

深达威[®]手持式激光测距仪 用户手册





产品执行标准: GB/T 14267-2009



2016L197-44

安全条例

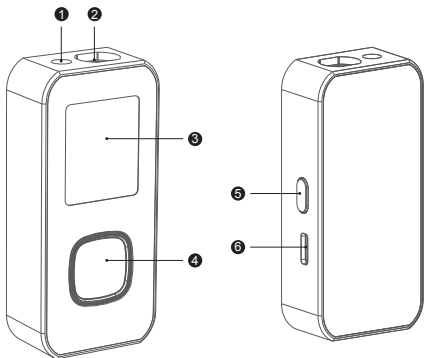
初次使用仪器前，请先仔细阅读安全条款和操作指南

- ⚠ 在使用仪器之前请仔细阅读本手册中的所有操作指南和安全条例，没有按照本手册所指引的操作方法使用仪器有可能会造成仪器的损害、影响测量精度、对使用者或第三者的人身伤害。
- ⚠ 不要用任何方式自行打开或修理仪器，严禁非法改装或改变仪器激光发射器的性能。请妥善保管仪器，不要放置在儿童可以接触到的地方，避免无关人员的使用。
- ⚠ 严禁用仪器激光器照射自己或他人的眼睛及身体其他部位，严禁将激光器照射在高反光的物体表面上。
- ⚠ 仪器电磁辐射可能对其他设备和装置造成干扰，请不要在飞机或医疗设备附近使用本仪器，不要在易燃、易爆的环境中使用仪器。
- ⚠ 报废的仪器不可与生活垃圾一同处理，请按国家或者当地的相关法律规定处理。
- ⚠ 仪器出现任何的质量问题，或对使用仪器有任何疑问时请及时联系当地经销商或仪器生产厂家，我们将第一时间为您解决。

感谢您购买 **SNDWAY** 深达威® 仪器 手持式激光测距仪系列产品!

专业铸造品质 品质成就品牌

产品介绍



① 激光发射镜头

② 激光接收镜头

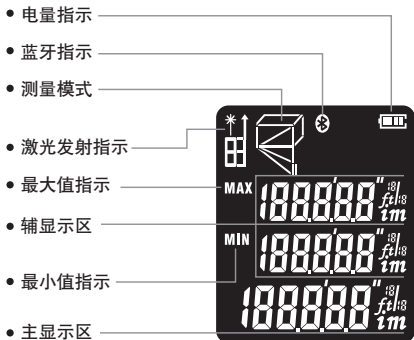
③ 显示屏

④ 电源/测量按键

⑤ 模式切换按键


⑥ Type-C充电口


屏幕显示




启动仪器、功能设置

● 启动仪器和关闭仪器

关机状态下，按  键，仪器和激光同时启动，仪器进入待测模式。

开机状态下，长按  键3s关机，或者无操作150s自动关机。


● 单位设定

激光关闭时，长按  键，切换单位，本机默认的单位为：0.000m，
该仪器提供了3种单位可供选择。

测量单位：

	长 度	面积	体积
1	0.000 m	0.000 m ²	0.000 m ³
2	0.0 in	0.00 ft ²	0.00 ft ³
3	0.00 ft	0.00 ft ²	0.00 ft ³

● 测量基准设置

激光打开时，长按  键进行设置前端基准和末端基准的相互转换，系统默认为末端基准。

● 电池





内置3.7V 370mAh锂电池，低电时电池图标会闪烁。

自助校准、声音开关

● 自助校准功能



自助校准功能主要用于修正数据，当用户测量距离发生偏差时，可用该功能修正距离，修正范围：

-0.009~0.009m。比如用户认为偏大2mm，可将此值调整值-0.002m，即可补偿2mm；反之偏小2mm，则调整至0.002m。操作如下：



1. 进入自助校准：关机状态下，按住 ，同时快速短按一次  开机，屏幕显示“CAL”；
2. 修改校准值：短按 ，校准值+1，校准值等于0.009m时，再次+1，跳转至-0.009m。
3. 保存校准值：短按 ，保存当前校准值，并进入声音设置；

● 声音的开启/关闭


仪器出厂默认带有声音提示功能，用户可根据需要开关声音提示。



1. 进入声音开关设置：参考《自助校准》部分，进入自助校准，跳过修改校准值，直接保存校准值，进入声音设置，屏幕显示“Sound”；
2. 切换声音开关：短按  切换声音开关，on表示开，off表示关；
3. 保存设置：短按  保存设置，并返回到待测量状态。

单次测量



待测模式下短按  键，仪器激光发射，将激光对准测量目标。再按  键进行距离测量，测量结果显示在主显示区。


连续测量


待测模式下长按  键，屏幕会闪烁显示max/min图标，此时松开按键（不松开按键，3s后关机），进入连续测量。屏幕上辅助显示区会显示此次连续测量过程中的最大测量值和最小值。

主显示区会显示当前测量值，短按  键或  键退出连续测量模式。

面积测量



按  键一次，屏幕会显示 ，长方形一条边闪烁。根据提示完成下列操作：


按  键进行第一条边的测量（长）


按  键进行第二条边的测量（宽）

仪器会自动进行面积运算，结果显示在主显示区。辅助显示区显示长方形的长和宽的测量值。

周长测量



按  键两次，屏幕会显示 ，平行四边形一条边闪烁 根据提示完成下列操作：


按  键进行第一条边的测量（长）


按  键进行第二条边的测量（宽）


仪器会自动进行周长的运算，结果显示在主显示区。辅助显示区显示平行四边形的长和宽的测量值。

体积测量

按  键三次，系统进入体积测量状态，仪器进入体积状态，屏幕上会显示一个立方体 ，长闪烁，根据提示完成下列操作：



按  键进行第一条边的测量（长）

按  键进行第二条边的测量（高）


按  键进行第三条边的测量（宽）

仪器会自动进行体积运算，结果显示在主显示区。
辅助显示区显示立方体的高宽的测量值。

墙面面积测量


按  四次，屏幕显示 ，根据提示完成下列操作。

按  键，测得墙面的高度；

按  键，测得墙面1的宽度1；


仪器会自动计算墙面的面积=高度×宽度1；

按  键，开始测量；

再按  键，测得墙面2的宽度2；

仪器会自动计算墙面的面积总和

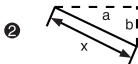
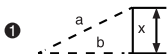
面积总和=高度×(宽度1+宽度2)

依次类推，按  键，测得墙面n的宽度n；

面积总和=高度×(宽度1+宽度2+.....+宽度n)；



勾股定理间接测量



仪器预设有两种利用勾股定理测量三角形单边距离模式，方便用户在特定复杂环境下进行间接测量。

① 测斜边和底，间接测量高度

仪器短按  键五次进入该三角间接测量模式：

按  键依屏幕提示先测出虚线斜边的长度(a)

按  键测出虚线直角边(底边)的长度(b)

仪器自动计算实线直角边(高)的长度(x)

② 测量直角三角形两直角边，间接测量斜边长度



点击  键六次，屏幕显示： 直角边闪烁

按  键依屏幕提示测出一条虚线的长度(a)

按  键测出另一条虚线角边的长度(b)

仪器自动计算实线斜边的长度(x)

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号提示。在勾股测量模式下，为保证测量的精度，须确保从同一个起始点测量，并按斜边、直角边测量顺序测量。

量房到初步方案设计助手APP(仅限带蓝牙款)

APP下载:

- 1) Android 应用市场搜索【知户型】下载;
IOS APP Store 搜索【知户型】下载;
- 2) 扫描二维码下载



激光测距仪通过APP方便实现:

- 1) 智能终端测距仪轻松互联, 实时测量及数据共享, 无需协助一个人就能轻松量房;
- 2) 移动端协同设计, 快速现场出图, 导出CAD/3Dmax等专业文件, 无缝协同主流设计软件;
- 3) 专属权限激活路径:
测距仪保持开机 → 打开知户型APP → 左上角进入个人中心 → 激活码 → 硬件(立即激活) → 连接测距仪, 激活专属权限

提示信息

使用过程中, 主显示区可能会出现如下提示信息:

信息	原因	解决方法
Err	超出距离测量范围	让仪器在量程范围内使用
Err1	信号过弱	测量反射能力强的目标点
Err2	信号过强	测量反射能力弱的目标点
Err3	电池电压过低	对电池进行充电
Err4	超出工作温度范围	让仪器在指定环境中使用
Err5	勾股测量违规	重新测量, 确保斜边大于直角边

技术参数

项目	SW-24A	SW-24B	SW-25A	SW-25B	SW-26A	SW-26B
距离测量范围	0.05-40m		0.05-50m		0.05-60m	
距离测量精度	±(2mm+d*1/10000)*					
蓝牙	X	✓	X	✓	X	✓
连续测量功能	✓					
面积体积测量	✓					
墙面面积测量	✓					
周长测量	✓					
勾股测量功能	✓					
最大/最小值	✓					
激光等级	II					
激光类型	630-670nm, <1mW					
自动切断激光	20秒(单次测量)					
自动关机	150秒					
充电规格	DC5V 0.35A					
电池	3.7V 370mAh锂电池					
满电测量次数	3500次					
存储温度范围	-20℃~60℃					
工作温度范围	0℃~40℃					
存储湿度	20%~80% RH					
重量	65g					
外形尺寸	80x37x20mm					

* “d” 表示实际距离

** 在恶劣环境下如：阳光过于强烈。环境温度波动过大，反射面反射效果较弱，电池电量不足的情况下测量结果会有较大的误差，此种情况配合目标反射板使用效果更佳。

仪器日常保养

- 禁止将仪器长期放置在高温高湿的环境中储存，长期不使用仪器时，请把仪器放置在随机的仪器盒内放在阴凉干爽处存放。
- 请保持仪器表面清洁，可用湿的软布擦拭表面灰尘，不可用带有腐蚀性洗液清洁仪器。可按照擦拭光学器件表的方法擦拭激光器窗口和聚焦镜。

装箱清单

购买仪器时请按下列清单认真检查仪器所有附件是否完整？

项目	名称	单位	数量	备注
1	主机	台	1	
2	说明书	本	1	内含保修合格证
3	彩盒	个	1	
4	充电线	条	1	

保修条例

1. 顾客自购买产品之日起本公司提供1年保修服务。
2. 以下情况不在保修之列：
 - ◎ 人为损坏或使用保管不当引起的损坏
 - ◎ 非经本公司授权的服务机构私自维修、改装或拆卸而导致的故障或损坏
 - ◎ 私自涂改购机凭证、合格证/保修卡
 - ◎ 显示屏（LCD）损坏
 - ◎ 机身编号被删改的产品
3. 保修时必须提供填有产品型号、机身编号、购买日期的保修卡。
4. 本保修卡只适用于中国境内，维修时请出示保修卡。
5. 保修卡遗失恕不补发，敬请妥善保管。
6. 对维修是否享受本公司承诺的服务，最终裁决权在本公司指定的各地维修中心。

合格证

执行标准：GB/T 14267-2009


检验结果：_____

检 验 员：_____



售后保修卡

本证请于购机后向经销单位盖章方为有效，过期作废，谢谢合作！

产品型号		经销单位盖章
产品名称		
经销单位		
使用单位		
地 址		
发票日期		

维修部分填写

日 期	
保修项目	
摘 要	
维 修 员	

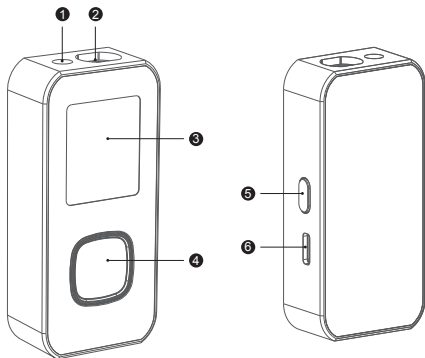


Safety Regulations

Please read the safety regulations and operation guide carefully before operating.

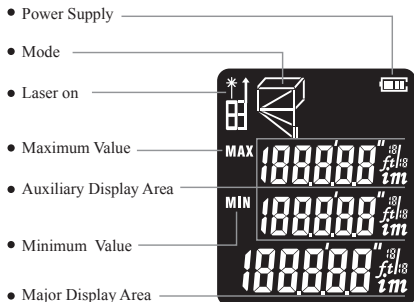
- ⚠ Please read all of the operational guide and safety regulations in this manual before operation . Improper operations without complying with this manual may cause damage to the device, influence on measurement result or cause personal injury to the user or a third party.
- ⚠ The instrument is not allowed to disassemble or repair in any ways. It is forbidden to do any illegal modification or performance change for laser emitter. Please keep it out of reach of children and avoid being used by any irrelevant person.
- ⚠ It is strictly prohibited to shoot eyes or other parts of body with the laser. It is not allowed to take the laser to shoot the surface of any highly reflective objects.
- ⚠ Due to electromagnetic radiation interference to other equipment and devices, please don't use the meter in the plane or around medical equipment, don't use it in inflammable, explosive environment.
- ⚠ Discarded meter device should not be processed just like household garbage, please handle it in line with related law and regulations.
- ⚠ Any quality issues or any questions on the meter, please contact local distributors or manufacturer in time, we are ready to offer solutions for you.

Product Overview




- | | |
|------------------------|------------------------|
| ❶ Laser Emitting Lens | ❹ Power/Measure Button |
| ❷ Laser Receiving Lens | ❺ Mode Switch |
| ❸ LCD | ❻ Type-C Charging Port |


Display




Start the Instrument / Menu Setting

● Turn on/off the Instrument

Under off state, press , device and laser get started simultaneously and the device enters the measurement mode.

Under on state, long press  for 3s to turn off the device, or it will automatically shut off without any operation within 150 seconds.


● Unit Setting

When the laser is turned off, long press  to switch the measurement unit. The default unit is: 0.000m. There are 3 units for selection.

Measurement units:

	Length	Area	Volume
1	0.000m	0.000 m ²	0.000 m ³
2	0.0 in	0.00 ft ²	0.00 ft ³
3	0.00 ft	0.00 ft ²	0.00 ft ³

● Changing Reference Point

When the laser is turned on, long press  to change the reference point. The default reference point is the terminal baseline.

● Battery





Built-in 3.7V 370mAh lithium battery, the battery icon will flash when the battery is low.

Self-calibration & Sound on/off

● Self-calibration Function



The self-calibration function is mainly used to correct data. If the deviation occurs when the user measures the distance, this function can be used for distance correction.

The correction range is $-0.009 \sim 0.009\text{m}$. For example, if the data is 2mm too large, reduce the value by 0.002m; If the data is 2mm smaller, increase the value by 0.002m.
Operation:



1. Enter self-calibration: In the shutdown state, press and hold the  key, and at the same time quickly press the  key to start the instrument up, and the screen displays "CAL";
2. Modify calibration value: Press  key to increase the calibration value by 1. When the calibration value is equal to 0.009m, increase the calibration value by 1 again and jump to -0.009m.
3. Save calibration value: Press  to save the current calibration value and enter the sound setting.

● Sound on/off


The instrument is equipped with sound prompt function by default. Users can turn on/ off the sound prompt according to their needs.



1. Enter sound setting: Refer to "Self-calibration" to enter the self-calibration. Skip the step of modifying the calibration value, save the calibration value directly to enter the sound setting, and the screen displays "sound";
2. Turn on/off sound: Press  to turn the sound on or off. "on" means to turn on the sound, off means to turn off the sound;
3. Save settings: Press  to save settings and return to the state to be measured.

Single Measurement



Under the test mode, press , and the instrument emits laser to lock the measuring point. Press  again for single distance measurement, and the measurement result will be displayed in the major display area.

Continuous Measurement

Under the test mode, long press  and max/min will flash on the screen, then release the key to enter the continuous measurement mode, and the maximum and minimum measured values measured in the continuous measurement process will display in the auxiliary display area.

The current measurement value will display in the main display area. Short press  or  to exit the continuous measurement mode.

Area Measurement



Press ,  shows at the screen. One of the side of rectangle blinks at the display, please follow the below instructions for area measurement:

Press  once for length

Press  again for width

The device automatically calculates the area and shows the result in the major display area. The measuring results of the length and width of the rectangle will be showed in the auxiliary display area.

Perimeter Measurement

Press  twice,  shows at the screen. One of the side of the parallelogram blinks at the display, please follow the below instructions for perimeter measurement:


Press  once for length

Press  again for width

The device automatically calculates the perimeter and shows the result in the major display area. The measuring results of the length and width of the parallelogram will be showed in the auxiliary display area.


Volume Measurement

Press  three to enter volume measurement mode.

A  will show at the top of the screen, and its long sides will blink. Please follow the below instructions for volume measurement:



Press  once for length

Press  again for height


Press  finally for width

The device automatically calculates the volume and shows the result in the major display area. The measuring results of the height and width of the cube will be showed in the auxiliary display area.


Metope Area Measurement


Press  four times till  shows at the display.
Please follow the below instructions for metope area measurement:

Press  once for the height of the wall;

Press  again for the width 1 of wall 1;


The instrument will automatically calculate the area of the wall: $\text{Area} = \text{Height} \times \text{Width 1}$

Press  to start the measurement;

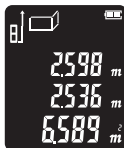
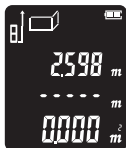
Press  again for the width2 of wall 2;

The instrument will automatically calculate the total area of the wall:

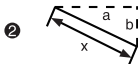
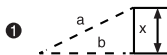
$\text{Total area} = \text{Height} \times (\text{Width 1} + \text{Width 2})$

By analogy, press  to measure the width(n) of the wall (n);

$\text{Total area} = \text{Height} \times (\text{Width 1} + \text{Width 2} + \dots + \text{Width n})$




Pythagoras



There are two Pythagoras modes which is convenient for indirect measurement in a specific complex environment.

- ① Calculate the second leg by measuring the hypotenuse and another leg.

Short press  five times to enter Pythagoras mode:



Press , measure the length of hypotenuse (a)

Press , measure the length of one leg (b)

Device automatically calculates the length of another leg (x)

- ② Calculate the hypotenuse by measuring the length of two legs.

Short press  six times, one leg of  is blinking.

Press , measure the length of one leg (a)

Press , measure the length of another leg (b)

Device automatically calculates the length of hypotenuse (x)

Legs must be shorter than hypotenuse, or there will be "err" showed at screen. In order to guarantee the accuracy, please make sure all measurements are started from the same point and in the order of hypotenuse and legs.

Tips

During use, the following prompts may be displayed in the major display area:

Prompt	Cause	Solution
Err	Out of the measurement range	Use the device within the measurement range
Err1	Signal is too weak	Choose the surface with stronger reflection. Use the reflecting plate.
Err2	Signal is too strong	Choose the surface with weaker reflection.
Err3	Low battery voltage	Charge the battery
Err4	Beyond working temperature	Use the device in the specified temperature.
Err5	Pythagoras measuring breaks the rules	Re-measure and ensure that hypotenuse is longer than legs.

Technology Specifications

ITEM	SW-24A	SW-25A	SW-26A
Measurement Range	0.05-40m	0.05-50m	0.05-60m
Precision	$\pm(2\text{mm}+d*1/10000)$ *		
Continuous Measurement	√		
Metope Area Measurement	√		
Area/Volume Measurement	√		
Perimeter Measurement	√		
Pythagorean Measurement	√		
Min/Max Value	√		
Laser Level	II		
Laser Type	630-670nm,<1mW		
Automatically Cut off Laser	20s (single measurement)		
Auto Power-off	150s		
Charging Specification	DC5V 0.35A		
Battery	3.7V 370mAh lithium battery		
Full charge measurement times	3500 times for single measurement		
Storage Temperature	-20°C~60°C		
Working Temperature	0°C~40°C		
Storage Humidity	20%~80% RH		
Weight	65g		
Dimension	80x37x20mm		

* "d" indicates the actual distance.

** In harsh environment, such as: sunlight is too strong, the ambient temperature fluctuates excessively, the reflection effect of the object's surface is weak, the battery is low, the measurement results will have a large error, so a reflecting plate is needed.

Instrument Maintenance

- The meter should not be stored in high temperature and humid environment for a long time. If it is not used very often, please place the meter in the box and store it in cool and dry place.
- Please keep the device surface clean. Use a soft wet cloth to wipe the dust on the surface. Do not use corrosive liquid to clean the device. Use the same method as wiping optical devices to wipe the meter and focusing mirror.

Packing List

Please check if all accessories are complete according to the following list.

No.	Item	Unit	QTY	Note
1	Meter	pc	1	
2	User Manual	pc	1	
3	Gift Box	pc	1	
4	Charging Cable	pc	1	

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