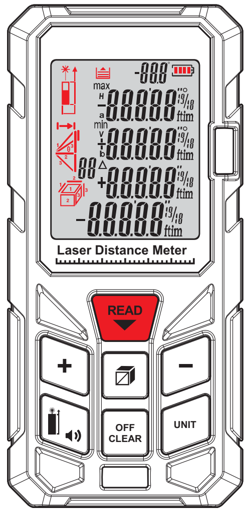
MarMonix

MLD 100

Laser Distance Meter

User Manual



- 60M
- 100M
- 80M
- 120M

Version:7603201 EN-00

MarMonix

Introduction

This Laser Distance Meter is an instrument that accurately measures the distance to a target using laser technology. It features light weight, small size, simple operation, high speed, and high accuracy.

Safety Precautions

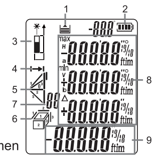
Before using the instrument for the first time, please carefully read the safety regulations and operation instructions.

1. Do not open or repair the instrument by any means on your own. It is strictly prohibited to illegally modify or change the performance of the instrument's laser emitter. Please keep the instrument properly and do not place it where children can reach it to avoid use by unauthorized persons.
2. It is strictly prohibited to use the instrument's laser to irradiate your own or others' eyes and other parts of the body. It is also prohibited to irradiate the laser on the surface of highly reflective objects.
3. The electromagnetic radiation of the instrument may interfere with other devices and equipment. Please do not use this instrument near aircraft or medical equipment, and do not use it in flammable or explosive environments.

Features

1. Single/Continuous Measurement
2. Area/Volume/Pythagorean Calculation Measurement
3. Cumulative/Subtractive Calculation Measurement
4. Display Maximum/Minimum Values during Continuous Measurement
5. Measurement Reference Selection
6. Unit Switching
7. Built-in Spirit Level
8. Data Storage: Up to 30 Groups
9. Data Viewing/Deletion

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:
9. Displays recorded data during single measuremen
10. Displays maximum/minimum values during continuous measurement
11. Displays calculated values for cumulative/subtractive/area/volume/ Pythagorean calculations
12. 9. Main Display Area:
13. Displays the last recorded data during single measurement
14. Displays the current measurement data during continuous measurement
15. 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
5. Measurement Mode Switch Button 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:

Short-press the READ button to turn on the device. If it fails to power on, replace the batteries and try again.

(1) Power Off:

Long-press the OFF/CLEAR button to turn off the device in any interface.

(2) Auto Power Off:

The device will automatically power off after about 180 seconds of inactivity (no button presses) after powering on.

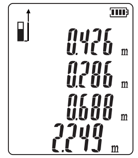
(3) Single/Continuous Measurement

(4) Single Measurement

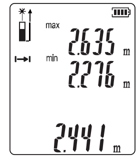
After powering on, it defaults to single measurement mode, and the LCD displays [----]. Short-press the READ button to record the first data point. Short-press it again to record the second data point... Short-press the OFF/CLEAR button to clear the current data, and short-press it again to clear the previous data point.

(5) Continuous Measurement

After powering on, long-press the READ button. When the LCD displays [ ], it indicates that the device has entered continuous measurement mode. Release the button and move the instrument to start measuring. During the measurement, the maximum and minimum values are displayed.During the measurement, the maximum and minimum values are displayed. Short-press the READ button to pause continuous measurement, and short-press the OFF/CLEAR button to exit continuous measurement.



Single Measurement



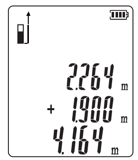
Continuous Measurement

3. Cumulative/Subtractive Measurement

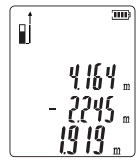
After powering on, short-press the + button (or - button). The secondary display area of the LCD will show [+] (or [-]), indicating that the device has entered addition (or subtraction) measurement mode. Short-press the READ button to record the first data point. Short-press it again to record the second data point, and the main display area of the LCD will show the cumulative (or subtractive) result. At this time, short-pressing the READ button again will continue the cumulative (or subtractive) calculation based on the previous result. You can also short-press the - button (or + button) to switch the calculation method.

Note:

After recording the first data point, short-press the OFF/CLEAR button to clear the data. After recording two data points, short-press the OFF/CLEAR button twice to clear the data and return to single measurement mode.



Cumulative Measurement



Subtractive Measurement

1. Area/Volume/Pythagorean Measurement

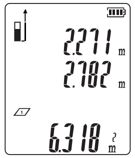
After powering on, short-press the [ ] button to cycle through the following measurement modes in sequence: area - volume - Pythagorean measurement 1 - Pythagorean measurement 2 - Pythagorean measurement 3. At this time, short-press the READ button to record the data of the flashing side. Short-press the OFF/CLEAR button to clear the data (if there is no data, short-press the OFF/CLEAR button to return to single measurement mode).

2. Area Measurement:

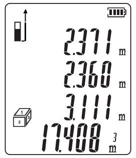
When the LCD displays [ ], aim the laser at the target to be measured. Short-press the READ button to measure two sides of the target respectively for area calculation.

3. Volume Measurement:

When the LCD displays [ ], aim the laser at the target to be measured. Short-press the READ button to measure three sides of the target respectively for volume calculation.



Area Measurement



Volume Measurement

(1) Pythagorean Measurement 1:

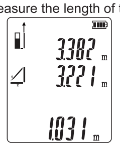
When the LCD displays [ ], enter Pythagorean measurement 1 mode. Place the rangefinder in a horizontal position and keep the reference plane unchanged. Aim the laser at the upper end of the target to be measured and short-press the **READ** button to measure the length of the hypotenuse of the right triangle. Then, keep the reference plane unchanged, aim the laser at the lower end of the target, and short-press the **READ** button to measure the length of the right-angled side. The main display area of the LCD will show the height of the target.

(2) Pythagorean Measurement 2:

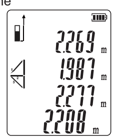
When the LCD displays [ ], enter Pythagorean measurement 2 mode. Place the rangefinder in a horizontal position and keep the reference plane unchanged. Aim the laser at the upper end of the target to be measured and short-press the **READ** button to measure one side of the hypotenuse of the right triangle. Then, keep the reference plane unchanged, aim the laser at the middle of the target, and short-press the **READ** button to measure the length of the right-angled side. Next, keep the reference plane unchanged, aim the laser at the lower end of the target, and short-press the **READ** button to measure the length of the hypotenuse. The main display area of the LCD will show the height of the target.

(3) Pythagorean Measurement 3:

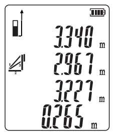
When the LCD displays [ ], enter Pythagorean measurement 3 mode. Place the rangefinder in a horizontal position and keep the reference plane unchanged. Aim the laser at the upper end of the target to be measured and short-press the **READ** button to measure the length of the hypotenuse of the right triangle. Then, keep the reference plane unchanged, aim the laser at the lower end of the target, and short-press the READ button to measure the length of the right-angled side. Next, keep the reference plane unchanged, aim the laser at the middle of the target, and short-press the READ button to measure the length of the



Pythagorean Measurement 1



Pythagorean Measurement 2



Pythagorean Measurement 3

hypotenuse of the small right triangle. The main display area of the LCD will show the height of the target at the angle.

1. Measurement Reference Switching

After powering on, short-press the button to switch the measurement reference. When the LCD displays [ ], it indicates the rear-end reference (i.e., the measurement result includes the length of the device body). When the LCD displays [ ], it indicates the front-end reference (i.e., the measurement result does not include the length of the device body).

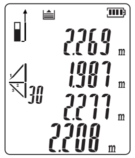
1. Buzzer On/Off

The buzzer is turned on by default after powering on. Long-press the button to turn off the buzzer. Long-press it again or power off and restart the device to turn on the buzzer.

1. Data Reading/Deletion

In any measurement mode, short-press the UNIT button to read the data. Short-press the + button or - button to view the previous/next data entry. Short-press the OFF/CLEAR button to clear the current data entry.

This device can store up to 30 data entries. When there are more than 30 entries, the first data entry will be automatically overwritten.



Data Reading

8. Unit Setting

After powering on, it defaults to single measurement mode with the unit of meters (m). After selecting the desired measurement mode, long-press the UNIT button to switch the unit.

(1) Units for single/continuous/addition/subtraction/Pythagorean measurement: [m]-[ft]-[in]-[---'--"]

(2) Units for area measurement: [m]-[ft], and the measurement results are in [m²]-[ft²]

(3) Units for volume measurement: [m]-[ft], and the measurement results are in [m³]-[ft³]

9. Calibration

(1) Find a standard known distance and power on the device to measure it.

(2) While powering off, long - press the READ button and button to enter the manual calibration interface. Short - press the + button or - button to adjust the distance difference.

(3) Short - press the READ button to save and complete the calibration.

Note:

The unit of the plus/minus values in the calibration interface is mm.

For example, if the standard distance is 0.1m and the measured distance after powering on is 0.110m, after entering the calibration mode, press the - button to adjust the value to - 10.000. If the standard distance is 0.1m and the measured distance after powering on is 0.091m, after entering the calibration mode, press the + button to adjust the value to 9.000.

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	±2mm±100*10⁻⁶*D D is the measured distance, and the unit is mm.
Laser class	II
Laser type	490nm~511nm, <1mW
Automatic laser shutdown	
Auto power off	Approximately 30 seconds of inactivity
Data Storage	
Storage temperature	Approximately 180 seconds of inactivity
Storage humidity	30 -20~60℃
Operating temperature	85%RH 0~40℃
Battery	1.5V AAA batteries *3
Size	110*51.3*26.5mm
Weight	90.2g

* In harsh environments (such as when the sunlight is too strong, the ambient temperature fluctuates greatly, the reflectivity of the reflecting surface is weak, or the battery power is insufficient), there will be large errors in the measurement results. In such cases, it is better to use the instrument in conjunction with a target reflector.

Maintenance

1. It is strictly prohibited to store the instrument in a high - temperature and high - humidity environment for a long time. When the instrument is not used for a long time, please remove the batteries and place the instrument in the random instrument cover and store it in a cool and dry place.

2. Please keep the surface of the instrument clean. You can wipe the surface dust with a wet soft cloth. Do not clean the instrument with corrosive cleaning liquids. You can wipe the laser window and the focusing lens according to the method of wiping optical devices.

Specific Declarations:

Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence.

We reserves the right to modify product design and specification without notice.

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