

手持式激光测距仪使用说明书

感谢您购买本公司系列产品手持式激光测距仪！

首次使用本产品前，请先仔细阅读安全条款和使用说明。

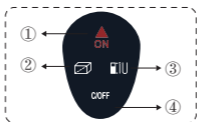
一、安全条例

- ▲ 在使用本产品之前请务必认真阅读本说明书里的所有条款和操作指南。没有遵循这些安全条款和操作指南可能会导致危险的激光辐射伤害、电击或者人身伤害。
- ▲ 不要试图用任何方式来改变激光器的性能，这样会导致激光暴露引起危险。仅在使用本仪器时才打开激光，不要直视激光。请妥善保证管您的仪器，以免无关人员的使用。
- ▲ 不要故意或在黑暗中用激光照射他人。
- ▲ 不要将激光束照射在高反光面的物体上。
- ▲ 不要放置在儿童可以接触到的地方。
- ▲ 不要擅自修理本仪器。如果仪器损坏，请与您的当地经销商联系。
- ▲ 电磁辐射可能对其设备、装置造成干扰（如：起搏器或助听器等医疗仪器）。
- ▲ 不要在易燃、易爆的环境中使用本仪器。请按照您所在地的法律法规来处置废弃的仪器。

二、概述

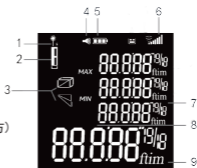
● 键盘

- ① ▲ ON 开机/单次测量/连续测量键
- ② ☒ 面积/体积/勾股
- ③ 📏 前后基准/单位
- ④ ⓧ COFF 清除/关机



● 显示屏(见右图)

- 1. 激光开启指示符
- 2. 测量基准边指示符
- 3. 面积/体积/勾股测量指示符
- 4. 蜂鸣器指示符
- 5. 电池电量指示符
- 6. 信号强度指示符
- 7. 单位指示符（包括乘方、立方）
- 8. 辅助显示区
- 9. 主显示区



三、电源

- 锂电池可直充，无需拆卸。



四、操作

- 启动/关闭

关机状态下按 **▲ ON** 键则开机，开机状态下15秒没有按键操作，则自动关闭背光。45秒没有按键操作，则自动关机。

- 基准边

仪器默认的基准边是仪器后端，按 **↺** 键可以切换基准边。

- 单位

长按 **↺** 键可以循环切换单位（如下图），关机时将记忆最后的显示单位：

长度	面积	体积
0.000m	0.000m ²	0.000m ³
0.00m	0.00m ²	0.00m ³
0.00m	0.00ft ²	0.00ft ³
0.0-1/16	0.00ft ²	0.00ft ³
0.0in	0.00ft ²	0.00ft ³
0-1/16in	0.00ft	0.00ft

- 电池电量指示

当电池框内的段码显示时电池余量图标，表示电池量处于较满的状态，显示的段数减少电池余量图标，表示电量相对减少，当只有电池框显示电池余量图标时，应及时充电。

- 自助校准功能

在关机模式下长按 **▲ ON** 键，直到主屏上显示boot闪烁时再短按 **▲ ON** 键，直到主屏上显示CRL.0时再短按 **▲ ON** 键进行加减调整，调整范围为-7-7mm，校准完成后再短按 **▲ ON** 键保存设置。

- 开启/关闭蜂鸣器

在关机模式下长按 **▲ ON** 键，直到主屏上显示boot闪烁时再按 **▲ ON** 键，直到主屏上显示BP.on时再短按 **▲ ON** 键可开启蜂鸣器，再按 **▲ ON** 键主屏上显示BP.oFF可关闭蜂鸣器，完成后按 **▲ ON** 键保存设置。

- 清除功能





短按 **OFF** 键则取消最后一个指令，在同一功能内单次测量（面积或体积等），可以用清除键清除上一个测量操作，重新测量。

- 信号强度指示

当所有信号段码都显示时，表示测量回波信号强度较高，显示的段数减少，表示测量回波信号强度相对减小。

五、测量

● 单次测量




关机状态下，长按  键开机，此时显示屏上的激光标志将闪动，再次短按  键则进行测量。仪器将自动保存正常的测量结果。开机状态下，按  键打开激光，再次按  键则进行测量。

● 连续测量




仪器开机后，长按  键约2秒开始连续测量。若要停止连续测量，再次按该键，或者按  键或者  键退出连续测量。连续测量时，主显示区显示实时测量值，辅助显示测量程中的最大值(MAX)或最小值(MIN)。

六、功能



● 面积测量

短按  键，直到  显示在显示屏上。按  完成第一条边测量，再按完成第二条边测量后会自动进行面积运算，结果显示在主显示区。

● 体积测量

短按  键，直到  显示在显示屏上。按  键分别完成三条边测量后会自动进行体积运算，结果显示在主显示区。

● 勾股测量

勾股测量主要是利用勾股定理计算测量不能直接测得的目标距离。短按  键，直到勾股图标显示在显示屏上。根据屏幕提示，按  分别完成直角边一直角边或斜边一直角边的测量，测量完后自动进行勾股运算，结果显示在主示区。

注意：

勾股测量模式下，直角边必须小于斜边长度，仪器才能计算，否则仪器会显示错误信息提示。

在勾股测量模式下，为保证测量精度，须保证从同一起始点开始测量，并按斜边、直角边提示测量顺序测量。

七、提示代码及解决方案

在使用仪器的过程中，仪器可能会出现如下提示信息：

信息	原因	解决方法
B. L	电池电压过低	给设备充电
T. L	温度过低	仪器升温
S. L	温度过高	仪器降温
D. H	数据溢出	重新测量
S. L	信号太弱	测量反射能力强的目标点及使用反射板
S. H	信号太强	使用反射板
H. F	硬件错误	重新开关机，若多次开机仍未解决问题，请与您的经销商联系

八、技术参数

规格型号	F40
测量精度	±2mm*
单位	m/in/ft
测量范围(无反射板)	0.05-40m
测量时间	0.1-4秒
激光等级	II类
激光类型	620-690nm;<1mw
防尘防水	IP 54
自动关闭激光	25秒
自动关机	45秒
照明	白色LED
测量基准切换	√
电量显示	√
信号强度指示	√
连续测量(最大、最少)	√
数据存储(20组)	√
面积、体积、勾股量功能	√
电池类型	200毫安锂电池
工作温度范围	0°C~40°C
储存温度范围	-25°C~60°C

*不良测量条件下(如环境光线过强、被测点漫反射系数过大或过小),测量精度会有较大误差:±2mm+40PPM。

*在强烈日光或者目标反光不好的情况下,请使用反射板。

九、保养

禁止将仪器浸入水中,可用湿的软布擦拭表面灰尘,不要使用浸蚀性洗液,按照擦拭相机镜头的方法擦拭光学部件表面(包括激光出射窗口和信号接收透镜)。

十、服务

为了更好的服务于客户,我公司随寄有保修卡,请用户妥善保管以享受我们应该有的服务。

1. 产品从购买之日起,正常操作使用未经拆修,一年内享受保修服务。
2. 下列情况不在免费保修范围内:
 - A. 因被滥用或人为导致仪器损坏;
 - B. 因用户运输时振动过大导致仪器损坏。
3. 用户无保修卡时将酌情收费。
4. 用户需要维修时请认真填写保修卡,并寄回我公司。

Laser Rangefinder User's Manual

- Thanks for purchasing our series products—the hand-held laser rangefinder.





First of all, before using this product please read the safety policy and direction for use.

I. Safety Policy

- ▲ Before using this product, please read all the terms and operational guide listed in this manual carefully. The improper use of this product with breach of these safety policy and direction of use may result in the dangerous injury of laser radiation, electric shock and personal injury.
- ▲ Do not try to change the performance of the laser device in any way, thus it may result in the danger caused by laser exposure. The laser can only be opened for use and please do not look in the laser straightly. Please keep your device properly to avoid the use by other irrelevant personnel.
- ▲ Do not use the laser to shine on other person deliberately or in the dark.
- ▲ Do not use the laser to shine on the object with high- reflective surface.
- ▲ Do not place the device on somewhere the children could touch and reach.
- ▲ Do not try to repair this device by yourself. If the device was damaged, please contact with your local dealer.
- ▲ The electromagnetic radiation may cause the interference on other equipment and devices (such as the medical instruments like pacemaker or hearing aids.)
- ▲ Do not use this device under the flammable and combustible environment.
- Please dispose your wasted device according to your local laws and regulations.

II. Overview

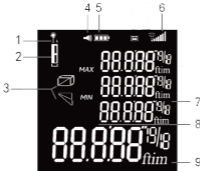
1. Keyboard

- ①  Turn on/Single measurement/Continuous measurement
- ②  Area/Volume/Pythagorean
- ③  Benchmark switch/Unit switch
- ④  Clear-off/Turn off

2. Display Screen (see following figure)

1. Laser indicator

2. Reference benchmark indicator
3. Area/Volume/Pythagorean function indicator
4. Buzzer status indicator
5. Battery indicator
6. Signal indicator
7. Unit indicator
8. Main displaying area
9. Supplementary displaying area




III. Power supply

- With built-in 200mAh Li-poly battery, the laser distance meter is chargeable.




IV. Operation On/Off


1. On/Off

- While under power off status, long press on the  button will turn on the device, while without any operation for 20 seconds under the power-on status, the back light of display shall be off automatically, while there is no further button operation for 30 seconds under the power-on status, the device shall be shut down automatically.

2. Reference Edge

- The default reference basement is the bottom of the device. With short press on  button, it can switch the reference base from the front of the device.

3. Unit

- With long press on  button it can switch the unit circularly (shown in the figure on right side).




Length	Area	Volume
0.000m	0.000m ²	0.000m ³
0.00m	0.00 m ²	0.00 m ³
0.00m	0.00ft ²	0.00ft ³
0.0 ^{1/16}	0.00ft ²	0.00ft ³
0.0 in	0.00ft ²	0.00ft ³
0 ^{1/16} in	0.00ft	0.00ft

- The last displayed unit will be kept in memory while the device was off.



4. Battery Level Indication

- While all the segment code in the battery column are all displayed, it means that the battery level shall be at the fulfilled status. While the displayed segment code is quite less, it refers to the relative lower battery level; while the empty battery column is displayed, the new battery should be used for replacing the old one inside the device.


5. Self Calibration Function

- Accuracy Calibration: When the device under the power off status, Long press  button until the screen displaying boot to get into boot mode, Press again until blinking CRL.0; Press  button to add and subtract range with -7 mm~ 7mm as adjustment, press  button again to save settings when the calibration is completed.

6. Buzzer ON/OFF

- When the device under the power off status, Long press  button until the screen displaying boot to get into boot mode, Continue press  button until BP. on is shown on screen to turn on or turn off the buzzer by choosing BP OFF/ON.

7. Clear-off Function



- Short press on  button, the last measurement will be canceled. While using the same function or single measurement to the area or volume etc., the clear-off button can be used to eliminate last measuring operation and arrange the measurement once again.

8. Signal Strength Indication


- While all the segment code of signal are displayed, it means that there shall be the stronger echo signal strength of measurement; while less segment code was displayed, it shall mean the relatively reduced echo signal strength of measurement.

V. Measurement

1. Single Measurement

- While the laser is off, press  button shortly for opening the laser, and the laser icon on the screen will be flashing, with short press  button again it shall start measurement. The device will display the measurement result automatically.





2. Continuous Measurement

- With laser on, long press on  button for about 2 seconds, it shall start the continuous measurement. Press this button once more to stop continuous measurement.




While performing continuous measurement, the main displaying area will show the real time measurement value, and the MAX or MIN value during the measuring process shall be shown in the supplementary displaying area accordingly.

VI. Functions

1.Area Measurement




● Press button  shortly until  was shown on the screen. To press  button to finish the measurement on the first edge, then to press  button again to finish the measurement on the second edge and the device will perform the area calculation automatically, and the result will be shown on the main displaying area.

2.Volume Measurement

● Press  button shortly until  was shown on the screen. To Press  button to finish the measurement on the three edges respectively, then the device will perform the volume calculation automatically, the calculated result will be shown in the main displaying area.

3.Pythagorean Measurement

● The Pythagorean measurement mainly used the Pythagorean theorem to calculate the object distance that cannot be measured directly.

To press  button shortly, until  was shown on the screen. According to the instruction on the screen, to press  button to respectively complete the measurement from right-angle side to right-angle side and hypotenuse to right-angle side, the Pythagorean calculation will finished automatically and the calculated result will be shown in the main displaying area.

Note:

The length of right-angle side should be shorter than the length of hypotenuse when using indirect measurement.

Target points should be in the same line and the laser beam should be right-angled to the line.

VII. Error Code Prompt And Solution

● While using the device, it may occur the prompt instruction as following :

Message	Reason	Solution
B.L	Battery power is too low	To replace the new battery
T.L	Temperature is too low	To warm up the device
T.H	Temperature is too high	To cool the device
D.H	Data overflow	To measure again
S.L	Signal is weak	To measure the target point with stronger reflective ability.
S.H	Signal is too strong	To measure the target point with weaker reflective ability.

H.F	Hardware fault	Restart/shut down the device, if the problem is still not solved after several times of restarting, please contact your dealer.
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VIII. Technical Parameters

SPECS and Model	F40
Measurement Accuracy	+/-2mm*
Measuring Unit	m/in/ft
Measuring Range (Reflective plate not included)	0.05-40m
Frequency	0.1-4 seconds
Laser Class	Class II
Laser Type	620nm~690nm; < 1mw
Water-Proof and dust-proof grade	IP 54
Laser auto shut-down	15 seconds
Auto shut-down	45 seconds
Illumination	White LED
Measurement reference switch	Yes
Data clear-off	Yes
Battery level display	Yes
Signal strength display	Yes
Continuous measurement (Max/Min)	Yes
Area/Volume/ Pythagorean measurement function	Yes
Type of battery	200mAh Li-on battery(3.7v)
Working temperature range	0° C ~ 40° C
Storage temperature range	-25° C ~ 60° C

● There shall be quite big error in measurement accuracy with +2mm+40PPM under the poor measuring conditions (such as too strong light, too high or low temperature, bad reflection conditions on the measured points.)

● Under strong sunlight or poor reflection of the object, please use the Reflective plate.

IX. Maintenance

● Forbid to drop the device into water, the wet soft cloth can be used to wipe off the dusts on the surface, but without the erosive solution for washing. To wipe the optical parts surface according to the method of wiping the camera lens (including the laser exit window and the lens for signal reception.)

X. Service

● In order to serve our customer better, our company provide warranty card accompanied with the device. Please Keep this warranty card properly to enjoy the after-sales service.

1. One year warranty will be offered from purchased date.
2. Below circumstances is not applied for warranty:
 - A. Due to abused use or damage due to manual behavior.
 - B. The damage due to severe vibration during user's transportation;
3. Corresponding repair charges will be charged without warranty card.
4. When the repair is needed, the user must fill the warranty card carefully and post it back to our company.