

## Laser Distance Meter English Manual LM70PRO/LM100PRO/LM120PRO

### Product Description



#### 1. Distance button

Short press to enter single measurement mode

Long press to turn on the meter (off state)/enter continuous measurement mode

#### 2. Function button

Short press to switch measurement functions

#### 3. Log button

Short press to scroll through history Long press to save records

#### 4. Unit/reference switching button

Short press to switch the references

Long press to switch the units

#### 5. +/- button

Short press to add

Long press to subtract

#### 6. Buzzer button

Short press to turn on/off the buzzer

#### 7. Clear/off button

Short press to delete records (returns back after clearing);

Long press to turn off the meter.

#### 8. Tripod screw hole

Equipped with 1/4" tripod screw hole, can measure with the tripod

#### 9. Battery compartment

### Symbols

Single/continuous measurement

Area measurement

Triangle area measurement

Volume measurement

Direct Pythagoras measurement

Indirect Pythagoras measurement ①

Indirect Pythagoras measurement ②

Auto horizontal measurement

Auto vertical measurement

### Operation Instructions

Turn on the meter and it will enter the single measurement by default. Press to select the measurement mode and the flashing edge is the edge to be measured.

Please pay attention to the measurement reference. The starting point will be different when different reference points are selected. The measurement reference in this manual refers to the rear reference.



#### 1. Single Measurement

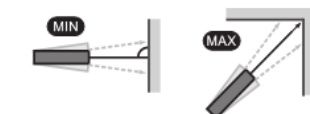
Turn on the meter and it will enter single measurement mode by default. Point the laser at the measurement target, then press and the measurement result will be displayed at the bottom of the screen.

#### 2. Continuous Measurement (Max/Min Measurement)

This function can be used to measure the diagonal of a house, look for horizontal lines, stake out, etc.

Long press to enter the continuous measurement. Point the laser at the measurement target, then press to stop measuring. The MIN/MAX/current measured value will be displayed on the screen.

\* This function will stop automatically after 5 minutes of continuous measurement.



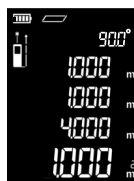
#### 3. Area Measurement

1) Press to switch to area measurement .

2) According to the flashing edge, point the laser at the first point of the target, press to measure the first edge (length).

3) Point at the second point, press to measure the second edge (width).

4) The calculation results of the length, width, circumference and area will be displayed on the screen.



#### 4. Triangle Area Measurement

1) Press to switch to triangle area measurement .

2) According to the flashing edge, point the laser at the first point of the target, press to measure the first edge.

3) Point at the second point, press to measure the second edge.

4) Point at the third point, press to measure the third edge.

5) The calculation results of the triangle area will be displayed at the bottom of the screen.



#### 5. Volume Measurement

1) Press to switch to volume measurement .

2) According to the flashing edge, point the laser at the first point of the target, press to measure the first edge (length).

3) Point at the second point of the target, press to measure the second edge (width).

4) Point at the third point of the target, press to measure the third edge (height).

5) The volume calculation result will be displayed at the bottom of the screen.



#### 6. Pythagoras Measurement

All Pythagoras measurements can be applied to different plane measurements, just ensure that the right-angle side is perpendicular to the object being measured.

Note: In Pythagorean Theorem, the right-angle side cannot be longer than the hypotenuse; otherwise a calculation error will occur.

1) Press to switch to direct Pythagoras measurement .

2) According to the flashing edge, point the laser at the first point of the target, press to measure the hypotenuse.

3) Rotate to the direction perpendicular to the target with the set reference as center, press to measure one right-angle side.

4) The calculation result of the other right-angle side is displayed at the bottom of the screen.



#### 7. Indirect Pythagoras Measurement ①

1) Press to switch to indirect Pythagoras measurement ① .

2) According to the flashing edge, point the laser at the first point of the target, press to measure the first hypotenuse.

3) Rotate to the direction perpendicular to the target with the set reference as center, press to measure one right-angle side.

4) Rotate to the third point of the target with the same reference as center, press to measure the second hypotenuse.

5) The calculation result of the length between the first point and the third point is displayed at the bottom of the screen.



#### 8. Indirect Pythagoras Measurement ②

1) Press to switch to indirect Pythagoras measurement ② .

2) According to the flashing edge, point the laser to the first point of the target, press to measure the first hypotenuse.

3) Rotate to the second point of the target with the set reference as center, press to measure the second hypotenuse.

4) Rotate to the direction perpendicular to the target with the same reference as center, press to measure the third right-angle side.

5) The calculation result of the length between the first point and the second point is displayed at the bottom of the screen.



## 9. Auto Horizontal Measurement

- 1) Press  to switch to auto horizontal measurement .
- 2) According to the flashing edge, point the laser to the first point of the target and press .
- 3) The angle degree between the hypotenuse and the horizontal edge, the length of the hypotenuse/horizontal edge/vertical edge will be displayed on the screen from top to bottom.



## 10. Auto Vertical Measurement

- 1) Press  to switch to auto vertical measurement .
- 2) According to the flashing edge, point the laser to the first point of the target and press .
- 3) Rotate to the second point of the target with the set reference as center, press  to measure the second hypotenuse.
- 4) The angle degree between both hypotenuses, the length of both hypotenuses, the vertical distance will be displayed on the screen in sequence.



## 1. Range

The range data is based on the rear reference by default; the maximum range may vary depending on the model version, please refer to the screen printing and the product packing for the actual ranges.

## 2. Accuracy ("D" represents the measured length)

Under good measurement conditions (good measurement surface/room temperature/indoor lighting, etc.): up to the rated range.  
Under bad measurement conditions (too much light, weak reflection on the surface of the measured objects or large temperature difference, etc.): the error may increase.  
Tip: Use a target board or a good reflective surface in case of poor daylight or target reflection.

## 3. In the ideal state, the short distance accuracy can be up to 1mm

(Ideal state refers to constant speed (speed < 1m/s) and flat contact surface; short distance means <1.5m)

## 4. Angle Error

0.1° is the error caused by the temperature, D is +/-0~45°.  
For example, the 0 degree error is +/-0.3° at room temperature, the 45 degrees error is +/-0.85° at non-room temperature.

## Fault Code – Problems and Solutions

All information is displayed in code or "Error". The following shows the codes and their explanations and the corresponding solutions:

## Standard Accessories

| Accessories               | Quantity |
|---------------------------|----------|
| 1.2V (AAA) NiMH batteries | 3        |
| Micro USB cable           | 1        |
| Manual                    | 1        |
| Device                    | 1        |
| Cloth bag                 | 1        |

## Technical Parameters

|                             |                                   |
|-----------------------------|-----------------------------------|
| Range (m)                   | 70m/100m/120m                     |
| Accuracy (mm)               | ± (2.0mm+5x10 <sup>-6</sup> D)    |
| Single measurement          | ✓                                 |
| Continuous measurement      | ✓                                 |
| Area measurement            | ✓                                 |
| Volume measurement          | ✓                                 |
| Direct Pythagoras           | ✓                                 |
| Indirect Pythagoras①        | ✓                                 |
| Indirect Pythagoras②        | ✓                                 |
| Addition/Subtraction        | ✓                                 |
| Auto Horizontal Measurement | ✓                                 |
| Auto Vertical Measurement   | ✓                                 |
| Display type                | 2.4" EBTN screen                  |
| Measurement references      | Front/tripod mount/rear reference |
| Measurement units           | m/ft/in/ft+in                     |
| Data logging                | 20 groups                         |
| Auto power off              | 3 minutes without operation       |
| Laser class                 | 2                                 |
| Laser type                  | 630-670nm, <1mW                   |
| Protective level            | IP65                              |
| Battery type                | 3pcs 1.2V (AAA) NiMH batteries    |
| Operating temperature       | 0°C~+40°C (32° F~+104° F)         |
| Interface type              | Micro USB charging cable          |
| Size (mm)                   | 59×28×137mm                       |
| Weight (g)                  | 170g                              |

| Code | Problems                                                                  | Solutions                                                                                              |
|------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 204  | Calculation error                                                         | Follow the instructions and operate again                                                              |
| 220  | Low battery                                                               | Please replace the battery or charge it                                                                |
| 255  | The reflected light received is weak, or the measurement time is too long | Please improve the reflective surface (use a reflector, white paper, etc.)                             |
| 256  | The received signal is too strong                                         | Please improve the reflective surface (use a reflector, or do not aim at strong light)                 |
| 261  | Over range                                                                | Please measure within the range                                                                        |
| 500  | Hardware malfunction                                                      | If it still appears after the meter has been turned on/off multiple times, please contact your dealer. |



Laser Class 2 products;  
Do not look into the beam directly or indirectly with optical aids.

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