



Laser Distance Meter ALM40 Operational Manual

Thank you for purchasing our ALM40 hand-held laser distance meter.

! Please read the terms and instructions carefully before using the instrument for the first time.

1.Safety rules

△ Before using the instrument, please read all clauses and operating instructions in this manual carefully. Failure to follow the operating instructions may cause damage to the instrument, affect the measuring accuracy, or cause personal injury to the user or a third party.

△ Do not attempt to open or repair the instrument by yourself in any way. It is strictly prohibited to illegally modify or change the performance of the instrument laser transmitter. Please take good care of the instrument. Do not put it in a place where children can reach it. Do not use it by irrelevant persons.

It is forbidden to illuminate the eyes and other parts of the body with the instrument laser. It is forbidden to illuminate the laser on the surface of strongly reflective objects.

△ Do not place the instrument within the reach of children.

Do not repair this instrument without authorization. If the instrument is damaged, contact your local dealer

Electromagnetic radiation may interfere with local equipment or devices (e.g. medical devices such as pacemakers or hearing AIDS).

• Do not use this instrument in flammable or explosive environment.

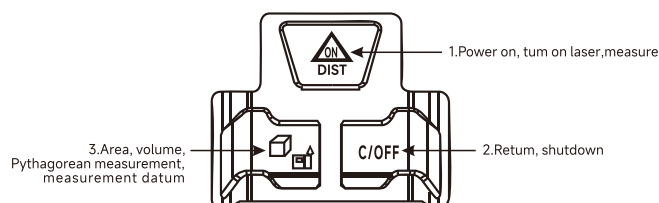
• Do not use this instrument near medical equipment.

• Do not use this instrument on aircraft.

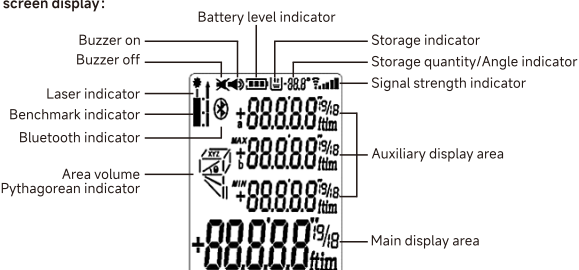
Dispose of discarded instruments in accordance with the law of your locality.

2.Buttons and display

Buttons:



Full screen display:



3.Starting up

Install/replace batteries:

Open the battery compartment cover, put the battery into the battery compartment correctly, and cover back the battery compartment cover. When the battery power is too low, the icon representing low battery power will appear on the display screen. Please replace the battery as soon as possible. Carbon or alkaline batteries can be used normally, and the measurement times of carbon batteries will be relatively reduced.

- Remove the battery when it is not in use for a long time.
- Lithium battery can be directly turned on for use. If the voltage is too low, please timely charge the instrument.
- When the battery level indicator is displayed, it indicates that the battery level is low and the battery needs to be replaced.

4.Operation

• **Start the machine:** Press the first button in the shutdown state for about 0.5 seconds to start the machine. When no button is pressed, It will turn off the backlight automatically after about 15 seconds.

• **Turn on laser/measurement:** when the machine is on, short press the first key to turn on the laser or measure the distance, long press the key to enter the continuous measurement mode. The display icon " " on the display screen indicates the strength of measured reflected signal, and the number of displayed segments decreases, indicating the relative weakness of measured reflected signal.

• **Benchmark switch:** long press the third key for about 2 seconds in the machine on state to switch benchmark, and restore the default benchmark after restarting.

• **Shutdown:** when the machine is on, press the second button for about 1 second to shut it down. When no button is pressed, it will shut down automatically after 45 seconds.

• **Setting up:** long press the first key for about 5 seconds to enter the setting state in the shutdown state, and the measured value can be corrected within the range of +/-7mm; Can be set in metric or imperial units; Can set backlight and buzzer. Press the first key for about 1 second during setting time to switch Settings, and short press the first key to adjust set value

Area measurement:

Short press the third key, display screen will display the icon " ", prompt to enter area measurement mode, at this time the long sides of the rectangle icon flashing, after locking measurement point, press the button on the first side long measurement, and then in the second side of the rectangle icon flashing, locking points again, press button on the second side length measurement, the instrument will automatically area calculation, calculation result is displayed in the main display area, the first and second side length measurement results show that in the auxiliary display area.

Volume measurement

Short press the third button until the icon " " appears on the display screen, indicating that the volume measurement mode is entered, and the volume measurement is completed according to the operation similar to area measurement.

Pythagorean measurement

The instrument presets three modes of measuring the length of the right side of a triangle by using Pythagorean theorem, including " ", " ", and " ". Short press the third button until the corresponding function icon appears on the display screen, and complete the corresponding function measurement according to the operation of similar area measurement.

Note: in the Pythagorean theorem measurement mode, the right Angle side must be less than the hypotenuse length, otherwise the instrument will prompt the error message "D.E".

5.Prompt code and solution

In the process of using the instrument, the following prompt information may appear:

Information	Cause	Solution method
B.L	Battery voltage is too low	Replace or charge the battery
T.L	The temperature is too low	Heat up the instrument
T.H	The temperature is too high	Cool the instrument
D.E	Measurement data error	Over range or Pythagorean measurement error

6.Technical data

Accuracy of measurement	±5mm*
unit	m/in/ft
Measuring range (no reflector)	0.03-40m**
Measuring time	0.3-4 seconds
Laser type	620~670nm, <1mw
Self-closing laser	15 seconds
Automatic shutdown	45 seconds
Display lighting	White LED
Switch of measurement datum	✓
Power display	✓
Battery type and life	2*1.5V AAA Alkaline batteries, Single measurement, about 5,000 times
Product size	90*40*24mm
The weight of the product	---
Operating temperature range	0 C° ~ 40 C°
Storage temperature range	-20 C° ~ 60 C°

* Under good measuring conditions (good measuring surface, room temperature), the measurement error can be up to 10 meters, and under bad measuring conditions (such as too strong ambient light, too large or too small diffuse reflection coefficient of the measured point, too large temperature difference, etc.), the measurement error can be up to ±0.25mm/m.

**In the case of strong daylight or poor reflection of the target, please use the aiming board!

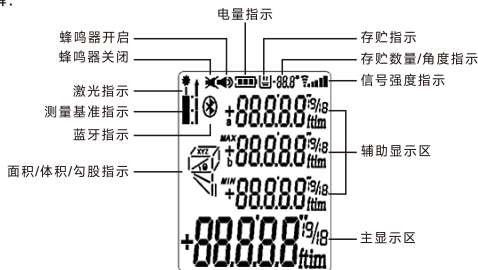
7.Maintenance

Do not immerse the instrument in water. Use a wet soft cloth to wipe dirt off the surface. Do not use an aggressive lotion. Wipe the surfaces of the optical parts (including the laser exit window and the signal receiving lens) in the same way as you would wipe glasses and camera lenses.



激光测距仪 ALM40 操作手册

显示屏：



3.启动

安装/更换电池

打开电池仓盖，把电池正确地放入电池仓，盖回电池仓盖。当电池电量过低时，代表电池电量过低的图标将会出现在显示屏上，此时请尽快更换新电池。

- 碳性或碱性电池均可正常使用，相比碱性电池而言，碳性电池的测量次数会相对少些。
- 在长期不用时，请将电池取出。
- 当电池电量指示符显示。

4.操作

- **启动：**关机状态下长按第1键约0.5秒钟开机，无按键操作15秒后自动关闭背光。
- **打开激光/测量：**开机状态下短按第1键则打开激光或测距，长按则进入连续测量。显示屏上显示 表示测量反射信号的强弱，显示的段数减少，表示测量反射信号强度相对减弱。
- **基准切换：**开机状态下长按第3键约2秒则切换基准，重新开机后恢复默认基准。
- **关机：**开机状态下长按第2键约1秒关机，无按键操作45秒后自动关机。
- **设置：**关机状态下长按第1键约5秒进入设置状态，可在 ± 7 mm范围内对测量值进行校正；可对公制或英制单位进行设置；可对背光及蜂鸣器进行设置。在设置时长按第1键约1秒为切换设置项，短按第1键为调整设置值。

面积测量：

短按第3键，显示屏会显示图标 ，表示进入面积测量模式，此时矩形图标的长边闪烁，锁定测量点后，按测量键进行第一边长的测量，然后矩形图标的第二边闪烁，再次锁定测量点，按测量键进行第二边长的测量，仪器会自动进行面积计算，计算结果显示在主显示区，第一和第二边长的测量结果显示在辅助显示区。

感谢您购买本公司ALM40手持激光测距仪

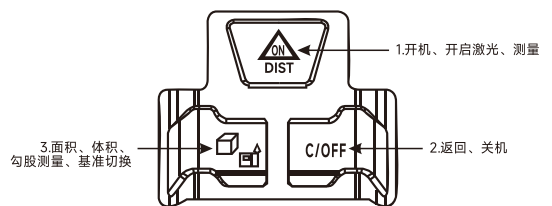
初次使用本产品前，请先仔细阅读安全条款和使用说明。

1.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：起搏器或助听器医疗仪器）。
 - 不要在易燃、易爆的环境中使用的本仪器。
 - 不要在医疗设备附近使用本仪器。
 - 不要在飞机上使用本仪器。
- △ 请按照您所在地的法规来处置废弃的仪器。

2.按键及显示

按键：



体积测量

短按第3键，直到显示屏出现图标 ，表示进入体积测量模式，根据类似面积测量的操作完成体积测量。

勾股测量

仪器预设三种利用勾股定理测量三角形直角边长度的模式，包括：“”，“”，“”，短按第3键，直到显示屏出现相应的功能图标，根据类似面积测量的操作完成相应的功能测量。

注意：勾股测量模式下，直角边必须小于斜边长度，否则仪器会提示错误信息“D.E”。

5.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	更换新电池或充电
T.L	温度过低	给仪器升温
T.H	温度过高	给仪器降温
D.E	测量数据错误	超量程或勾股测量错误

6.技术参数

测量精度	$\pm 5\text{mm}^*$
单位	M(米)/ft(英尺)/in(英寸)
测量范围（无反射板）	0.03-40m** (推荐量程选择)
测量时间	0.3-4秒
激光类型	620~670nm, <1mw
自动关闭激光	15秒
自动关机	45秒
显示照明	白色LED
测量基准切换	✓
电量显示	✓
电池类型及寿命	2*1.5V AAA碱性电池， 单次测量5000次左右
产品尺寸	90*40*24mm
产品重量	---
操作温度	0°C ~ 40°C
储存温度	-20°C ~ 60°C

* 在良好测量条件（良好的测量表面，室温）下可至10米，在不良测量条件下（如环境光线过强、被测点漫反射系数过大或过小、温差过大等），测量误差可达 $\pm 0.25\text{mm/m}$ 。

** 在强烈日光或者目标反光不好的情况下，请使用觇板！

7.保养

禁止将仪器浸入水中，可用湿的软布擦拭表面灰尘，不要使用侵蚀性洗液。按照擦拭眼镜和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）。