




# APEXFORGE Magic D80 Pro Bluetooth Laser Measure User Manual

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# APEX FORGE

User's Manual



## LASER DISTANCE METER MAGIC D80 Pro



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## Magic D80 Pro Bluetooth Laser Measure

## **Safety Policy**

Please read the safety policy and instructions carefully before using the instrument for the first time.

⚠ Please carefully read all the operating instructions and safety regulations in this manual before using the instrument. Otherwise, it may cause damage to the instrument, affect the measurement accuracy and cause personal injury to the user or a third party due to the failure in using the instrument according to the operating methods stipulated herein.

⚠ Do not open or repair the instrument by yourself in any way, and it is strictly forbidden to illegally modify or change the performance of its laser device. Please keep the instrument properly, and do not place it in a place within the reach of children. Avoid use by irrelevant persons.

⚠ It is strictly forbidden to point the laser to people's eyes and other parts of the body or aim the laser on highly reflective surface or objects.

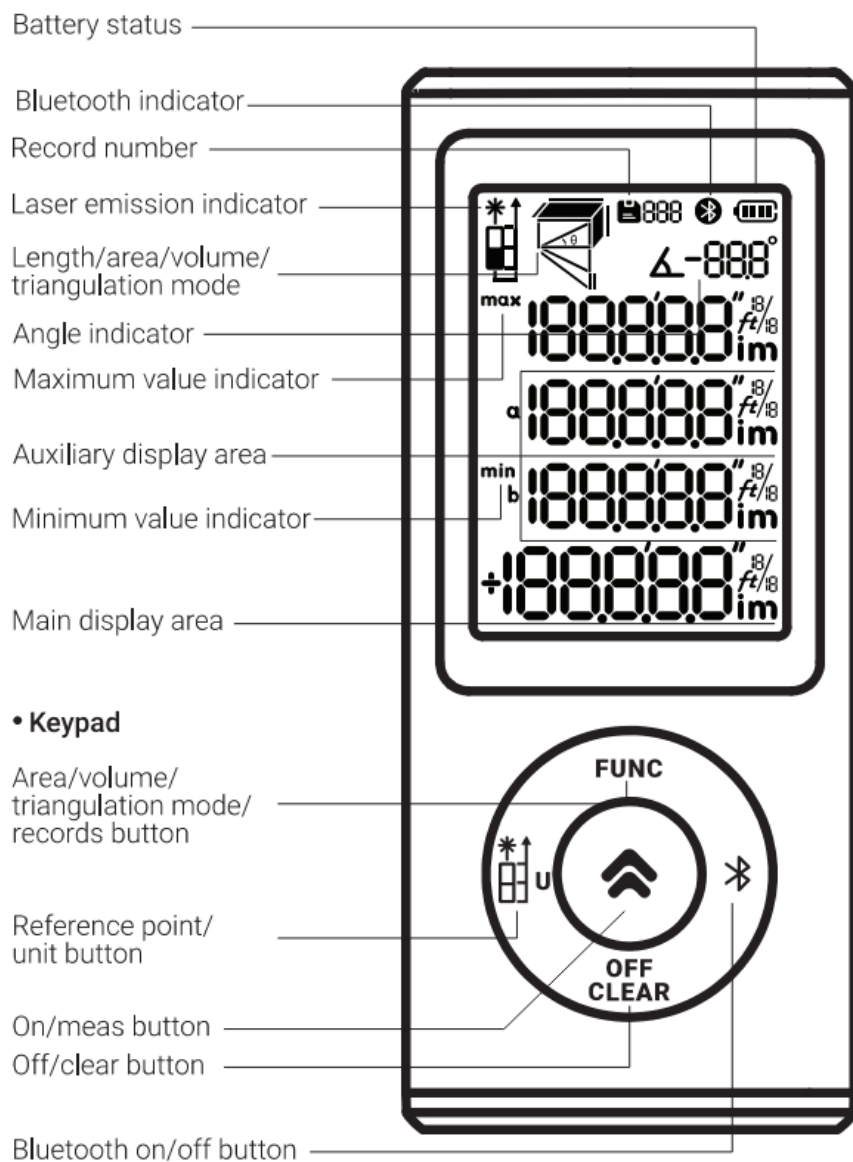
⚠ Do not use the instrument near any aircraft or medical equipment as other equipment and devices may be interfered by its electromagnetic radiation, and do not use the instrument in flammable or explosive environment.

⚠ Scrapped instruments should not be disposed of together with domestic garbage. Please dispose them according to relevant national or local laws and regulations.

⚠ If you have any quality problems or have any questions about the use of the instrument, please contact the local distributor or the instrument manufacturer in time, and we will solve them for you as soon as possible.

## **Display screen, keypad**

- **Display screen**



## App Installation

Scan the product R code, or search for 'AF MAGIC' in the App Store, download and install the App. The Android user can search for the App 'AF MAGIC' in Google Play







Product QR code

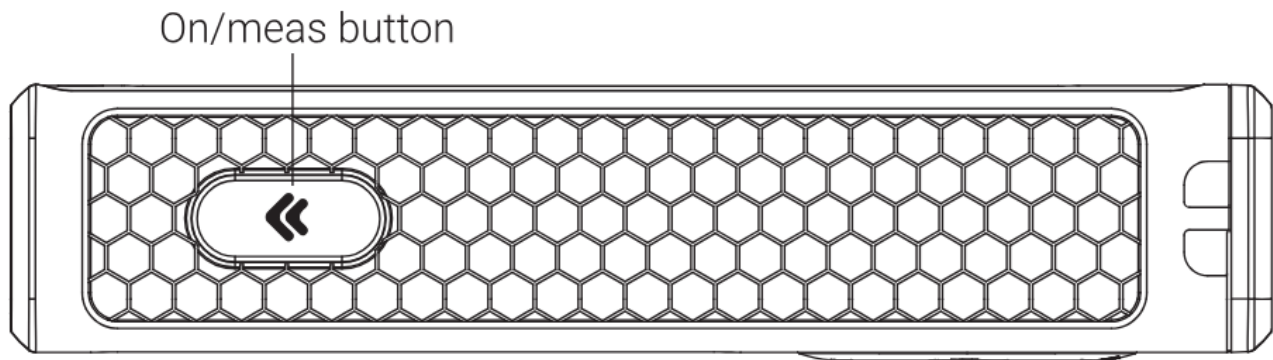
<https://apex-forge.com/pages/apexforge-app-download>

## Bluetooth



The instrument will automatically record the data while calculating the final result. Press and hold the button

**FUNC** to read the record. The specific operation to read the record is as follows:

1. > Short press   to switch record;
2. > Long press  to clear all records;
3. > Short press  to exit.



## Lithium Battery


- The built-in 3.7V 1000mAh lithium battery is non-removable. The instrument has integrated charging circuit, with clear undervoltage indicator and charging indicator.
- Battery charging: It is recommended to use the mobile phone charger or 5V, <3A adaptors with Type-C charging cable.
- The instrument shall be charged in time when running out of battery or its battery status shows blank and flashes after being turned on due to its insufficient battery capacity . Insert USB to charge, and the battery symbol scrolls starts  . When fully charged, it will display  , and flash.

## Battery Maintenance

When you don't use it for a long time, charge the product fully and recharge it every two months to avoid battery damage.

## Initial Operation and Setting


### • On/Off

When it's off, press the button  to turn it on, and the instrument enters the ready mode.

When it's on, press and hold the button  for 3 seconds to turn it off.

If no operation is carried out on the instrument within 150 seconds, the instrument will automatically turn off.


### • Unit setting

In the mode of length measurement, press and hold the button  to switch measuring units. The instrument provides 6 units for your choice.

### • Unit:

	Length	Area	Volume
1	0.000 m	0.000 m <sup>2</sup>	0.000 m <sup>3</sup>
2	0.00 m	0.00 m <sup>2</sup>	0.00 m <sup>3</sup>
3	0.0 in	0.00 ft <sup>2</sup>	0.00 ft <sup>3</sup>
4	0 1/16 in	0.00 ft <sup>2</sup>	0.00 ft <sup>3</sup>
5	0 '00 "1/16	0.00 ft <sup>2</sup>	0.00 ft <sup>3</sup>
6	0.00 ft	0.00 ft <sup>2</sup>	0.00 ft <sup>3</sup>

### Reference point Setting

Press the reference button  to switch among the front-end/middle-end/back-end basis, and the system defaults to the back-end basis.



#### • Backlight on/off

The backlight of this instrument is automatically turned on and off. After any button is pressed, the backlight will be turned on continuously for 15 seconds. To save power, the backlight will be turned off automatically after 15 seconds of inactivity.

#### • Self-calibration and Sound on/off


The instrument is equipped with the self-calibration function to ensure the accuracy of the instrument. Calibration

method: When it's off, press the buttons  and  at the same time until the screen displays with a flashing number at the lower end to enter the self-calibration mode.



At this time, the user can adjust this value using the buttons   according to the error of the instrument. The adjustment range is -9 ~ 9mm.





For example, the actual distance is 3.780 m.

If the instrument's measured value is 3.778 m, 2mm lower than the actual value, you can enter the calibration

mode using the button  to increase the existing calibration value by 2mm.

If the instrument's measured value is 3.783 m, 3mm higher than the actual value, you can enter the calibration


mode and use the button  to reduce the existing calibration value by 3mm. After adjustment, press the button  to save the calibration result.

Press the button  to save the calibration result, and enter the setting of sound on/off, displaying "Sound" on the screen with flashing letters at the lower end. Press the buttons   to set the sound on or off. "on" refers to turn on the sound, while "off" refers to turn off the sound. After setting, press the button  to exit the setting.


### Distance, Area, Volume and Indirect Pythagorean Measurement


#### • Single measurement:

For length measurements, repeatedly press the  button until the indicator for length measurement

appears — on the display To measure, briefly press the measuring button . The measured value will be shown at the bottom of the display.




- **Continuous measurement:**

For continuous measurements, in length measurements mode—long press to the  until the indicator for continuous measurement (Max and min symbol) appears on the display. The laser is switched on and the Measurement starts immediately. Move the measuring tool until the required distance is shown at the bottom of the display. Briefly press the measuring button to end continuous measurement. The last measured value will be shown at the bottom of the display. Continuous measurement automatically switches off after 150 seconds. The last measured value remains indicated at the bottom on the display. If you need to measure continuously, please





long press to the .

Remarks: During continuous measurement, the machine should avoid shaking to prevent the laser from losing the test target and causing the machine to report an “error” or inaccurate data.

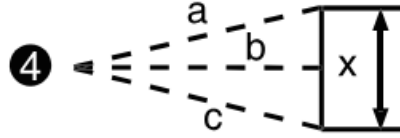
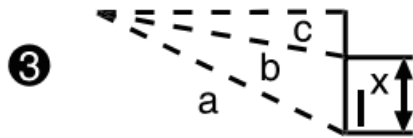
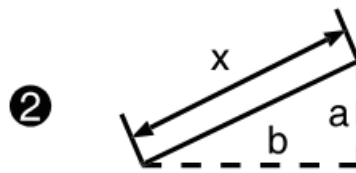
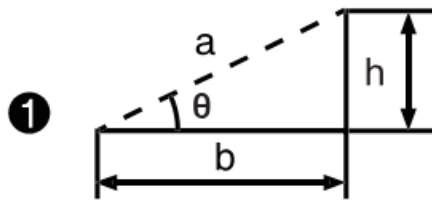
- **Area measurement:**

For area measurements, repeatedly press the button **FUNC** until the indicator for area measurement  appears on the display. Then, operate following the prompts below: Press the button  to measure the first side (width) and press the button  to measure the second side (length). The instrument will automatically calculate the area, and the results will be displayed on the main display area. The auxiliary display area displays the measured values of the length and width of the rectangle. During measurement, you can also press **OFF CLEAR** to clear the measurement results and re-measure. In case of no data showing on the display area, press the button **OFF CLEAR** to exit the area measurement mode and enter the length measurement mode.

- **Volume measurement:**

For volume measurements, repeatedly press the button **FUNC** until the indicator for volume measurement  appears on the display. Then, operate following the prompts below: Press the button  to measure the first side (width), press the button  to measure the second side (length) and press the button  to measure the third side (height). The instrument will automatically calculate the volume, and the results will be displayed on the main display area. The auxiliary display area displays the measured values of the length, width and height of the cube. During measurement, you can also press **OFF CLEAR** to clear the measurement results and re-measure. In case of no data showing on the display area, press the button to exit the volume measurement mode and enter the length measurement mode.

- **Indirect Pythagorean measurement:**



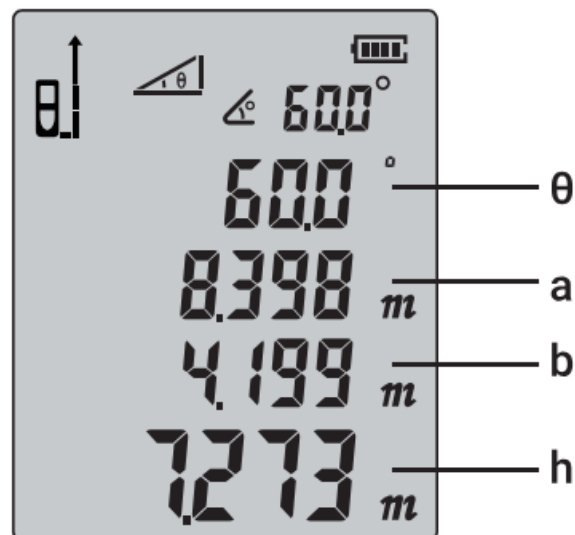
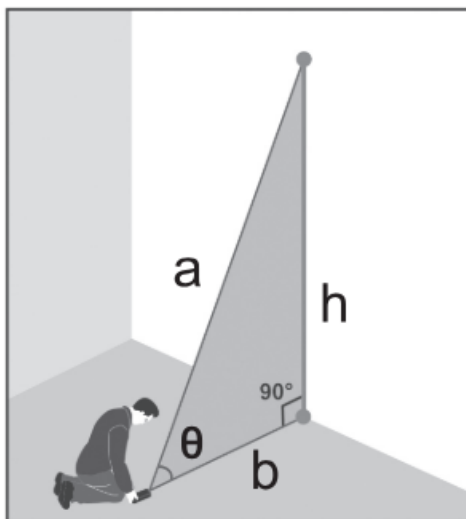
The instrument has four modes of measuring the unilateral distance of a triangle by Pythagorean theorem, which is convenient for users to measure indirectly in specific complex environment.

### 1 >Angle and height measurement

Repeatedly press the button **FUNC** until the indicator for indirect pythagorean measurement appears on

the display. Press to measure the length of the dotted-line hypotenuse (a) according to the prompt and measure the angle between the hypotenuse and the bottom edge at the same time.

The instrument automatically calculates the horizontal distance b and the vertical height.



### 2 >Measure two right sides of a right triangle and indirectly measure the length of hypotenuse

Repeatedly press the button **FUNC** until the indicator for indirect pythagorean measurement appears on the display.

Press the button to measure the length of a dotted line (b) following the prompt


Press the button to measure the length of another dotted line (a) and the instrument automatically calculates the length of the solidline hypotenuse (x)

During measurement you can also press **OFF CLEAR** to clear the measurement results and remeasure



### 3 >Repeatedly press the button **FUNC** until the indicator for indirect pythagorean measurement appears on the display.



Press the button to measure the length of a dotted line (a) according to the prompt and press the button to measure the length of the middle dotted line (b)




Press the button  to measure the length of the other dotted line (c) The instrument automatically calculates the length (x) of one solid-line side of a triangle

During measurement, you can also press  to clear the measurement results and remeasure

4 > Repeatedly press the button  until the indicator for indirect pythagorean measurement  appears on the display.

Press the button  to measure the length of a dotted line (a) according to the prompt and press the button  to measure the length of the dotted line (b) as the figure shows

Press the button  to measure the length of another dotted-line hypotenuse (c) and the instrument automatically calculates the length of the solid-line right side (x)


During measurement, you can also press  to clear the measurement results and remeasure





In Pythagorean measurement mode, the right-angle side must be shorter than the hypotenuse length, otherwise the instrument will display an error signal. In Pythagorean measurement mode, it is necessary to ensure the measurement from the same starting point and measure according to the order of hypotenuse and right angle sides, so as to ensure the accuracy of measurement.

## Measurement Record Storage

Measurement records will be automatically saved, and users can export records through the App

## Bluetooth

The instrument will automatically record the data while calculating the final result, Press and hold the but  to read the record The specific operation to read the record is as follows

1. > Short press   to switch record:
2. > Long press  to clear all records:
3. > Short press  to exit

## Prompt Information

During use, the following prompt information may appear on the main display area

Information	Cause	Solution
Err1	The signal is too weak	Measure the target point with strong reflectivity
Err2	The signal is too strong	Measure the target point with weak reflectivity
Err3	Battery voltage is too low	Charge the battery
Err5	Pythagorean measurement not correct	Re-measure to ensure that the hypotenuse is longer than the right angle side
Err6	Over range	Use the instrument within the measurement range
Err8	Angle transducer error	Return to the factory for maintenance

## Technical Parameters

Item	MAGIC D80 Pro
Maximum measuring distance	0.16-262feet
Accuracy of distance measurement	±1/16inch
Continuous measurement	✓
Bluetooth	✓
Bluetooth distance	32.8feet
Area and volume measurement	✓
Pythagorean measurement	✓
Max/Min	✓
Self-calibration	✓
Laser grade	II
Laser type	630-680nm, < 1 mW
Number of records stored	100
Automatic laser cutting	20 seconds
Auto power off	150 seconds
Charging time	About 2.5h
Battery life	15000 measurements
Sound prompt	✓
Storage temperature range	-4°F-140°F (-20°C-60t)
Operating temperature range	32°F-104°F (0°C-40°C)
Storage humidity range	20%~80% RH
Battery specification	3.7 V 1000mAh lithium battery
Charging specification	Type-C USB, input: DC5V,<3A
Inclination measurement range	±90°
Net weight	4.23 Ounces
Size	4.64X1.97X0.98 inch

- The front-end basis should be used for the minimum measurement range
- “D’ means the actual distance
- The conditions are not favorable, such as strong sunlight. The measurement result will have a large deviation under insufficient battery power, weak reflection effect of reflector, and the largely fluctuated environmental temperature. In this case, it’s better to measure with a target reflector. The conditions that affect the measurement include: objective lens or laser tube blocked by obstacles; measurement target is transparent, such as water surface, glass and mirror; hand and laser is wagging during measurement, etc.

## Daily Maintenance of Instrument

- It is forbidden to store the instrument in high temperature and high humidity environment for a long time. When the instrument is not used for a long time, please put the instrument in the accompanied bag and store it in a cool and dry place.
- Please keep the surface of the instrument clean. Wipe the dust on the surface with a wet soft cloth. Do not clean the instrument with corrosive lotion. The laser window and focus lens can be wiped according to the method of wiping the optical devices.

## Packing List

When purchasing the instrument, please carefully check whether all accessories of the instrument are provided according to the following list.

Item	Name	Unit	Quantity	
1	Host	Set	1	Remarks
2	Instrument portable bag	No	1	
3	Lanyard	No	1	
4	Instruction	No	1	
5	Quick Start Guide	Piece	1	
6	Color box	No	1	
7	Reflector	No	1	
8	Type-C cable	No	1	

Inspector:

Date:

## WARRANTY CARD



## Your Warranty Includes

- 36-Month Coverage

Within 36 months of purchase, we will provide timely and effective online after-sales service. We will repair or replace any defective product (due to manufacturing fault) within the warranty period. The battery provides 24-month coverage.



## How to Return Your APEXFORGE Product

- Contact [support@opex-forge.com](mailto:support@opex-forge.com) with your order number.
- We will issue you a return label for your return.
- Tear off the 'Return Details' page and fill in the details. Include this inside your return
- We will issue your replacement/refund on receiving the return package.



## Return Details


In order to process your return as quickly as possible, we require the following information. Please fill out this form and include it in your return package.

Purchase Name:	
Order Number:	
Date of Purchase:	
Your Email Address:	
Place of Purchase:	



If your purchase was fulfilled by Amazon, please use Amazon's 30-day return service.

**APEX  
FORGE**

 The image shows the cover of the user manual for the APEXFORGE Magic D80 Pro Bluetooth Laser Measure. The cover is white with a black border. At the top, the 'APEXFORGE' logo is displayed in a bold, sans-serif font. Below the logo, the text 'User's Manual' is written in a smaller font. In the center, there is a photograph of the device, which is a handheld laser distance meter with a digital display showing '800'. At the bottom of the cover, the text 'LASER DISTANCE METER' and 'MAGIC D80 PRO' are printed.	<p><a href="#">APEXFORGE Magic D80 Pro Bluetooth Laser Measure</a> [pdf] User Manual</p> <p>Magic D80 Pro Bluetooth Laser Measure, Magic D80 Pro, Bluetooth Laser Measure, Laser Measure</p>
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References

- [User Manual](#)

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