Laser Ranging Telescope

User Manual

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.

Introduction

Laser rangefinder is a portable photoelectric instrument that combines the functions of telescope, laser ranging and angle measurement, mainly in two aspects:

- While clearly observing the object, the distance of fixed or slow-moving objects within a certain range can be measured. It has the advantages of high measurement accuracy, short measuring time, intuitive distance display, power saving and automatic power off.

- It integrates the latest technology, and realizes the measuring function of measuring target distance and angle. When obtaining the target distance, the Angle between the telescope and the target point and the ground plane (elevation angle is positive, depression angle is negative), relative height and horizontal distance can be displayed at the same time.

The laser transmission power of the instrument is small, safe for the human eye, and it can range any target. It is small, light, easy to carry, and powered by a rechargeable lithium battery.

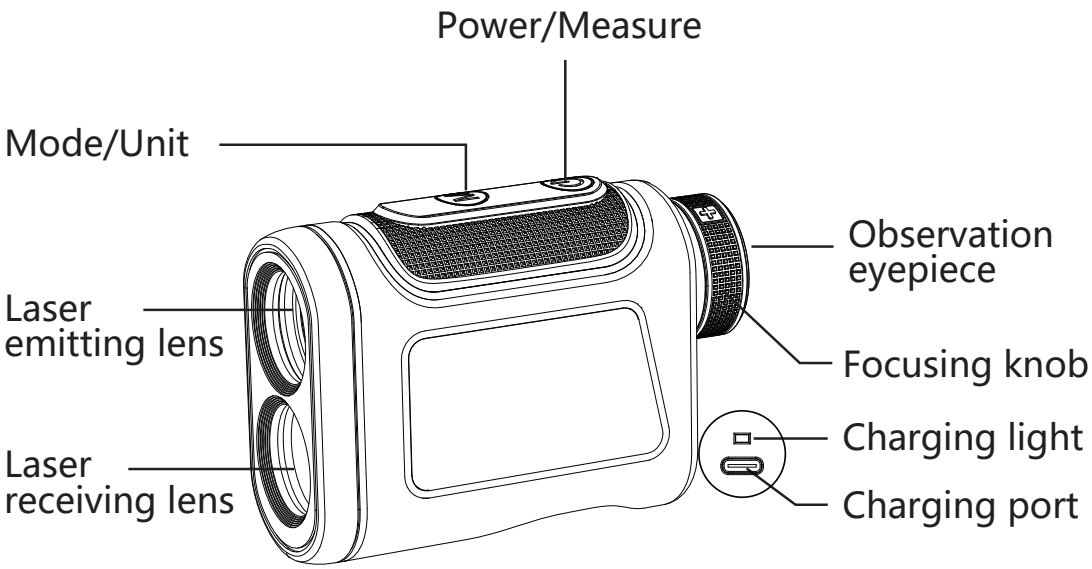
Sndway laser rangefinder is an instrument for the installation of electric equipment (equipped with scanning measurement function, which can easily identify small distant targets, such as electric wire, wire tower). It can be used on highway, municipal engineering, forestry survey and design,

construction, network planning survey and design, communication overhaul, hunting, golf and so on.

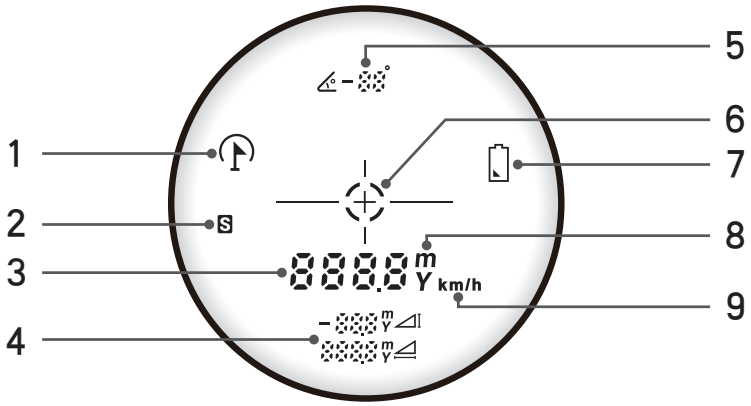
Features:

1. Multifunctional LCD sight;
2. Silent operation, automatic power off system;
3. Using pulse laser, harmless to eyes;
4. Fast ranging (Note: The maximum distance varies with the reflectivity of different target objects and the climate environment);
5. Speed measurement function;
6. Using 750mAh rechargeable lithium battery;
7. Flagpole locking function: convenient to measure slender targets like flagpoles, wire poles, signal towers, etc.

Instrument Structure



LCD Display



1> Flagpole Locking Mode

2> Ranging Mode

3> Straight-line Distance

4> Vertical and Horizontal Distance

5> Angle

6> Target

7> Battery Level

8> m/Y Unit

9> km/h Speed Unit

Specifications

Measuring Range	600m-1500m
Magnification	6X ±5%
Field of View	7.0° ±5%
Scanning Ranging Function	Yes
Reading Error	±(1.0m+Dx0.3%)
Speed Measurement Accuracy	±5 Km/h
Speed Measurement Range	0~300 Km/h
Height Measurement	Yes
Flagpole Locking	Yes
Angle Range	±90°
Diopter Adjustment Range	±6°
Units of Distance	m / Y
Objective Caliber	23.5mm
Eyepiece Caliber	15.0mm
Exit pupil Caliber	3.7mm±0.5
Battery	750mAh Li-ion
Battery Life	Charge-discharge 800 times
Operating Times	30000 times (at full charge)
Protection Grade	IP54
Operating Temperature	-10°C~ 50°C
Dimensions	104x74.5x40.5 mm
Laser Level	Class 1
Laser Wavelength	905nm

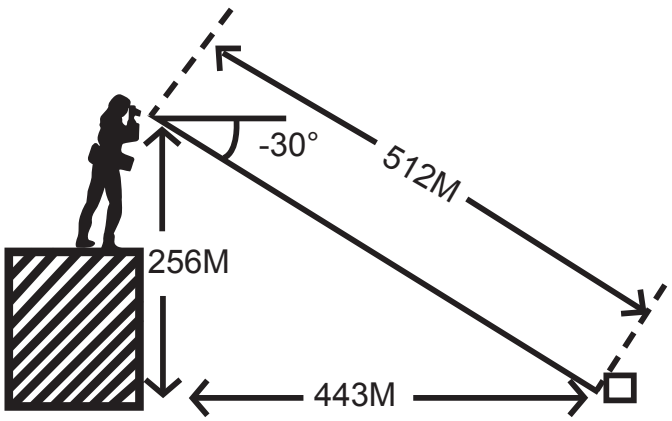
Note: *The maximum range is based on the light-colored building measurement. Weather, target size, surface shape, etc., can have an effect on the maximum range. **Weather, reflection condition of the target and strong light can also affect the accuracy of the device. Please check "NOTES" for more information.

Operating Instructions

- The laser rangefinder has two buttons: "Start" button ⏻ and "MODE" button. Press ⏻ for 1 second to start the device.
- Press and hold ⏻ and "MODE" for more than 6 seconds to reset the device when there is an unexpected error.

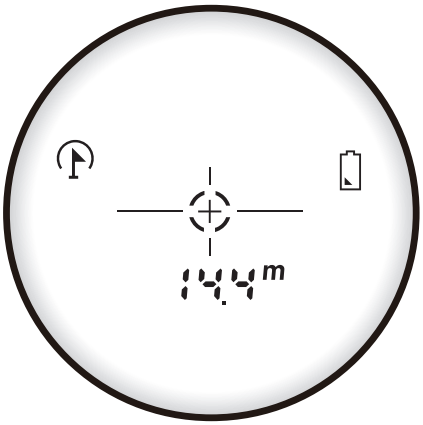
Short press the MODE key to switch between 3 measurement modes:

Measurement results diagram:



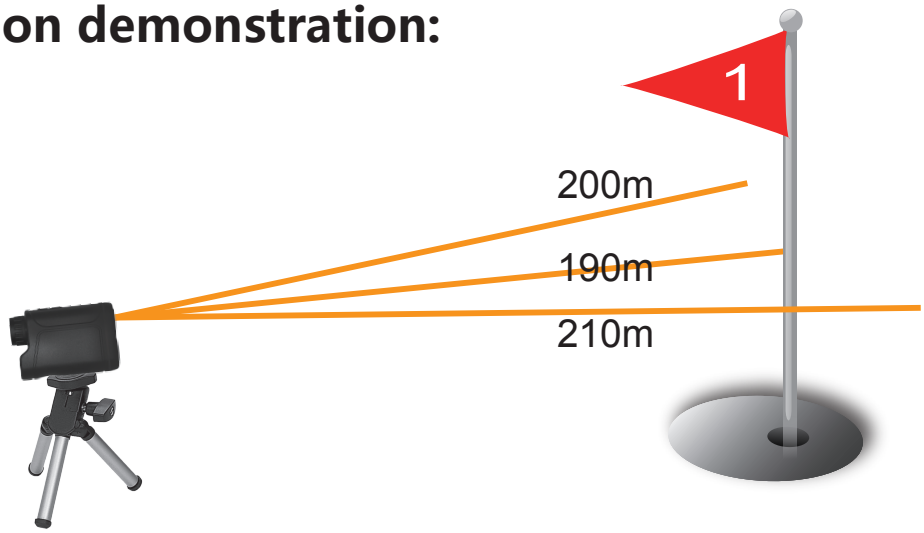
①. Straight line distance mode: The scanning character " S " is displayed at the top left of the screen. Press and hold the ⏻ key to start scanning and ranging. With the change of the target, the straight line distance data constantly refresh, while the angle, vertical height and horizontal distance will continue to refresh. Release the ⏻ key, then the instrument stops ranging.

②. Flagpole locking mode: The flagpole icon " " is displayed in the screen, as shown below:



Flagpole locking function is used to measure signal towers, wire poles and other slender targets.

Function demonstration:

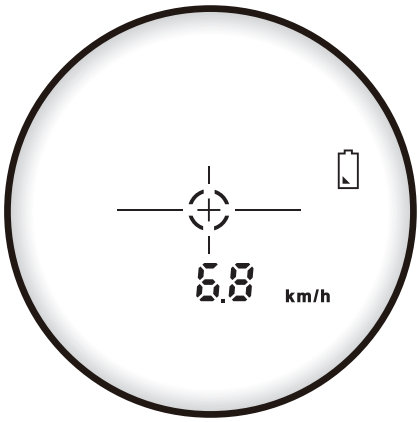


Flagpole locking instruction:

Point the telescope near the flagpole, long press , and slowly scan around the flagpole, the instrument will automatically lock the distance of the flagpole. After locking, release , the screen data will keep unchanged.

Note: The flagpole locking principle is to lock the minimum measured distance. During use, if the instrument scans a position closer than the flagpole, it will lock the data beyond the flagpole. Therefore, when selecting the scanning area, try to choose no shelter near the flagpole, or there is no target area smaller than the distance from the flagpole. When scanning back and forth near the flagpole, scan left and right at a slower speed to get an accurate flagpole distance.

③. Speed measurement mode, As shown below:



Press and hold ⏻ to measure the moving target. The instrument will display the target speed every 1 second or so.

- Long press “MODE” key to switch the unit m/Y (meter/ yard).
- Press ⏻ again for a distance measurement. After ranging, the data between the measured target point and the telescope is displayed near the center of the screen. If the target has weak reflection or is out of range, "---" is displayed.
- Laser rangefinder will automatically power off in 10 second without operation.

- "  " indicates battery undervoltage.
  The instrument has a built-in 750mAh rechargeable lithium battery. When the screen shows  , it means that the instrument needs to be charged. The instrument shows red light when charging and green light when fully charged. Charge time is about 3 hours.
- Battery operating time: continuous operation of about 30,000 times (at room temperature). Target focus measurement and automatic power off are included in a single working cycle. The times may vary depending on temperature and other factors such as the shape and color of the target.
- Diopter adjustment: Adjustment of diopter is used to obtain clear images on the eyepiece display. First, power on, then turn the eyepiece ring counterclockwise until the display is in clear focus.

Notes

- The multifunctional range finder does not emitted a visible beam.It uses a non-destructive 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.

Following factors ensure optimal measurement range and accuracy:

- Bright Target
- No impurities in the air
- High Reflecting Surface
- Sunny Day
- Target with a polished appearance

Following factors cannot ensure optimal measurement range and accuracy:

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

- When the battery shows  , it means that the battery is low. Please charge the battery in time, otherwise the error will increase.

- Do not touch the lens surface with your fingers to avoid damaging the film layer on the lens surface.
- This instrument is adjusted by precision instrument, please do not disassemble it.
- When there are impurities in the exposed lens, please gently wipe it with a wiping cloth. Do not wipe it with other objects to avoid damaging the optical glass surface film.
- When carrying or using, it should avoid collision , heavy weight, baking or corrosion.
- It is advisable to store in a dry, cool and well-ventilated place, away from direct sunlight, dust and temperature changes.
- If the rangefinder is damaged, it should be sent to a special department for maintenance. Do not disassemble it by yourself.
- Do not direct the instrument at the sun or strong light, so as not to damage the photosensitive devices in the instrument.

Packing List

Please carefully check if the meter and attachments are in company with the below list.

No.	Item	Unit	QTY	Note
1	Telescope	pc	1	
2	Pouch	pc	1	
3	Hand Strap	pc	1	
4	Type-C	pc	1	
5	User Manual	pc	1	
6	Gift box	pc	1	