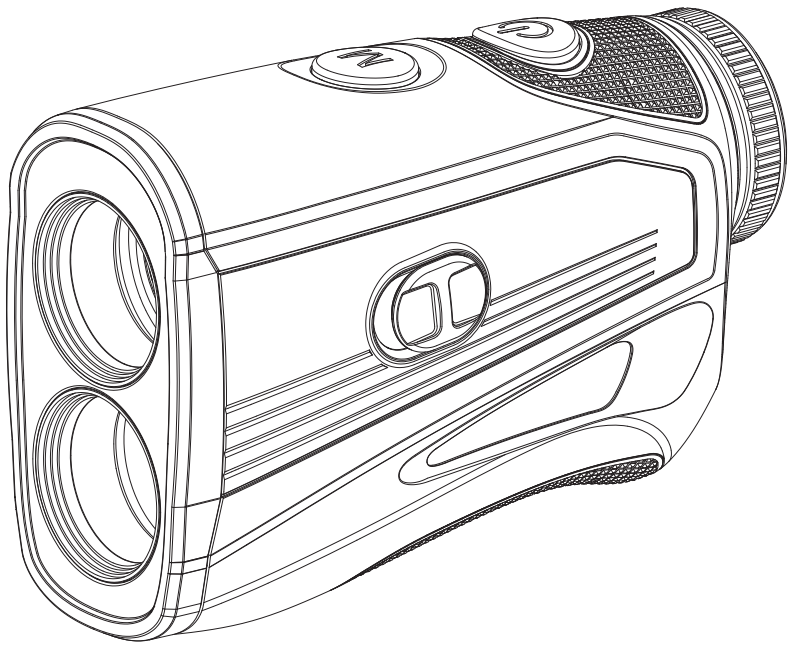
SNDWAY

Operation manual

手持式测距望远镜

Laser Rangefinder Telescope



SW-1000E　SW-1500E　SW-2000E

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产品执行标准：GB/T 14267-2009

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。

⚠ 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。

⚠ 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报废的仪器。

⚠ 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厂家，我们将第一时间为您解决。

产品介绍

本激光测距望远镜，是一种工程、高尔夫通用型仪器。全系配备扫描测量功能，可轻松识别远处细小目标，广泛应用于电力设备安装，如：电线、电线塔，高速公路，市政工程，林业勘察设计，建筑施工、网络规划勘测设计，通讯检修，狙击手，高尔夫，狩猎等户外各类测量。

产品优势

● 在清晰观察物体的同时，可测量固定或慢速运动物体在一定范围内的距离。具有测量精度高、测距时间短、距离显示直观、耗电低和自动断电等优点。

● 仪器的激光发射功率小、对人眼安全；不需要配对目标，可对任何目标测距；体积小，重量轻，便携。机内使用可循环充电锂电池供电。

产品特性

- 小巧，轻便，便携；
- 高精度，高速，低功耗；
- 1级脉冲激光，对眼睛无害；
- 静音操作，自动断电；
- 内置750mAh可循环充电锂电池；
- 旗杆锁定功能，方便测量细长目标；
- 高度和水平模式，应用于工程测量；
- OLED自发光屏，无惧环境明暗，屏显清晰可见。

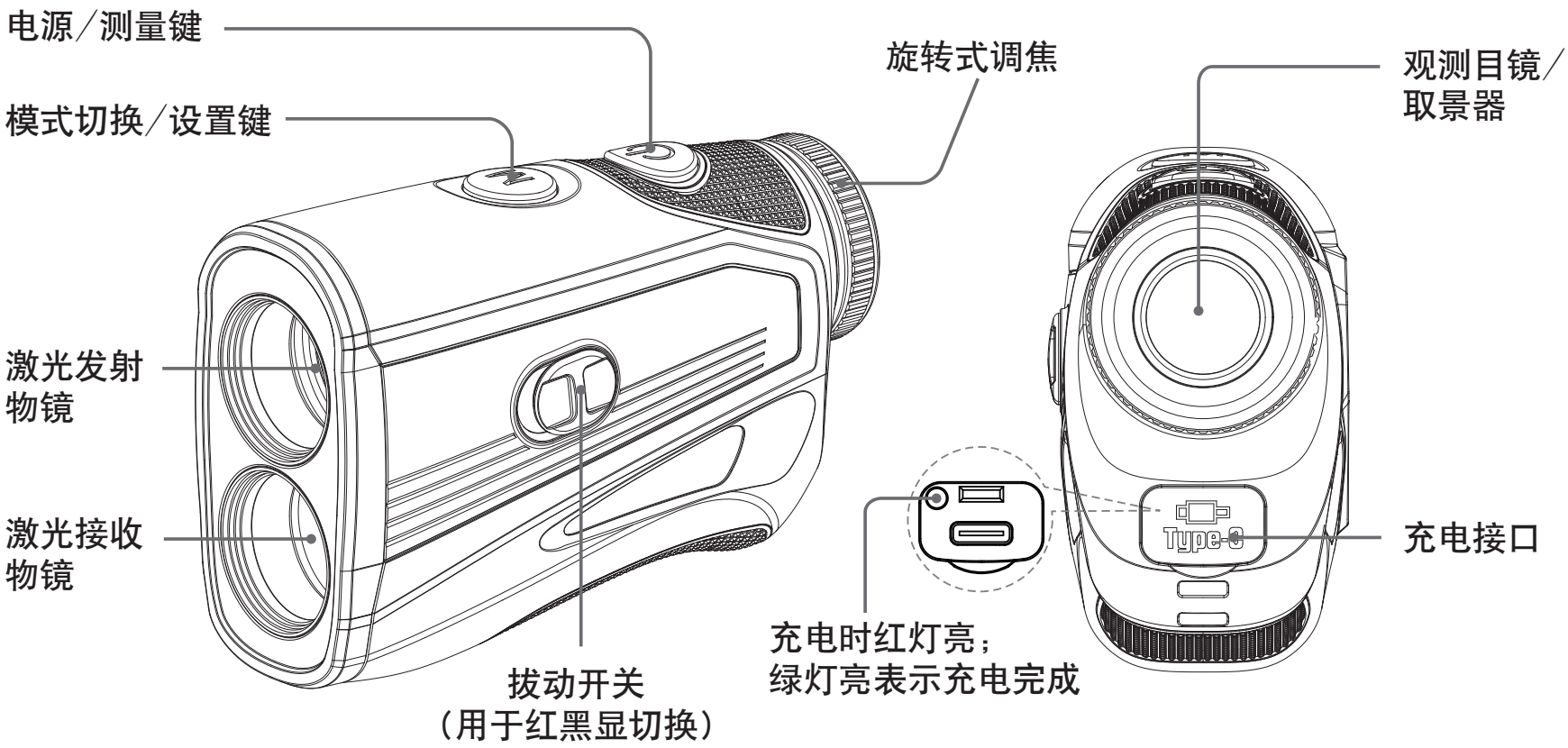
技术参数

产品型号	SW-1000E	SW-1500E	SW-2000E
测量范围	3-1000m	3-1500m	3-2000m
测量单位	m(Meter), Y(Yard)		
反应时间	<0.5s(<100m 0.3s;>700m 0.45s)		
测距精度	1.0m±D*0.3%		
望远镜倍率	6±5%X		
视场	7.0°		
物镜孔径	23.5mm		
目镜孔径	16mm		
出瞳直径	3.7±0.5mm		
视度调节范围	±6°屈光度		
显示屏	OLED		
产品尺寸	115.5x75.8x43.5mm		

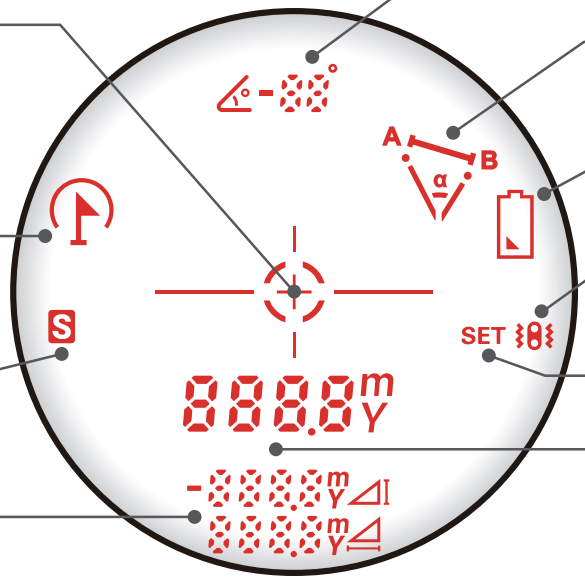
产品重量	206g
电池规格	3.7V / 750mAh Li-ion
工作温度	-10°C~ 50°C
激光等级	Class 1
激光波长	905nm
满电工作次数	20000次测量(满电)
充电时间	2小时
充电规格	DC 5V 0.5A Type-C

* 最大量程，以浅色建筑物测量为标准。天气、目标大小、表面形状等情况，可能对最大量程产生影响。精度受天气、目标反射条件是否良好，是否有强光干扰等因素影响。
详情参考<注意事项>。

产品概述图


电源/测量键
模式切换/设置键
旋转式调焦
观测目镜/
取景器
激光发射
物镜
激光接收
物镜
Type-C
充电接口
充电时红灯亮；
绿灯亮表示充电完成
拔动开关
（用于红黑显切换）

屏显内容图解



1. 十字瞄准靶心
   正在测量过程中 闪烁
   测量完成 停止闪烁

2. 旗杆锁定模式
   未锁定旗杆 已锁定旗杆

3. 直线测量模式

4. 直线距离模式：显示高度和水平距离
   旗杆模式：显示高度
   方位角模式：显示到两个目标的距离

5. 角度

6. 方位角测量模式
   显示两个目标之间的直线距离

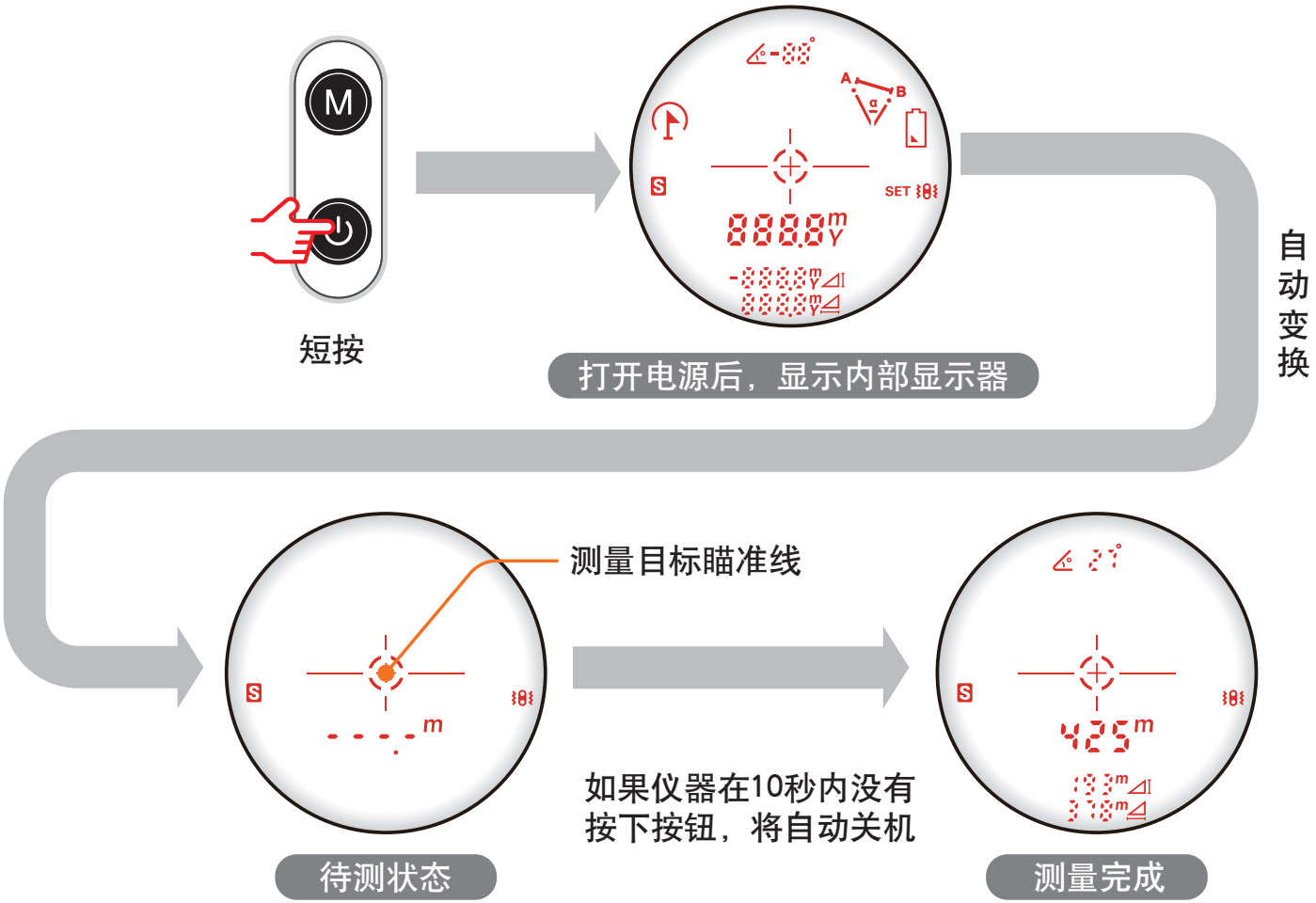
7. 电池电量显示

8. 震动指示

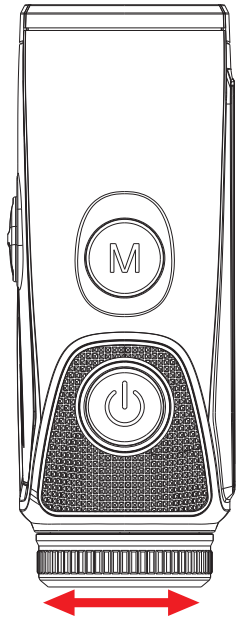
9. 设置模式指示

10. 直线距离模式：
    显示实际距离
    旗杆模式：显示旗杆距离
    方位角模式：显示两个目标之间的直线距离

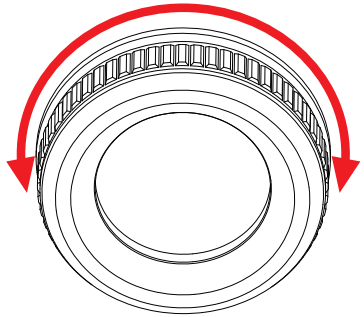
操作说明图解


M
短按
A
B
α
SET
打开电源后，显示内部显示器
自动变换
测量目标瞄准线
待测状态
如果仪器在10秒内没有
按下按钮，将自动关机
425
测量完成

旋转式调焦



根据旋钮上的正负指示作为参考



顺着“右”方向旋转适用于近处看不清的用户(如远视眼），顺着“左”方向旋转适用于远处看不清的用户(如近视眼）。通过调节旋钮，使目距和瞳距一致即清晰。

模式选择

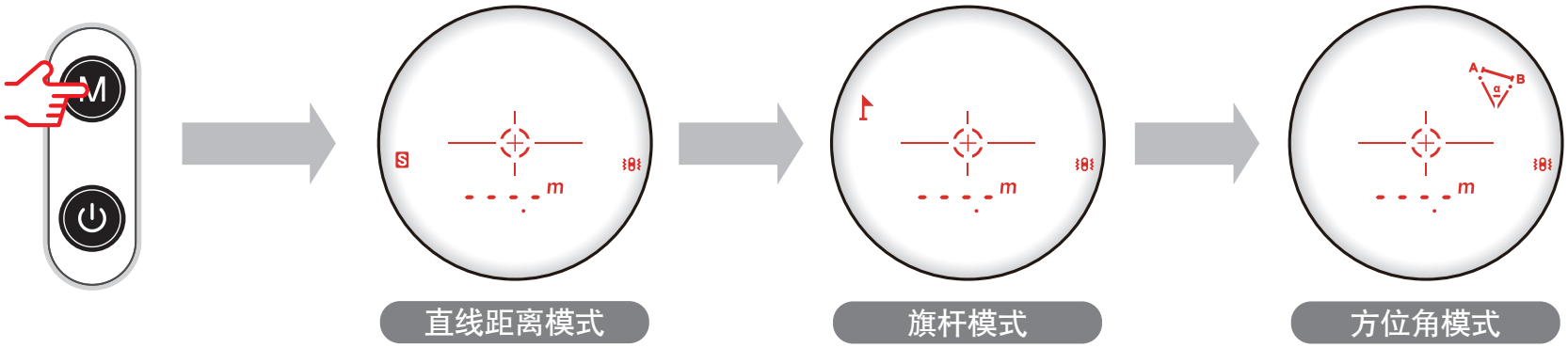
短按模式键 M 切换模式。

仪器设有3种模式：

1.直线距离模式：测量使用者到观测目标的直线距离。

2.旗杆模式：锁定最近目标距离。

3.方位角模式：测量两个目标之间的距离。



单位和振动选择

长按模式键 M 2s进入设置模式。

- **设置亮度(红显显示有效)**

短按电源键 ⏻ 切换亮度，短按模式键 M 进入单位设置。

- **设置单位**

短按电源键 ⏻ 切换单位m／Y，短按模式键 M 进入振动设置。

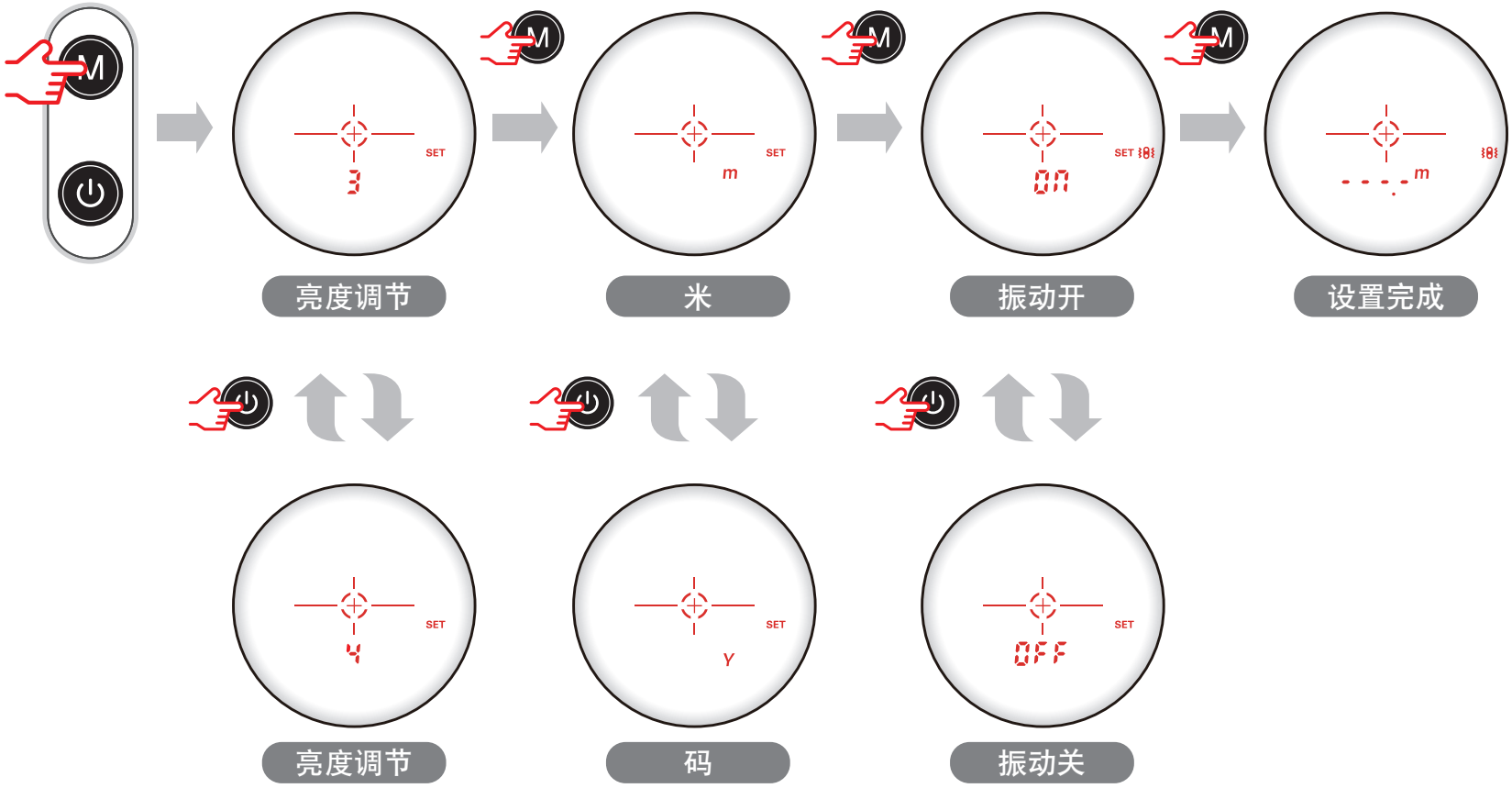
- **振动设置**

短按电源键 ⏻ 切换振动开关，短按模式键 M 设置完成。

注：

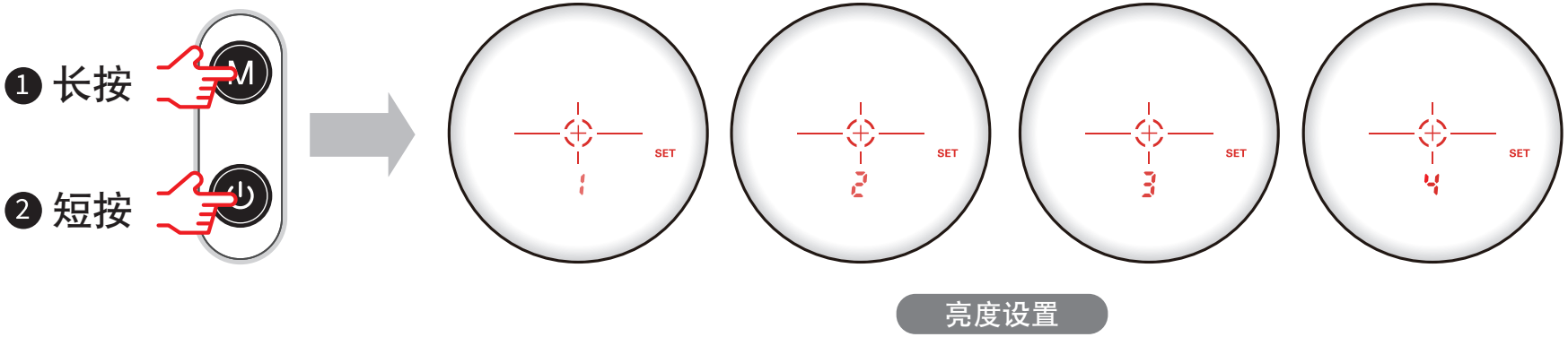
1.开启振动模式，仪器测量距离，振动一次，仪器锁定旗杆，振动两次。

2.关闭振动模式，仪器测量距离，不振动，仪器锁定旗杆，振动两次。


M
SET
3
m
ON
- - - -
亮度调节
米
振动开
设置完成
4
Y
OFF
亮度调节
码
振动关

OLED亮度调节

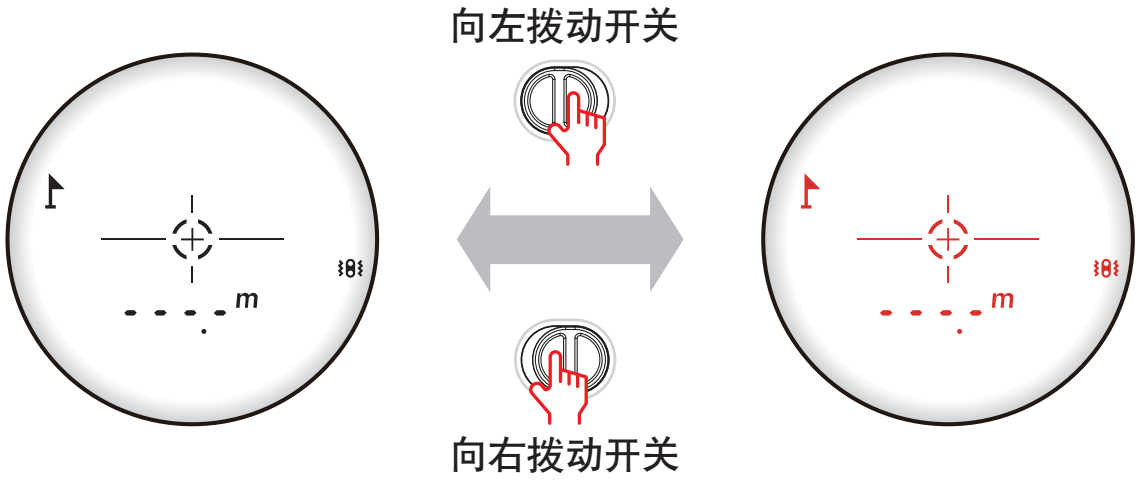
长按 M 键，然后短按 ⏻ 键可以调节亮度，系统设置了1–4档亮度循环调节，再次开机时保留上次调节的亮度



亮度设置

OLED红黑显切换设置

拨动开关 向左切换黑显；拨动开关 向右切换红显。

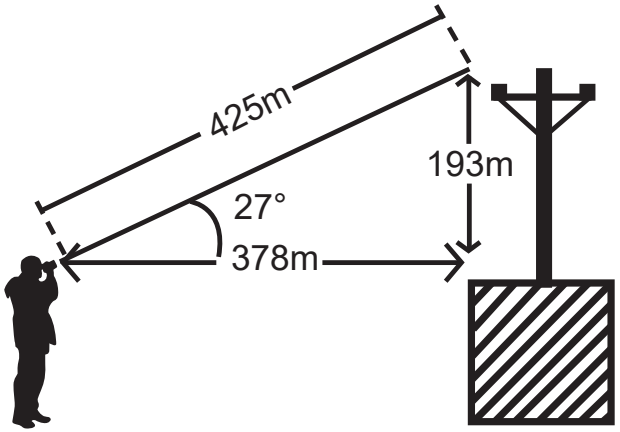


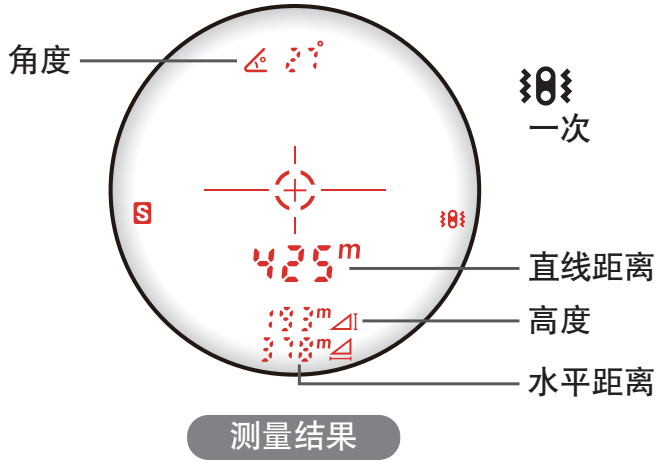
直线距离测量

测量直线距离

单次测量：短按测量键 测量一次距离

连续测量：长按测量键 扫描距离，实时显示扫描目标距离。





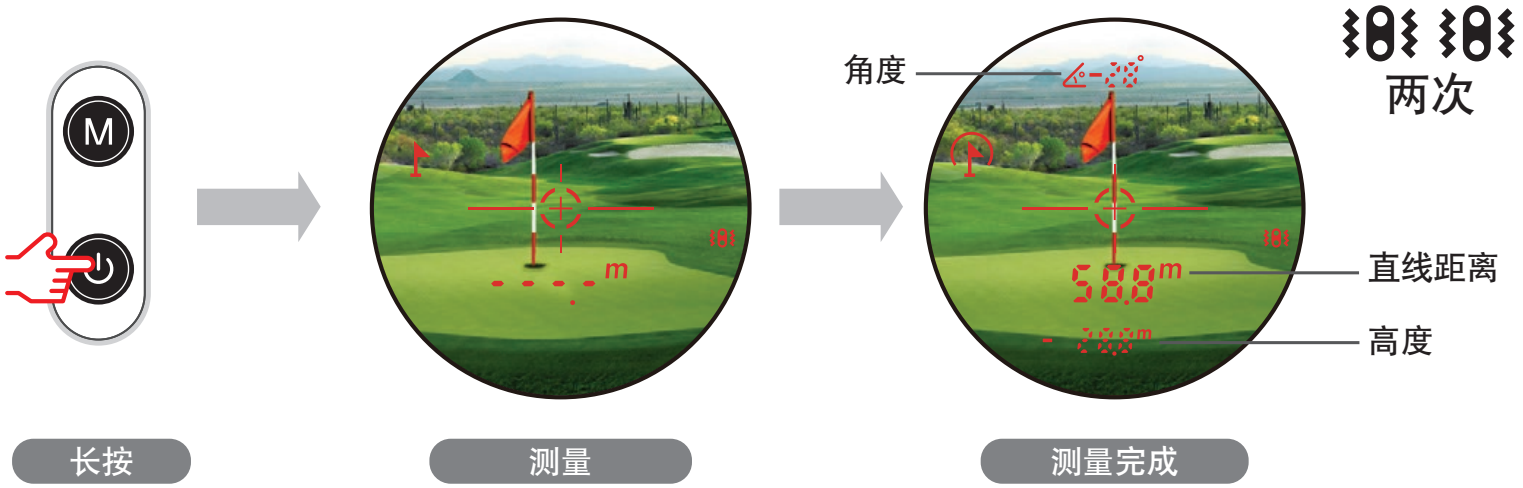
*请确保测距超过3米

*测距前请保证镜头干净

*请确认所测目标是否超过量程。

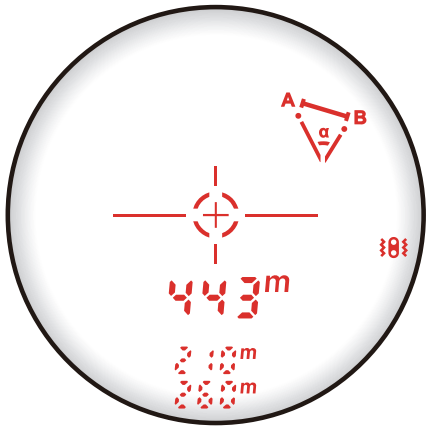
旗杆锁定

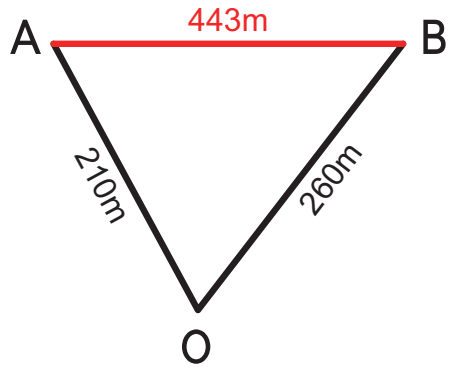
当测量重叠目标时，长按测量键 ，左右缓慢扫描锁定最近的目标，测量最近的距离。



方位角模式

方位角测量模式用于两个目标之间的直线距离，先对着A点测距，再对着B测距，最后会自动计算出AB之间的距离





注意事项

● 多功能测距仪发射出不可见、无损视力的红外脉冲激光，然后将其从选定目标反射回光学接收器中。通过测量每个脉冲激光从测距仪到目标并返回所花的时间，系统采用先进的精确充电电路来即时计算出被测距离。该设备的最大测量范围取决于目标的反射率、颜色、表面光洁度尺寸和实际形状。

下列因素能确保获得最佳测量范围和精度：

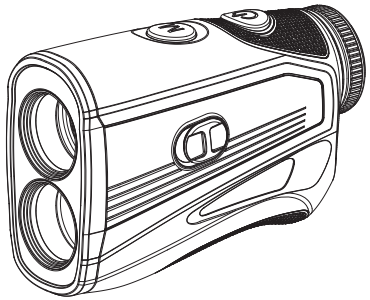
- 晴朗天气
- 空气中无任何杂质
- 亮色目标
- 具有高反射面的目标
- 具有光亮外表的目标

下列因素不能确保获得最佳测量范围和精度：

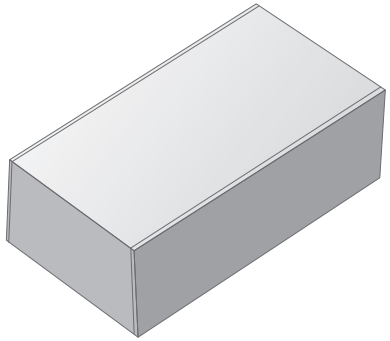
- 黑色目标
- 细小或微型目标
- 强光干扰／猛烈太阳光
- 雪天、雨天或雾天
- 需穿透玻璃测量的目标
- 有漫反射表面的目标
- 动态目标

- 当电池显示 闪烁时表示电量不足，应及时给电池充电，否则测距误差会增大。
- 请勿用手指触摸镜头表面，以免损坏镜头表面的膜层。
- 本机是经过精密仪器精确调校的，请勿随意拆卸，如有损坏，应送专门部门进行维修。
- 请用擦镜布轻轻擦拭镜头，切勿用其他物体擦拭。
- 携带时，应避免碰撞或重压。
- 携带时或使用时，不要使其受到烘烤或腐蚀。
- 存放时应注意防潮，宜存放在干燥、阴凉、通风的地方，防止太阳直射，避免灰尘和温度突变。
- 切忌将本机直接对准太阳或强光源发射，以免损坏机内光敏器件。

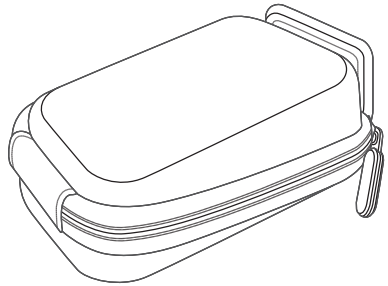
包装清单



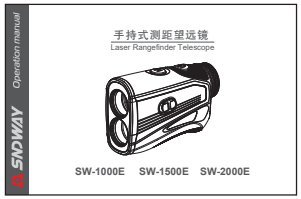
主机



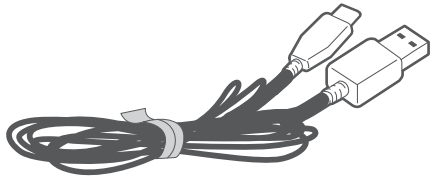
包装盒



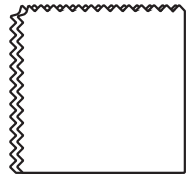
布包



用户手册



USB Type-C线



擦拭布

挂绳

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 guided could cause damage to the device, influence on measurement result or bodily injury to the user.
- 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 using by any irrelevant personnel.
- 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 shall not processed just like household garbage, please handle them 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.

INSTRUCTION

Laser rangefinder telescopes of Sndway are an instrument both for construction and golf. It can be used on the installation of electric equipment or various outdoor measurement, such as electric wire, wire tower, highway, municipal engineering, forestry survey and design, construction, network planning survey and design, communication check, hunting, golf and so on.

Features:

- Compact, light and portable;
- High accuracy, quick measurement and low power consumption;
- Class 1 pulse laser causing no harm to eyes;
- Noiseless operation, Auto power off.
- Built-in 750mAh chargeable Li-ion battery, with USB Type-C charging port;
- Flag pole lock function, convenient for us to measure the slender target;
- Horizontal and vertical distance, applied to engineering survey
- OLED self-luminous screen without fear of ambient light or darkness and the screen is clearly visible

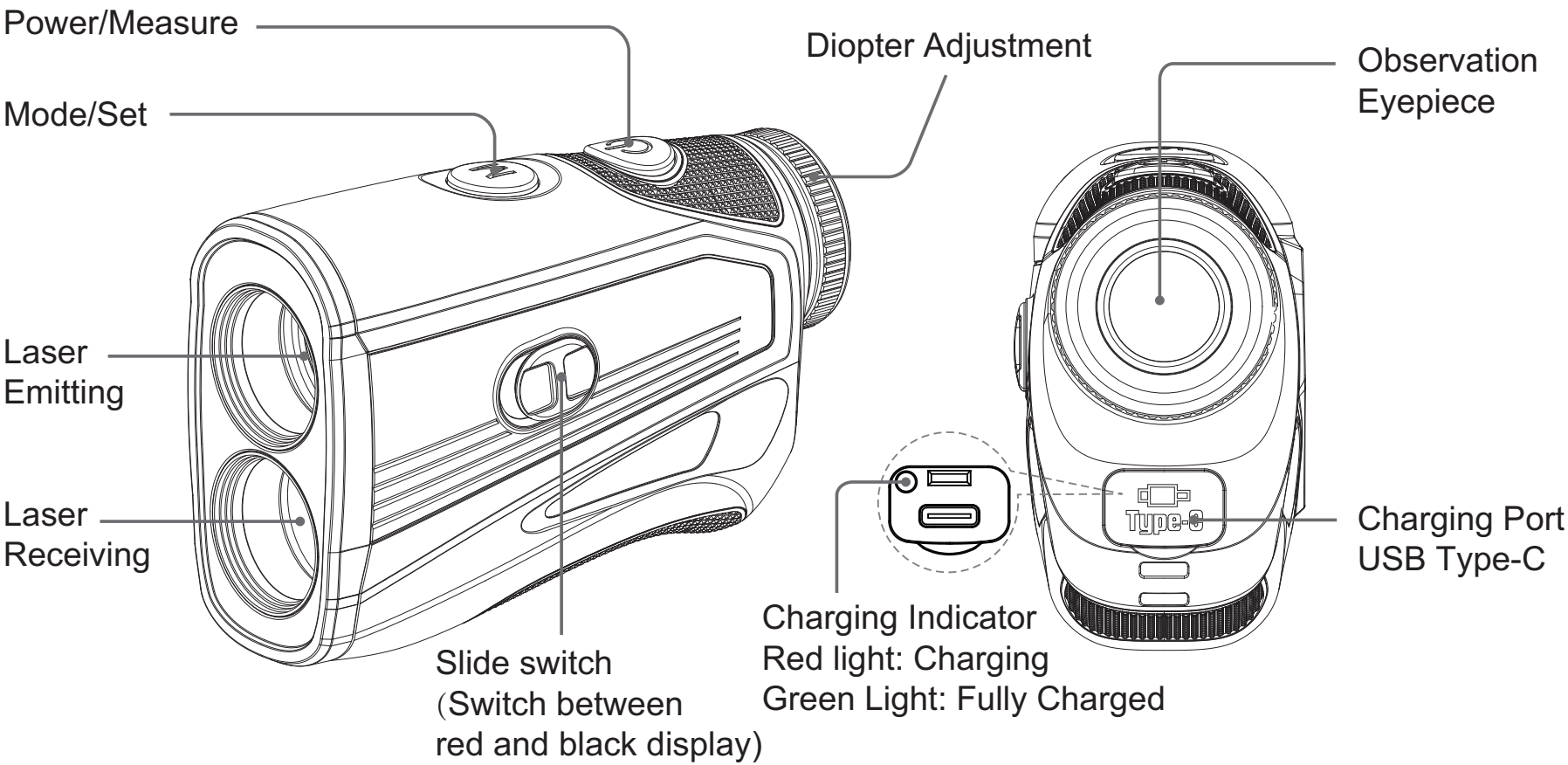
SPECIFICATIONS

Model	SW-1000E	SW-1500E	SW-2000E
Measure Range	3-1000m	3-1500m	3-2000m
Unit of Measure	m(Meter), Y(Yard)		
Measuring Time	<0.5s(<100m 0.3s;>700m 0.45s)		
Measurement Accuracy	1.0m±D*0.3%		
Magnification	6±5%X		
Field of View	7.0°		
Objective Lens	23.5mm		
Eyepiece Lens	16mm		
Exit Pupil	3.7±0.5mm		
Diopter	±6°		
Display	OLED		
Dimensions	115.5x75.8x43.5mm		

Weight	206g
Battery	3.7V / 750mAh Li-ion
Operating Temperature	-10°C~ 50°C
Laser Class	Class 1
Laser Wave Length	905nm
Working Times	20000 times after a full charge
Charging Time	2h
Charging Specification	DC 5V 0.5A Type-C

* The maximum range is based on the measurement of light-colored buildings. Weather, target size, surface shape, etc. may affect the maximum amount of process. The accuracy is affected by the weather, whether the target reflection conditions are good, whether there is strong light interference and other factors.For details, refer to <OPERATIONAL NOTES>

RANGEFINDER DIAGRAM



OLED DISPLAY

1.Aiming: target in the center

Scanning Target: blinking;

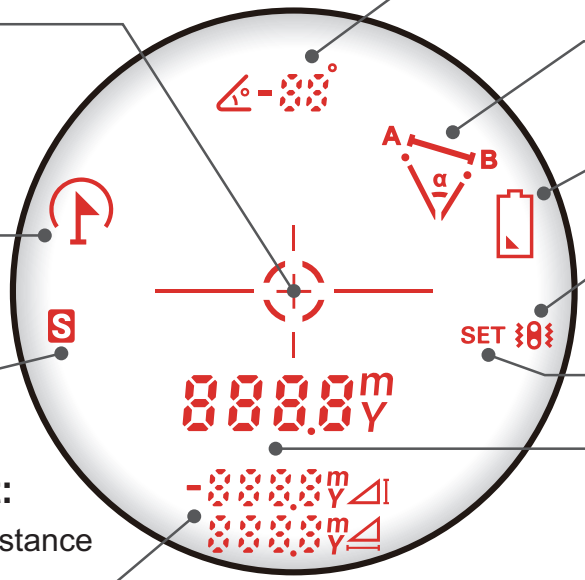
Catch the Target: stop blinking

2. Flag Lock

Unlocked Locked

3.Straight Line Distance Mode

4. Straight Line Measurement:
vertical distance and horizontal distance
Flag Pole: vertical distance
Azimuth Mode: Measure the straight-line distance between two targets



5.Angle

6. Azimuth Mode:
distance between two targets

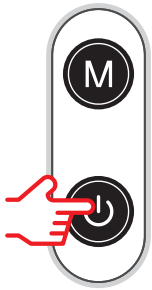
7. Battery Display

8. Vibration Mode

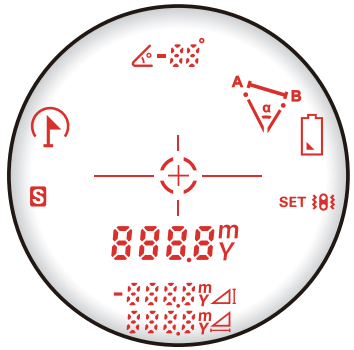
9. Setting mode

10. Straight Line Measurement:
actual distance
Flag pole: distance to the flag pole
Azimuth Mode: Measure the straight-line distance between two targets

HOW TO USE

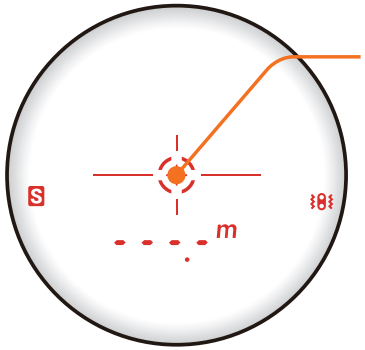


Short press



Display when power on

Auto shift



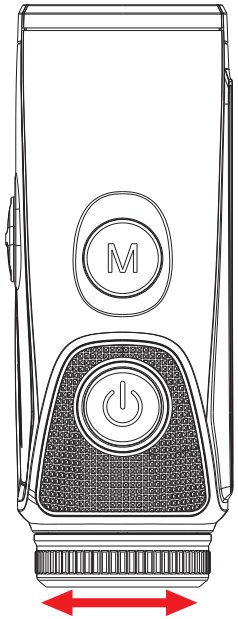
Aiming cross

Waiting for measuring

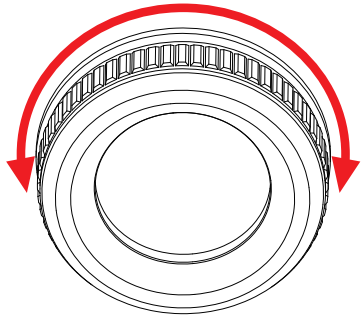
It will be turn off automatically after 10s when no operation is made.

Measure result

DIOPTER ADJUSTMENT



Adjust the sight according to “right" and “left" on the knob



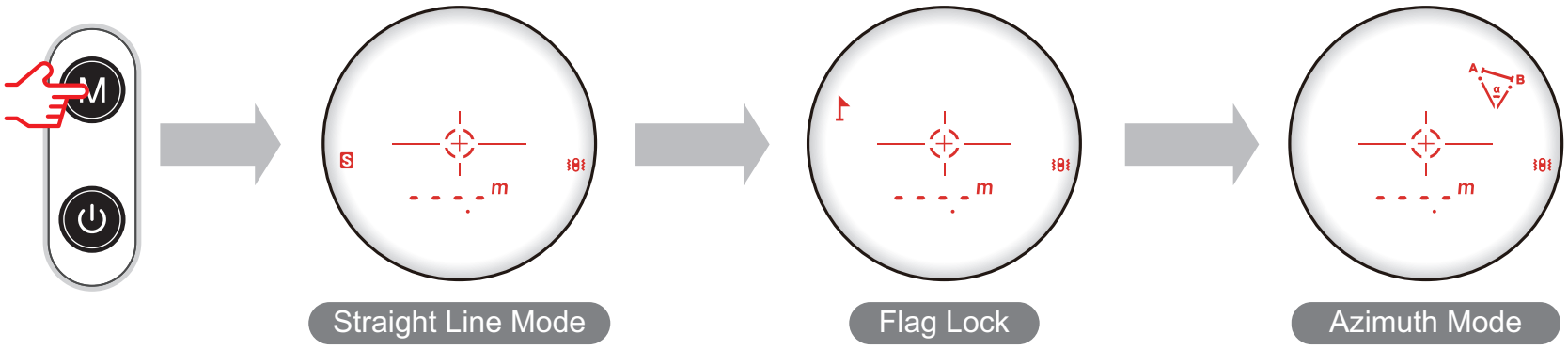
Turn right when users cannot see clearly at close range, such as farsightedness. Turn left when users cannot see clearly at long range, such as nearsightedness.

SETUP MODES

Short press the M button to select the mode.

There are 3 available modes in the device:

1. **Straight Line Distance Measurement:**
   Measure the straight-line distance from device to target.
2. **Flag Lock:** Lock and measure the nearest target distance.
3. **Azimuth Mode:** Measure the distance between two target.



BRIGHTNESS, UNIT AND VIBRATION SETUP

Long press the button M for 2s to set mode.

- **Brightness setup (Invalid when in red display mode)**

⏻ Short press to select brightness level,

M Short press to choose the unit.

- **Unit Setup**

⏻ Short press to select unit between M and Y,

M Short press to set vibration.

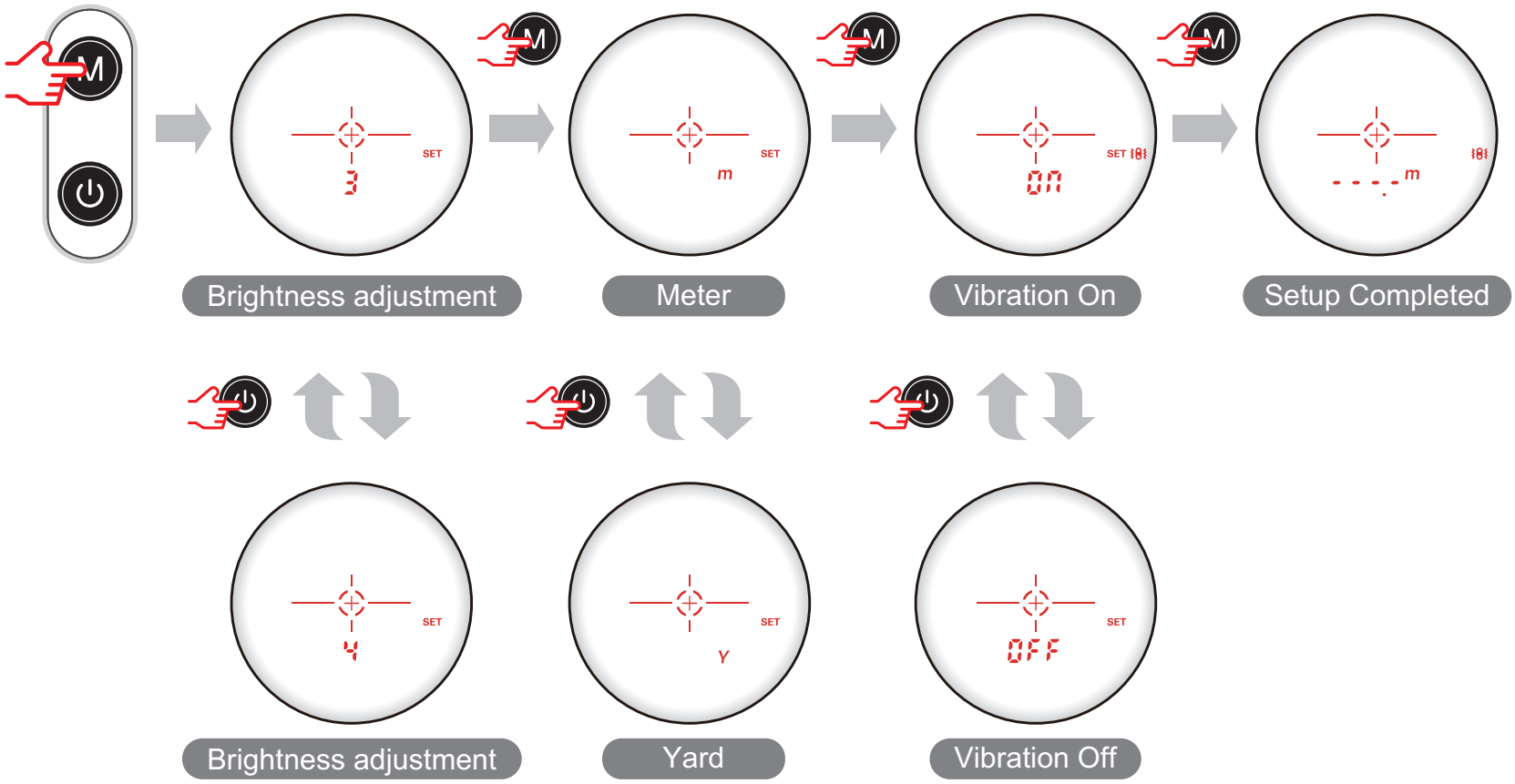
- **Vibration Setup**

⏻ Short press to switch on/off the vibration,

M Short press to save setting result.

NOTE:

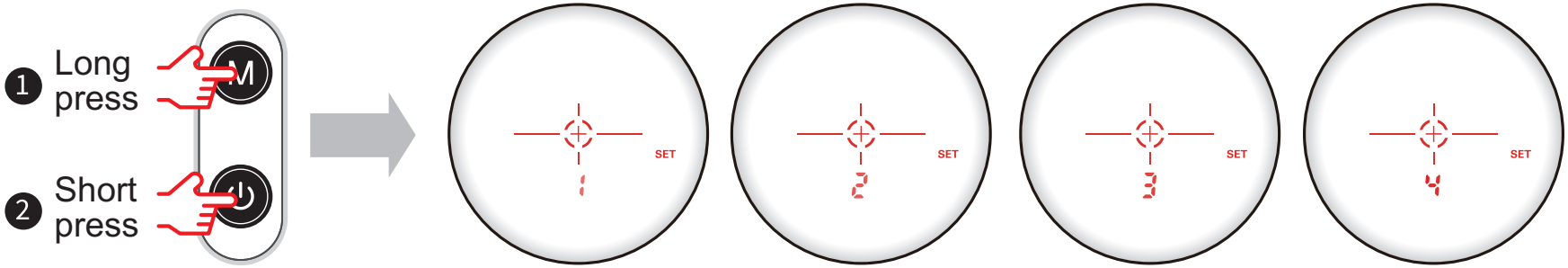
1. Vibration on, the device vibrates once after each measurement, and twice when flag mode locked
2. Vibration off, the device won't vibrate after each measurement, and vibrate twice when flag mode locked.


M
SET
3
m
ON
OFF
Brightness adjustment
Meter
Vibration On
Setup Completed
4
Y
Brightness adjustment
Yard
Vibration Off

OLED Brightness Adjustment

Long press M, then short press ⏻ to adjust the brightness level.

The system has set 1~4 levels, and if you adjust the brightness level, it will be retained when turn on again.

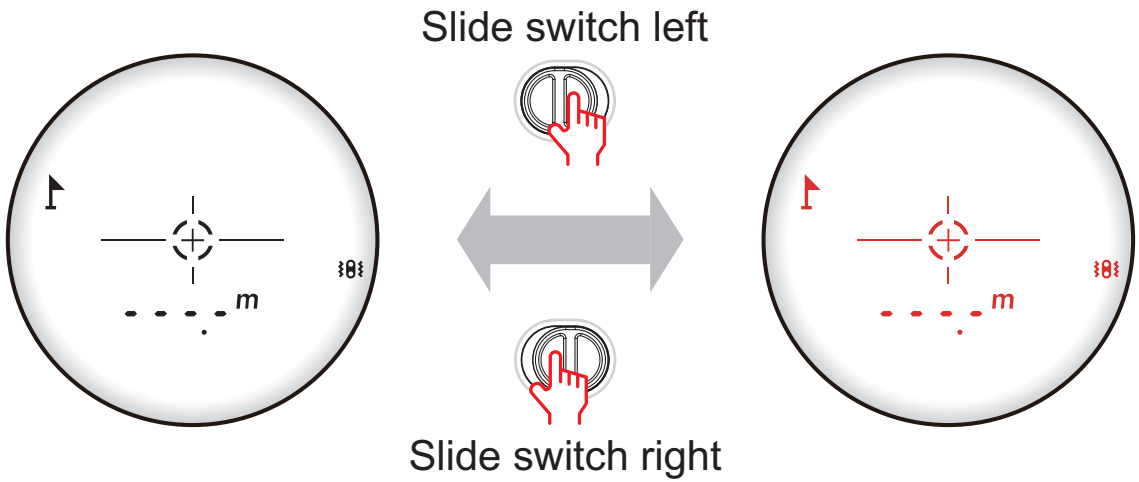


Brightness setup

Display Setup

Slide the switch to the left to switch the black display;

Slide the switch to the right to change the red display.

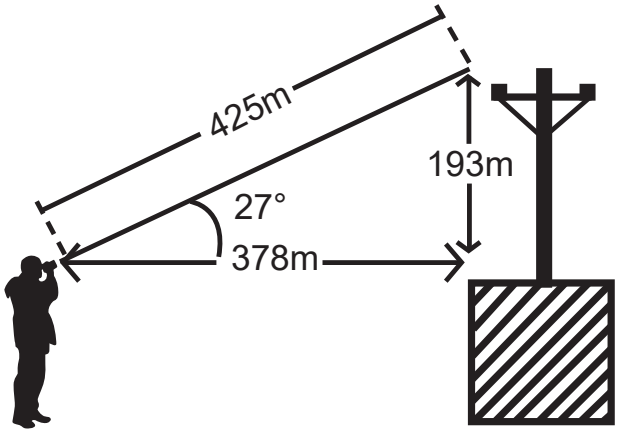


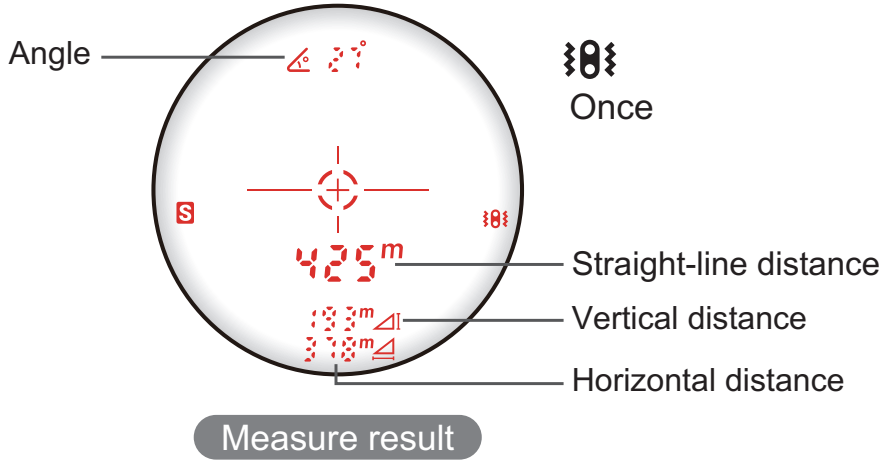
STRAIGHT LINE DISTANCE MEASUREMENT

Measure the straight-line distance.

Single Measurement: Short press once

Continuous Measurement: Long press to scan the distance





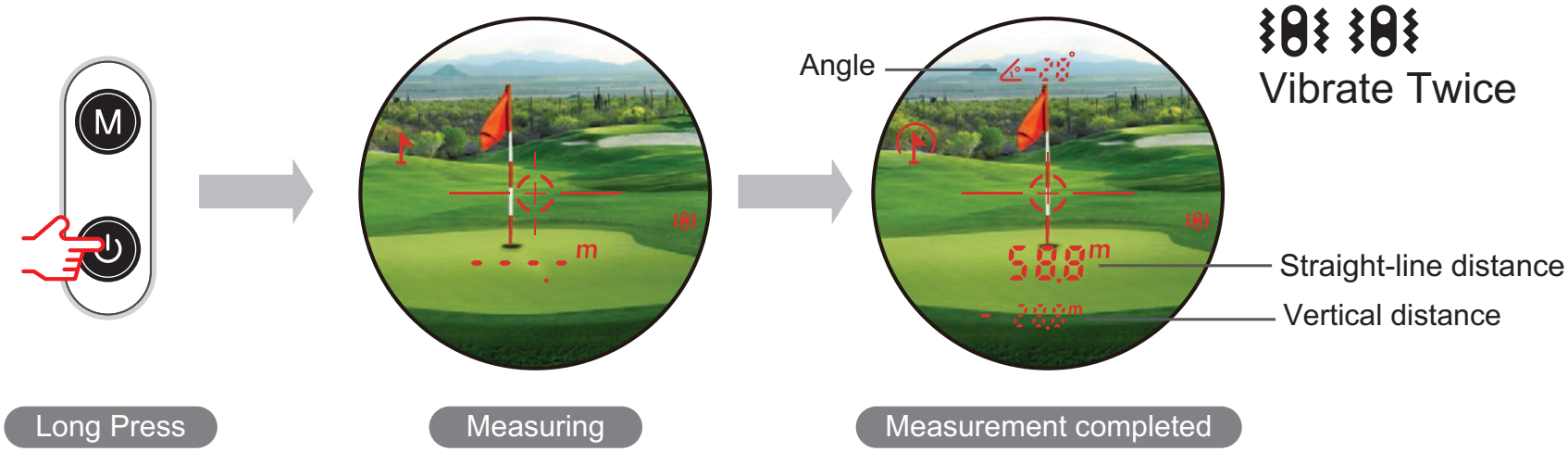
※Please do the measurement over 3 meters

※Please check if the lens is clean;

※Please confirm whether there is target overlap during measurement;

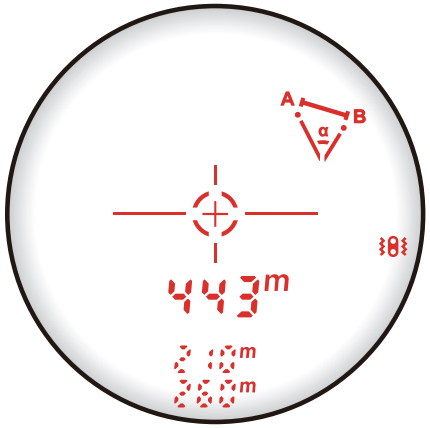
FLAG LOCK

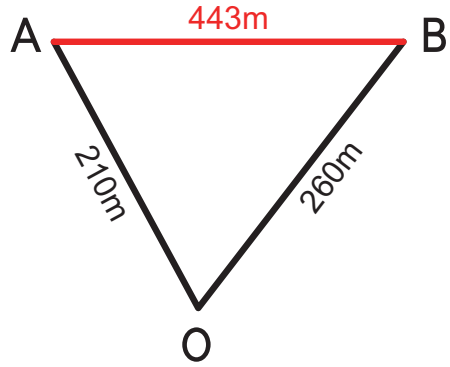
Long press ⏻ to aim at the target then scan left and right when measuring overlapping targets,then get the distance of the nearest target.



AZIMUTH MODE

The azimuth measurement mode is used for the straight-line distance between two targets. First the distance to point A is measured, then the distance to point B is measured, and finally the distance between AB is calculated automatically.





OPERATIONAL NOTES

The multifunctional range finder does not emitted a visible beam. It uses a nondestructive vision infrared pulse laser, and then from the selected target reflection, back to the optical receiver, By measuring each pulse from the target and back, the laser rangefinder then uses its advanced diagnostic circuit to instantly calculate the measured distance. The maximum measuring range of the device depends on the target reflectivity, colour, surface finish, size and actual shape.

Try to use the device in below environment to guarantee the accuracy:

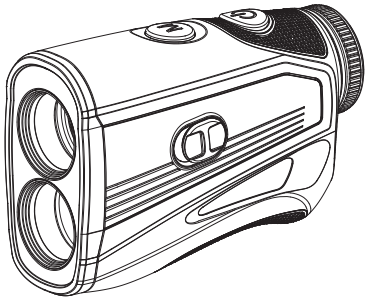
- Sunny Day
- Clear Air
- Bright Target
- High Reflecting Surface
- Shiny Surface

Below situation may cause measuring problems to the device:

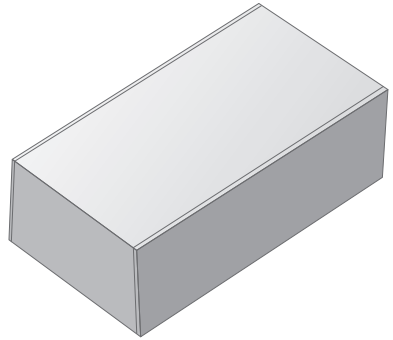
- Black Target
- Tiny Target
- Very Strong Light or Sunshine
- Snowy Rainy or Foggy
- Glass
- Diffuse Surface
- Dynamic Target

- Charge the device when the icon keeps flashing to avoid bigger error under low power condition.
- DO NOT touch the lens by finger in order to protect the coating on lens.
- DO NOT disassemble the device which is calibrated by high precise instrument, Please send it to a professional maintenance department when the device gets problems.
- DO NOT wipe the lens with anything other than lens cloth.
- DO NOT carry the device with collision or weight.
- DO NOT make the device in baking or corrosion environment.
- DO NOT store the device under sunlight, dusty or temperature-abrupt environment.
- It should be kept in a dry, cool and ventilated place.
- DO NOT operate the device aiming to the sun or strong light source, which may damage the photosensor.

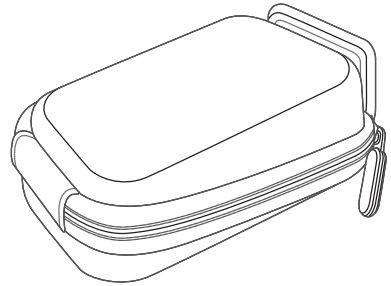
PACKING LIST



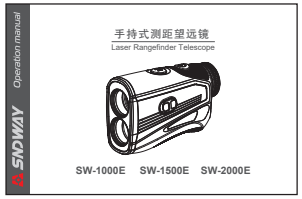
Laser Rangefinder



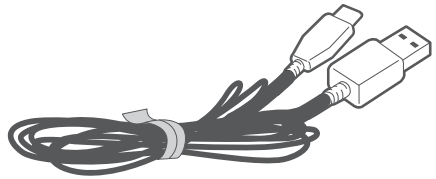
Gift box



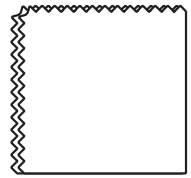
Magnetic Pouch



User Manual



USB Type-C cable



Lens Cloth

Hand Strap

Operation manual

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