



# **LRF1300M-PRO & LRF2400M-PRO**

## **OLED**

## **LASER RANGEFINDER**



# **INSTRUCTION MANUAL**

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# IMPORTANT INFORMATION

## **Warning: Laser safety**

To avoid any harm to eyes, please do not look at the laser emission aperture (4) while or after pressing the power button (2) when laser is actively measuring distance

## **Warning: Battery**

- Please do not put the battery together with metal items such as keys, coins in one pocket as it may cause a short circuit.
- Do not keep the battery inside the product in extremely hot temperature environments (above 50°C/122F).
- Please remove the battery if product is to be stored for a very long time.
- Please comply with local laws and regulations regarding safe disposal of the lithium batteries.

## **Maintenance**

Please do not touch the lens with your fingers so as to avoid damage to the glass coating.

In the case of drastic changes of temperature, the lens surface may be covered by fog. This is normal and fog can be removed with soft lens cloth.

To remove smudges or fingerprints from the lens surface, please clean the lens with soft cloth and mild lens cleaning solution, but never with abrasive solutions like Windex and similar.

## **Measurement Considerations**

### **Measuring targets**

The laser rangefinder is suitable for measuring highly reflective objects (such as highway signs), moderately reflective objects (such as building walls) and low reflective objects (such as trees, golf flags, utility poles, animals etc.) When the object reflective ability is reduced, the range will be reduced accordingly.



Figure 1 Measurement target

## Factors that influence ranging capability:

1) **Target size and reflectivity:** Generally speaking, the higher the reflectivity of the target and the larger the size of the target, the better the ranging ability will be. For example, the measuring range for a large building wall may be 1500m, and the range will be increased up to 2200m for a large highway sign, but may be decreased down to only 600m for a deer-sized animal. Please also note that rangefinder may fail to measure the target that can hardly create diffuse reflection, such as water surfaces.

2) **Target shape:** When a target is uneven (non-uniform), such as trees, the ranging ability will decrease.

3) **Measuring angle:** The ranging ability would be at its best if the measured object is vertical in the direction of the laser beam.

4) **Environment factors:** The environment factors including sunshine intensity, the concentration of water vapor in the air and suspended particles (such as rain, fog, snow, haze, etc.) all negatively affect the measuring ability of the laser rangefinder

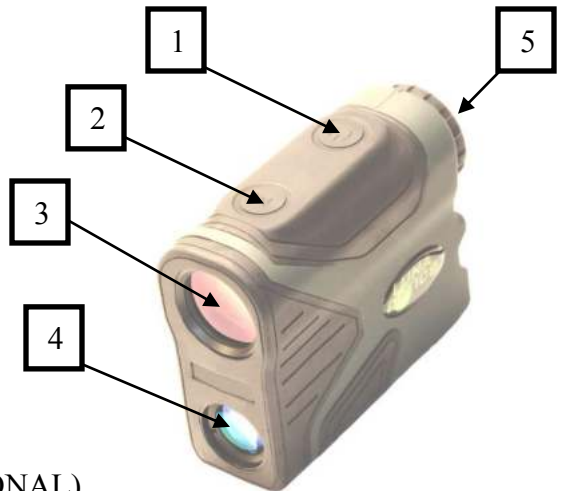
### Note:

To get a better and more consistent measurement, it is advised to mount the product on a tripod in order to reduce the jitter of the rangefinder while measuring.

## Product Description

### Glossary:

- 1) Power button
- 2) Mode button
- 3) Objective Lens
- 4) Laser emission aperture
- 5) Eyepiece lens



### List of Accessories

- Laser Rangefinder (1pc)
- Operation Manual (1pc)
- Carry Case (1pc)
- Lens Cloth (1pc)
- CR2 Battery (1pc) (OPTIONAL)

<b>Specifications:</b>	<b>LRF1300M-PRO</b>	<b>LRF2400M-PRO</b>
<b>Range</b>	6~1200m (6~1300yds)	6~2200m (6~2400yds)
<b>Range Measuring Accuracy</b>	within 400m/400yds, +/-1m; exceeding 400m/400yds, 0.4%	
<b>Angle Measuring Range</b>	-60°~60°	
<b>Angle Measuring</b>	±1°	
<b>Measuring Range of Speed</b>	20~300km/h	
<b>Laser type</b>	905nm (Class 1 laser)	
<b>Magnification</b>	7x	
<b>Effective eyepiece</b>	16mm	
<b>Exit Pupil Diameter</b>	3.7mm	
<b>Object Lens Size</b>	24mm	
<b>Field Angle</b>	7.5°	
<b>Display</b>	OLED (85% transmittance)	
<b>Battery</b>	1xCR2 3V	
<b>Weight</b>	168g (With battery)	
<b>Dimensions</b>	104mmx78mmx30mm	
<b>Operating Temperature</b>	-10°C~50°C	

## Battery installation

Pull up gently the battery cover half from the side and then unscrew the battery cover by rotating it counterclockwise and place a CR2 (3V) battery into the battery tube observing polarity(negative end going in first). Close the battery cap tight, but do not over-tighten!



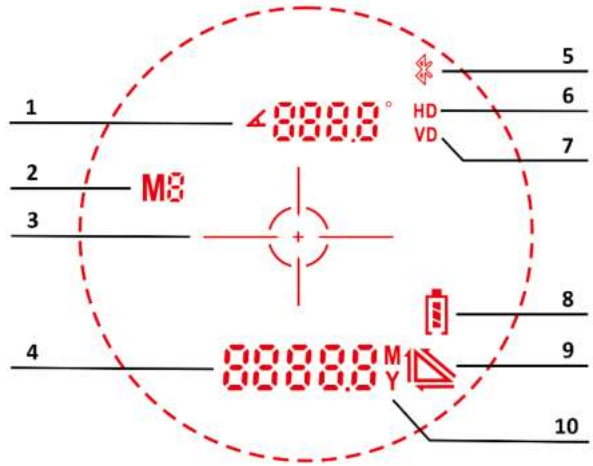
Pull up this part

**Note:**

- Rechargeable CR2(3V) batteries can also be used (peak Voltage 4.2V or less)
- Battery life is approx. 5000 measurements.

# OLED Display Introduction

1. Angle data
2. Mode indicator
3. Target indicator
4. Distance data
5. Bluetooth icon
6. Horizontal Distance indicator
7. Vertical Distance indicator
8. Battery power level icon
9. Current measuring methods
10. Measurement unit

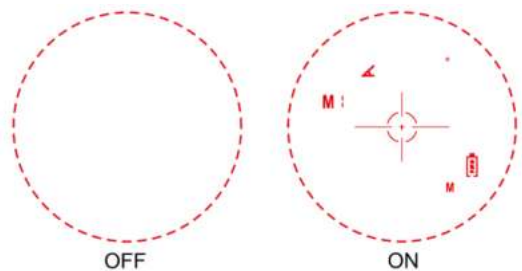


## NOTE:

OLED screen does not guarantee completely dust-free screen. When the rangefinder is working, the OLED screen produces highly magnetic field and microscopic dust may appear on the display, but it will not affect ranging function.

# Rangefinder Setup and Operation

**Power On:** Hold the power button for more than 2 seconds and all the signs will be showed on the display. Press the power button only once and the screen will display last used or default mode signs, but not all signs.

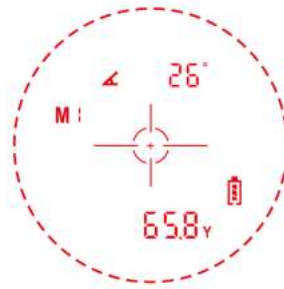


**Automatic Power Off:** The device will shut down automatically in 10 seconds if not used. In Bluetooth mode, the device will shut down automatically in 30 seconds if not used.

**Measurement Unit:** The unit of measurement can be switched between Meters (M) and yards (Y). Hold the Mode Button between 2 to 4 seconds to switch between the two distance measurement units. The unit is retained after the mode button is released.



Meters



Yards

**Switching Modes:** Press the mode button once to cycle between the 3 available modes:



**Mode 1:**  
**Slope Distance Measurement**  
**Angle Measurement**  
**Continuous Distance Measurement**



**Mode 2:**  
**Horizontal Distance Measurement**  
**Angle Measurement**



**Mode 3:**  
**Horizontal Distance Measurement**  
**Height Measurement**

**Single Distance Measurement:** Press the Power Button momentarily once to measure the distance between you and the target. While measuring the distance, the center cross will flash.

**Continuous Distance Measurement:** Hold the power button to continuously measure the distance between you and any target you are aiming at while scanning the area. The distance measured will display accordingly. While measuring the distance, the center cross will be flashing.

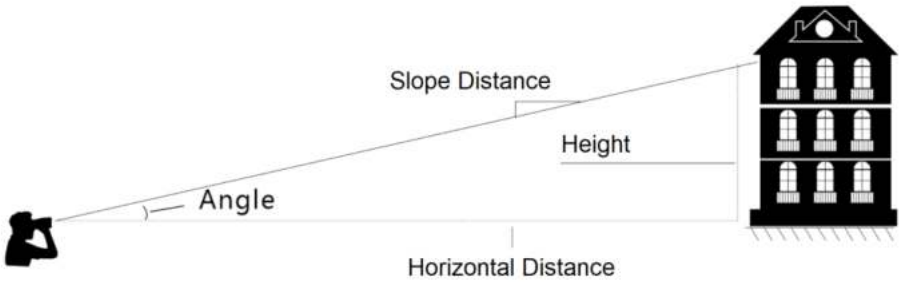
## IMPORTANT:

If no distance is shown after ranging the target, first try again. If same result, please be aware that the target may be too small, its color maybe non-reflective, the weather may not be optimal, there may be some objects between you and the target (such as tall grass, foliage, wires, etc. or the target distance may simply exceed the device's maximum ranging distance.



## IMPORTANT: Horizontal Distance & Slope Distance:

In **Mode 1**, when measuring a target at an angle, the distance shown is the slope distance from you to the target. In **Modes 2 and 3**, when measuring a target at an angle, the distance shown is the horizontal distance from you to the target.



## Brightness Adjustment

To adjust the brightness of the OLED display, hold the mode button and while holding the Mode Button, press the Power Button simultaneously to activate brightness control mode. There are 5 brightness levels. The default brightness level is 3. To cycle through the different brightness levels, press the power button while in brightness control mode. The brightness level will be indicated on the screen. To exit brightness control mode, press the mode button once.



# Ballistic Calculator

**Activate Bluetooth on the Device:** To turn on Bluetooth and connect to an external application, hold the mode button for more than 4 seconds. When Bluetooth activates, the Bluetooth icon will be shown on the screen. To close the Bluetooth function, press and hold the mode button for more than 4 seconds until the Bluetooth icon on the screen disappears.






**NOTE: while Bluetooth is active, battery is drained more quickly**



## Connect to the Application on the Smartphone:

Enable Bluetooth on the Smartphone and download the “**Microballistics**” APP available on iOS and Android. By configuring the bullet type, sight setup, and environmental factors, the APP uses the device’s rangefinder feedback (distance and angle) to find the bullet drop path and informs the shooter the windage and elevation to aim at the target. The information is available on-screen and by sound.



Profile 1	Profile 2	Profile 3	Profile 4
	Berger Target VLD G7 coefficient: 0.2386		.30 155 gr
	Muzzle Velocity 899.16 m/s	Sights Height 38.1mm	Zero 91.44 m
	Temperature 15°C	Pressure 1000 hPa	Humidity 78%
	Wind Speed 0 m/s	Direction 0°	↓
	0°		



### Configure Graphs Compare Range

Range m	Drop cm	Elevation MOA	Wind cm	Windage MOA	Speed m/s	Energy J
0	D 3.81		0		899	4060
100	D 0.21	U 0.07	0	0	834	3493
200	D 10.75	U 1.85	0	0	771	2988
300	D 37.82	U 4.33	0	0	711	2536
400	D 84.37	U 7.25	0	0	652	2138
500	D 154.02	U 10.59	0	0	597	1792
600	D 251.24	U 14.40	0	0	545	1491
700	D 381.62	U 18.74	0	0	495	1229
800	D 552.25	U 23.73	0	0	447	1002
900	D 772.26	U 29.50	0	0	402	810
1000	D 1053.43	U 36.21	0	0	359	648