode, short-press the READ button to capture data for the currently flashing side. Short-press the OFF/CLEAR button to clear recorded data; if no data is present, this action reverts to single measurement mode, ensuring seamless mode transitions and data control.

(1) Area Measurement: When the LCD displays " [] ", direct the laser at the target. Short-press the READ button to measure two sides consecutively, enabling accurate area computation.

(2) Volume Measurement: When the LCD displays " [] ", aim the laser at the target. Short-press the READ button to measure three sides consecutively, delivering precise volume calculations.



Area Measurement



Volume Measurement

(3) Pythagorean Measurement 1:

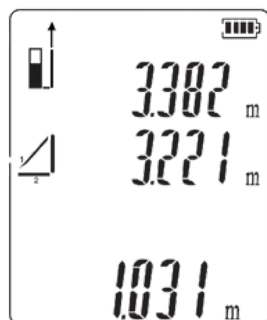
When the LCD displays " [] ", the device enters Pythagorean Measurement 1 mode. Position the rangefinder horizontally, maintaining a consistent reference plane. Aim the laser at the upper end of the target and short-press the READ button to measure the hypotenuse of the right triangle. Without altering the reference plane, aim the laser at the lower end of the target and short-press the READ button to measure the right-angled side. The LCD's main display will then show the calculated height of the target, ensuring precise indirect height measurement.

(4) Pythagorean Measurement 2:

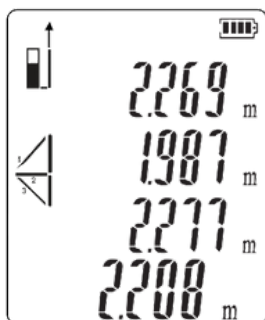
When the LCD displays " [] ", the device enters Pythagorean Measurement 2 mode. Position the rangefinder horizontally, maintaining a consistent reference plane. Aim the laser at the upper end of the target and short-press the READ button to measure one side of the hypotenuse of the right triangle. Next, keeping the reference plane unchanged, aim the laser at the middle of the target and short-press the READ button to measure the right-angled side. Then, with the reference plane still unchanged, aim the laser at the lower end of the target and short-press the READ button to measure the other hypotenuse segment. The LCD's main display will then show the calculated height of the target, ensuring accurate indirect height measurement.

(5) Pythagorean Measurement 3:

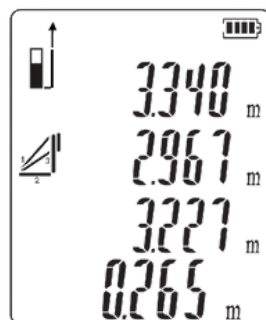
When the LCD displays "[4]", the device enters Pythagorean Measurement 3 mode. Position the rangefinder horizontally, maintaining a consistent reference plane. Aim the laser at the upper end of the target and short-press the READ button to measure the hypotenuse of the primary right triangle. Next, keeping the reference plane unchanged, aim the laser at the lower end of the target and short-press the READ button to measure the right-angled side. Then, with the reference plane still unchanged, aim the laser at the middle of the target and short-press the READ button to measure the hypotenuse of the smaller right triangle. The LCD's main display will then show the calculated height of the target at the specified angle, ensuring precise indirect height measurement.



Pythagorean
Measurement 1



Pythagorean
Measurement 2



Pythagorean
Measurement 3

5.Measurement Reference Switching

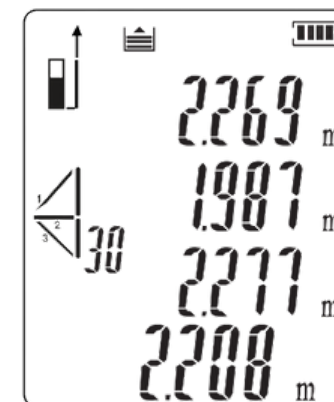
After powering on, short-press the "[4]" designated button to toggle between measurement references. When the LCD displays "[4]", the rear-end reference is active, incorporating the device's body length into the measurement result. When the LCD displays "[5]", the front-end reference is selected, excluding the device's body length from the measurement result, ensuring precise reference customization for accurate measurements.

6.Buzzer On/Off

Control Upon powering on, the buzzer is enabled by default. Long-press the "[4]" designated button to deactivate the buzzer. To reactivate, long-press the button again or power off and restart the device, ensuring flexible audio feedback management for user convenience.

7.Data Reading and Deletion

In any measurement mode, short-press the UNIT button to access stored data. Navigate through entries by short-pressing the + button for the next entry or the - button for the previous entry. Short-press the OFF/CLEAR button to delete the current data entry. The device supports storage of up to 30 data entries; when exceeded, the earliest entry is automatically overwritten, ensuring efficient data management and retrieval.



Data Reading

8.Unit Setting

Upon powering on, the device defaults to single measurement mode with meters (m) as the unit. After selecting the desired measurement mode, long-press the UNIT button to cycle through available units, enabling precise adaptation to user or project requirements.

- (1) Units for Single, Continuous, Addition, Subtraction, and Pythagorean Measurements: Toggle between meters [m], feet [ft], inches [in], and feet-inches [---'----"], ensuring versatile linear measurement options.
- (2) Units for Area Measurement: Select between meters [m] or feet [ft], with results displayed in square meters [m²] or square feet [ft²], facilitating accurate area calculations.
- (3) Units for Volume Measurement: Choose between meters [m] or feet [ft], with results shown in cubic meters [m³] or cubic feet [ft³], supporting precise volume computations.

Calibration Procedure

- (1) Identify a known standard distance and power on the device to measure it, establishing a baseline for accuracy.
- (2) While the device is powered off, long-press the "  " READ button and the designated button simultaneously to access the manual calibration interface. Short-press the + button or - button to adjust the distance difference, ensuring precise alignment with the standard.
- (3) Short-press the READ button to save the adjustments and complete the calibration, securing accurate measurement performance.

Note:

In the calibration interface, the unit for plus/minus adjustments is millimeters (mm), ensuring precise fine-tuning. For instance, if the standard distance is 0.1 m and the measured distance upon powering on is 0.110 m, enter calibration mode and press the - button to adjust the value to -10.000 mm, correcting the 10 mm overmeasurement. Conversely, if the measured distance is 0.091 m against a 0.1 m standard, enter calibration mode and press the + button to adjust the value to +9.000 mm, compensating for the 9 mm undermeasurement, thus ensuring accurate calibration.

Prompt Messages

Message	Cause	Solution
Err10	Low battery voltage	Replace the batteries
Err15	Out of range	Please use within the specified range
Err16	Poor measurement conditions	Change the measurement conditions, such as increasing the reflectivity of the object, reducing ambient light, and decreasing the distance to the measured object
Err26	Out of display range or Pythagorean error	Please use within the specified range or ensure that the hypotenuse is longer than the right - angled side

Technical Parameters

Measuring range (front - end reference)	60M:0.05~60M 80M:0.05~80M 100M:0.05~100M 120M:0.05~120M
Measurement accuracy	$\pm 2\text{mm} \pm 100 \times 10^{-6} \times D$ D is the measured distance, and the unit is mm.
Laser class	II
Laser type	490nm~511nm, <1mW
Automatic laser shutdown	Approximately 30 seconds of inactivity
Auto power off	Approximately 180 seconds of inactivity
Data Storage	30
Storage temperature	-20~60°C
Storage humidity	85%RH
Operating temperature	0~40°C
Battery	1.5V AAA batteries *3
Size	110*51.3*26.5mm
Weight	90.2g

Measurement Accuracy in Harsh Environments In challenging conditions—such as intense sunlight, significant ambient temperature fluctuations, low reflectivity of the target surface, or insufficient battery power—measurement results may exhibit substantial errors. To ensure accuracy under these circumstances, employ the instrument alongside a target reflector to enhance signal strength and improve measurement reliability.