

# 十字线激光标线仪 Cross Line Laser

用户手册  
User's Manual





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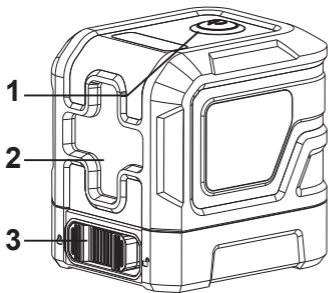
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# 用户须知

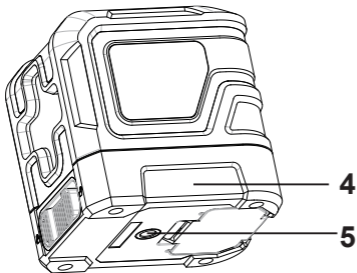
- ◆ 本手册详细介绍了产品的使用方法、注意事项以及相关事项，在使用产品之前，请仔细阅读手册，以便发挥产品的最佳效能。
- ◆ 不要在易燃、易爆的环境中使用仪器。
- ◆ 报废的仪器不可与生活垃圾一同处理，请按国家或者当地的相关法律规定处理。
- ◆ 仪器出现任何的质量问题，或对使用仪器有任何疑问时，请及时联系当地经销商或深达威厂家，我们将第一时间为您解决。

# 仪器结构

## 1>> SW-511R SW-511G

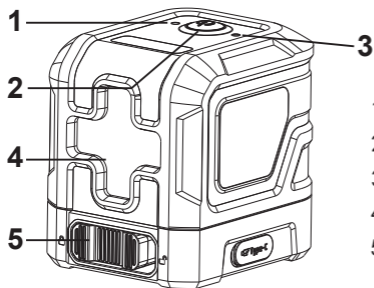


- 1. 电源键
- 2. 激光发射窗
- 3. 锁紧开关

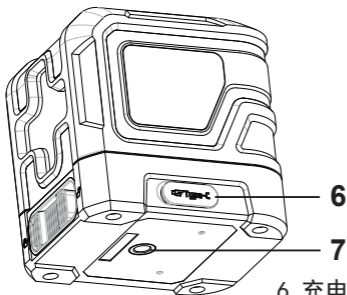


- 4. 电池仓
- 5. 1/4英寸转接螺孔

## 2>> SW-521R SW-521G



1. 低电指示灯
2. 电源键
3. 电源指示灯
4. 激光发射窗
5. 锁紧开关



6. 充电口
7. 1/4英寸转接螺孔

## 安全信息

### 安全警告信息：

- 在使用本产品前请务必仔细阅读此用户手册及其相关安全信息。使用者必须完全理解并按相关指导进行操作。

### 安全注意信息：

- 操作时，请勿将眼部暴露于出射的激光光束中（红色或绿色光源）。长时间暴露于激光光束可能会导致眼部的损伤。

### 安全注意信息：

- 某些产品套装中会提供附件眼镜，注意此类眼镜并非安全眼镜，其仅为帮助使用者在较强环境光线或距激光仪器光源较远时较易辨认激光光束之用。



### 安全警告信息：

- 请勿直视或通过光学仪器直接观察激光光束或将仪器设置在目视高度（需避免将眼部直接暴露于激光束下可能造成的伤害）。
- 切勿擅自拆卸激光仪器，激光仪器内并无用户可维修的部件。

- 切勿以任何方式擅自改制仪器，擅自改制仪器可能会造成有害的激光辐射暴露。
- 切勿在孩童周围使用激光仪器或任其使用激光仪器。否则会导致严重的眼部损伤
- 暴露于2级激光最大时间不超过2秒通常认为是安全的，眼睑自然反射（眨动）通常可以提供足够的保护。

## 操作模式

### 总述信息：

- 拨动开关拨至 ，仪器进入锁定状态：短按电源键切换1/2/3档激光亮度，开机后，激光线射出（默认3档亮度）并以5秒每次的频率闪烁；长按电源键1s自动关机。
- 拨动开关拨至 ，仪器进入解锁状态：激光自动点亮，短按电源键切换1/2/3档激光亮度，当仪器超出其整平范围（ $4^{\circ} \pm 1^{\circ}$ ）时，激光光束将快速闪烁。



## 自整平模式

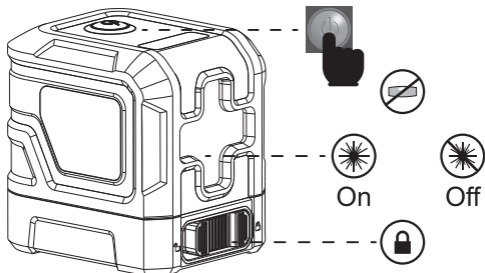
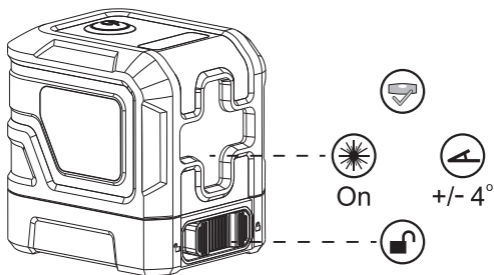
- 当仪器机芯在解锁状态时，仪器的自整平工作模式方可开启。

## 手动模式

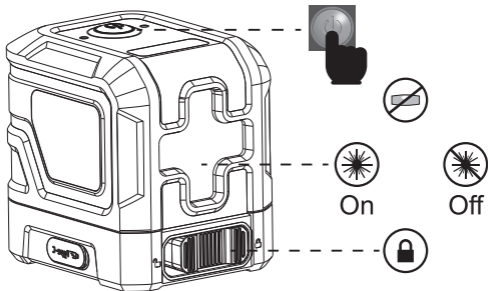
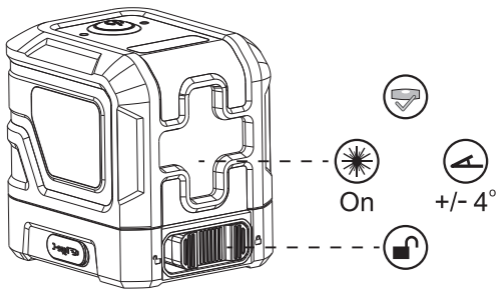
- 当摆锤在其锁紧位置时短按电源键仪器开机后手动模式启动，激光线可根据需要设置成不同的角度，激光线将以5秒每次的频率闪烁。
- 手动模式下投射的激光线不可作为水平或铅垂参照。

注（仅适用于SW-521R/SW-521G）：当电池电量不足时，LED低电指示灯将红灯常亮，完全放电后将自动关机；充电时，LED电源指示灯将会以慢闪的形式来提醒用户仪器正在充电中，充满后，LED电源指示灯会切换至常亮状态。

# 1>> SW-511R SW-511G



## 2>> SW-521R SW-521G



## 用户指南、维护及保养

- 此激光仪器已在厂内按各项精度指标严格标定及封装。
- 建议用户在初次使用前进行精度检测，并在今后使用，特别是精度要求较高的放样操作期间进行定期的精度检测。
- 不使用仪器时，请关闭仪器并将仪器的摆锤锁紧加以保护。
- 手动模式时，自整平模式是关闭的，并不能确保激光光束精度可作为水平或铅垂的放样参照。
- 切勿将仪器置于直接日照或高温环境中。机壳及一些机芯部件是由塑料构成，在高温环境中可能会产生形变。
- 请使用湿布清洁外部塑料部件。尽管这些部件具有一定的抗溶剂性，但仍不建议使用溶剂进行擦拭。存储仪器前，请使用干软拭布擦除湿气。

- 不使用仪器时，应将其放回包装(如软包或塑箱)内存储保护。长时间不使用，先把仪器充满电，并每半年再充电一次，以免电池损坏。
- 切勿将此仪器处置于家用垃圾/废品中。
- 请遵守当地相关法令处置电池。
- 请遵照WEEE(废弃电子、电器设备指令)当地相关条例进行收集、处置此类电器、电子废旧设备。

## 技术参数

项目	SW-511R	SW-511G
产品类型	1V1H/2线	
激光类型	LD红光635nm±5nm	LD绿光515nm±5nm
激光等级	Class II	
激光器功率	≤1mW	
精度	±3mm/5m	±3mm/10m
整平范围	4°±1°	
整平时间	≤3s	
扩展角	H&V: 110°	
防护等级	IP54	
电池规格	2x1.5V AA	
工作温度	-10°C~50°C	
储存温度	-20°C~60°C	
尺寸	64x76x77mm	

项目	SW-521R	SW-521G
产品类型	1V1H/2线	
激光类型	LD红光635nm±5nm	LD绿光515nm±5nm
激光等级	Class II	
激光器功率	≤1mW	
精度	±3mm/5m	±3mm/10m
整平范围	4°±1°	
整平时间	≤3s	
扩展角	H&V: 110°	
防护等级	IP54	
充电方式	USB-C充电	
电源	内置3.7V 1400mAh锂电池	
工作温度	-10°C~50°C	
储存温度	-20°C~60°C	
尺寸	64x76x77mm	

## SW-511R/SW-511G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	L型支架	个	1	
3	AA电池	节	2	
4	说明书	本	1	
5	保修合格证	张	1	

检验员：

日期：

## SW-521R/SW-521G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	L型支架	个	1	
3	USB-C充电线	条	1	
4	说明书	本	1	
5	保修合格证	张	1	

检验员：

日期：

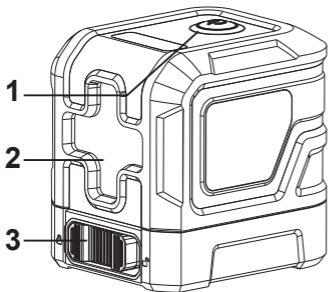


# User Instructions

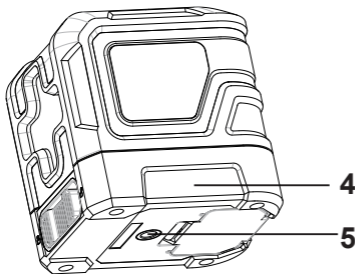
- ◆ This manual includes application method, attentions and other items about the product in detail. Please read it intently to make sure of its function playing perfect well.
- ◆ Do not use it in inflammable and explosive circumstance.
- ◆ Do not throw away the used battery with the normal household waste, please deal with it by national or local related law and regulations.
- ◆ If there are any troubles with quality, or any doubts about the use, please contact the local agent or us, we will solve it as soon as possible.

## Product Structure

### 1>>SW-511R SW-511G

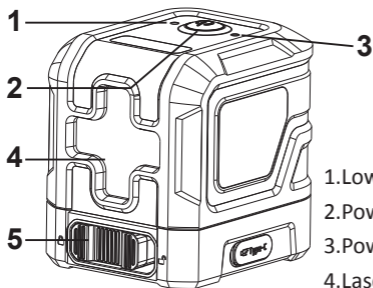


- 1.Power
- 2.Laser Windows
- 3.Lock/Unlock Switch

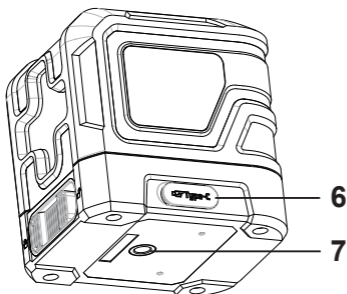


- 4.Battery compartment
- 5.1/4 Inch Switching Bolt Hole

## 2>> SW-521R SW-521G



- 1.Low Battery Indicator
- 2.Power
- 3.Power LED Indicator
- 4.Laser Windows
- 5.Lock/Unlock Switch



- 6.Charging Port
- 7.1/4 Inch Switching Bolt Hole

## Safety

### WARNING:

- Read the Safety Instructions and User Manual thoroughly before using this product. All users must fully understand and adhere to these instructions.

### CAUTION:

- While the product is in operation, be careful not to expose your eyes to the emitting laser beam (red or green laser source). Exposure to a laser beam for an extended time may be hazardous to your eyes.

### CAUTION:

- Glasses may be supplied in some of the laser equipment attachments. These are NOT certified safety glasses. These glasses are ONLY used to enhance visibility of beam in brighter environments or at greater distances from laser source.



### WARNING:

- Do not stare directly into the beam, view directly with optical instruments or set up the laser at eye level.

- Do not disassemble the laser equipment. There are no user maintenance parts inside.
- Do not modify the laser equipment in any way. Modifying the laser equipment may result in hazardous Laser Radiation Exposure.
- Do not operate the laser equipment around children or allow children to operate the laser equipment. Serious eye injury may result.
- An exposure to the beam of a Class 2 laser is considered safe for a maximum of 2 seconds. Eyelid reflexes will normally provide adequate protection.

## Operation Modes

### General Notes:

- Push the switch to , the laser equipment enter the lock mode: Press the power button to switch the laser capacity 1/2/3. After power on, laser beam shoots out (default 3 capacity) and flashes at a frequency of 5 seconds each time; long press the power button for 1 second to shutdown mode.
- When the push switch is set to the , the laser equipment enters the unlocked mode; the laser beam will be turned on automatically. Press the power button to switch the capacity 1/2/3. When the laser equipment exceeds its leveling range ( $4^{\circ}\pm 1^{\circ}$ ), the laser beam will flash rapidly.

### Plumb Mode

- Only when the laser equipment is switched to unlocked mode, the plumb function can be enabled.

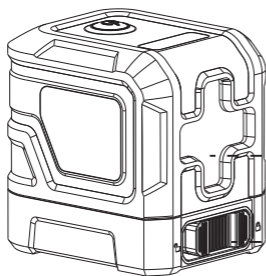
## Manual Mode

- When the pendulum is in its locking position, press the power button to turn on the laser equipment, and the manual mode starts. The laser beam can be set to different angles according to needs, and the laser beam will blink at a frequency of 5 seconds every time.
- Laser beam projected in manual mode cannot be used as horizontal or plumb reference.

Note (Only suitable for SW-521R /SW-521G) :

When the battery is low, the LED low power indicator will constantly be on with red light, and will automatically shut down after full discharge; When charging, the LED power indicator light will flash slowly to remind the user that the instrument is charging, after full, the LED power indicator light will switch to the steady state.

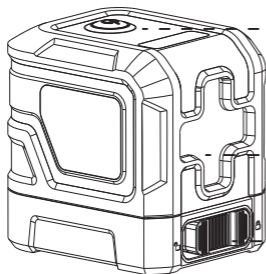
# 1>> SW-511R SW-511G



On



+/- 4°



On

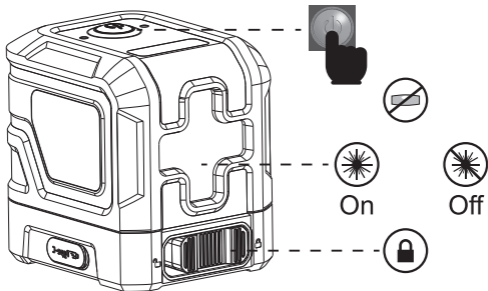
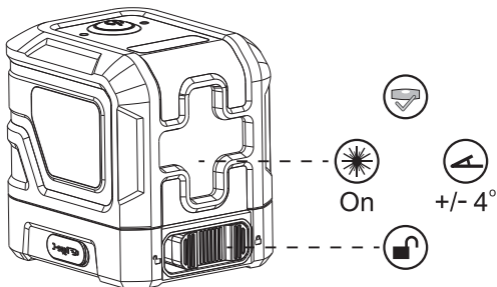


Off





## 2>> SW-521R SW-521G



## Guide & Maintenance

- The laser equipment is sealed and calibrated at the plant according to the specified accuracy indicators.
- It's recommended to carry out an accuracy check before its first use and periodic checks during future use especially during lofting operation.
- When not in use please power OFF the laser equipment and lock the pendulum for protection.
- In Manual Mode, plumb mode is OFF. The accuracy of the beam is not ensured to be level.
- Do not store the laser equipment in direct sunlight or expose it to high-temperature environment. The housing and some internal parts are made of plastics and may become deformed in high-temperature environment.
- Exterior plastic parts may be cleaned with a damp cloth. Although these parts are solvent resistant, NEVER use solvents. Use a soft, dry cloth to remove moisture from the laser equipment before storage.

- Store the laser equipment in its case when not in use. Keep it with full power if no operations for a long time, and charge it once every half a year to avoid the battery damage.
- Do not dispose of this product with household waste.
- Always dispose of batteries per local code.
- Please recycle in line with local provisions for the collection and disposal of electrical and electronic waste under the WEEE Directive.

## Specifications

Items	SW-511R	SW-511G
Product Type	1V+1H/2 Lines	
Laser Type	LD Red Laser 635nm±5nm	LD Green Laser 515nm±5nm
Laser Class	Class II	
Laser Power	≤1mW	
Accuracy	±3mm/5m	±3mm/10m
Levelling Range	4°±1°	
Levelling Time	≤3s	
Extension Angle	H&V: 110°	
Ingress Protection	IP54	
Battery specification	2x1.5V AA	
Operation Temperature	-10°C~50°C	
Storage Temperature	-20°C~60°C	
Dimension	64x76x77mm	

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Product Type	1V+1H/2 Lines	
Laser Type	LD Red Laser 635nm±5nm	LD Green Laser 515nm±5nm
Laser Class	Class II	
Laser Power	≤1mW	
Accuracy	±3mm/5m	±3mm/10m
Levelling Range	4°±1°	
Levelling Time	≤3s	
Extension Angle	H&V: 110°	
Ingress Protection	IP54	
Charging Mode	USB-C	
Power Source	Built-in 3.7V 1400mAh Lithium Battery	
Operation Temperature	-10°C~50°C	
Storage Temperature	-20°C~60°C	
Dimension	64x76x77mm	

## Packing List of SW-511R/SW-511G

Please check if there are all accessories according to the following list when purchasing this meter.

Items	Name	Unit	Quantity	Remark
1	The meter	PC	1	
2	L-bracket	PC	1	
3	AA battery	PC	2	
4	User manual	PC	1	

Inspector:

Date:

## Packing List of SW-521R/SW-521G

Please check if there are all accessories according to the following list when purchasing this meter.

Items	Name	Unit	Quantity	Remark
1	The meter	PC	1	
2	L-bracket	PC	1	
3	USB-C charging cable	PC	1	
4	User manual	PC	1	

Inspector:

Date:



**深达威科技(广东)股份有限公司**  
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