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LASER DISTANCE METER
USER MANUAL

We continue to be committed to provide you tools with competitive price. "Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and doses not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.

VEVOR®

SW-DA70

NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

✉ **CustomerService@vevor.com**

This is the original instruction,Please read all manual instructions carefully before operating. VEVOR reserves clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there is any technology or software updates on our product.

⚠ 📖 CE FC [⚠2] ⊘

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.

⚠ It is strictly prohibited to shoot eyes or other parts of body with the laser; it is not allowed take the laser to shoot any objects' surface with strong reflecting.

⚠ 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 batteries or 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.
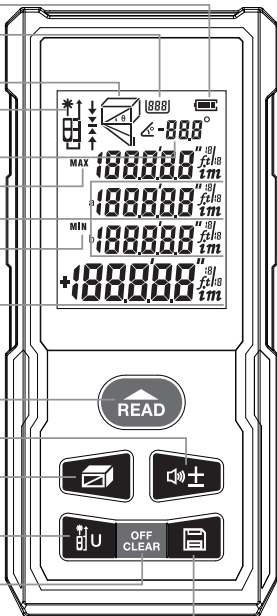
- **Display**

- Power Supply
- Record
- Length, Area, Volume and Pythagorean
- Laser on
- Angle
- Maximum
- Auxiliary Display
- Minimum

- Major Display

- **Keyboard**

- Turn on/ Measuring
- Sound/Addition/ Subtraction
- Area/Volume/ Pythagorean Measuring
- Reference Point/ Unit Switch
- Turn off/ Remove
- Save

Lithium Battery

The product is equipped with 3.7V/850mAh lithium battery which is built-in and non-removable. Please charge it if it can not be turned on or there is no power indication after starting up. Please use charging adapter with DC 5V and 1A to charge it, the charging port is the micro USB port. (We recommend to use phone charger). The battery icon 🔲 will be displayed in scrollable way during charging process. The battery icon 🔋 will be displayed and flashing when the charging process is completed.

Battery Maintenance

Keep it with full power if no operations for a long time; and charge it once every half year to avoid the battery damage.

Start the instrument/Menu Setting

● **Turn on/off the Instrument**

Under off status, press button 🔘 , device and laser get starting simultaneously and stand by for measurement.
Under on status, long press button 🔘 for 3 seconds to turn the device off. The device can also be shut off without any operation for 150 seconds.

● **Unit setting**

Long press button 🔘 , reset current measurement unit, the default unit is: 0.000m.
There are 6 units for selection.

Units:

Length	Area	Volume
0.000m	$0.000m^2$	$0.000m^3$
0.00m	$0.00m^2$	$0.00m^3$
0.0in	$0.00ft^2$	$0.00ft^3$
0 1/16 in	$0.00ft^2$	$0.00ft^3$
0'00"1/16	$0.00ft^2$	$0.00ft^3$
0.00ft	$0.00ft^2$	$0.00ft^3$

● **Changing Reference Point**

Press 🔘 key to change the reference point.
The device reference point by default is rear.

● **Delay Measurement**

Long press 🔲, a second number shows in the
screen . User can press 🔲 or 🔲 to adjust the time.
Press 🔘 to start count down, the measure start
when the time turns to 0.

● **Back Light On/Off**

The back light is set to turn on and off automatically.
The back light can be on for 15s while operating,
and it will be shut off automatically in 15s when
there is no operation to the device.

● **Sound On/Off**

The instrument provides artificial voice broadcast
function, users can operate the instrument
according to the voice. Long press 🔲 to turn off the
voice function, then long press 🔲 to turn on the
voice function.

Self-Calibration

This function can keep the precision of the device. Instruction: Power off, Long press button ![OFF CLEAR] ,and then press ![READ] . Release the button ![READ] , then release button ![OFF CLEAR] till "CAL" and a figure under it display on the screen. User can adjust the figure with button ![±] ![▦] according to the accuracy of the meter. Adjusting range: -9 to 9mm, then, long press button ![READ] to save the calibration result.

Length Measurement & Calculation

● **Single Distance Measuring:**

Turn on the laser beam by short press of the button ![READ] under measuring mode, press the button ![READ] again for single measurement of length, then the measured results displayed in the major display area.

● **Continuous Measuring:**

Long press button ![READ] under measuring mode and enter into continuous measuring mode . Maximum measuring result displays in auxiliary display area, present result displays in major display area. Short press button ![READ] or ![OFF CLEAR] to exit continuous measuring mode.

- **Area Measurement:**

  Press ⬚ till you see ⬚ , please follow the below instructions for area measuring:

  Press 🔘 once for length

  Press 🔘 again for width

  The device calculates and shows the result in the major display area.

  The measured values of the length and width of the rectangle are displayed in the auxiliary display area.

  Press 🔲 , clear off the result and measuring again if necessary.

  Press 🔲 again to exit the mode.

- **Volume Measurement**

  Press ⬚ till you see ⬚, please follow the below instruction for volume measuring:

  Press 🔘 for Length

  Press 🔘 again for Width

  Press 🔘 thirdly for height

  The device calculates and shows the result in the major display area.

  Press 🔲 , clear off the result and measuring again if necessary.

  Press 🔲 again to exit the mode.

● Metope Area Measurement

When the meter is in area mode, you can use the add / subtract function to total up the area of several surfaces.

Press ⬛ till you see ⬜ .
Press 🔘 to measure the height of the wall first;
Press 🔘 to measure the bottom edge of the first wall, get the first area in the major display area;
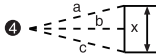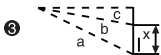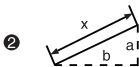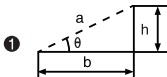Press 🔘 to measure the bottom edge of another wall, get the sum of these two walls.
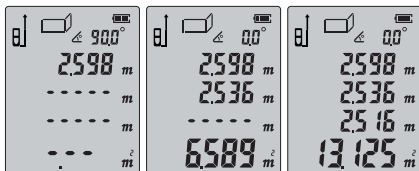
Repeat these operations for more walls. Press button ⬛ to clear the previous measuring result and start new measurement.

When there is no data in the Auxiliary Display area, press button ⬛ to exit the mode.

- **Pythagoras**

There are four Pythagoras modes in case that user gets hard to reach the target.

1. Calculate the length of two legs by measuring the hypotenuse and the angle.

   Press ▱ till you see ◺ , the hypotenuse of ◺ blinking.

   Press 🔴 , measure the length of hypotenuse (a), and calculates the angle (θ) between the bevel and the bottom at the same time.

   Device calculates the horizontal distance (b) and vertical height (h) .

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

   Press ▱ till you see ◿ , one leg of ◿ blinking.

   Press 🔴 , measure the length of one leg (a)
   Press 🔴 , measure the length of another leg (b)
   Device calculates the length of hypotenuse (x)

3. Press ⬛ till you see ◺ .

   Press 🔘 , measure the length of one side (a)
   Press 🔘 , measure the length of the median line (b)
   Press 🔘 , measure the length of another side (c)
   Device calculates the length of the leg in full line (x)

4. Press ⬛ till you see ◁ .

   Press 🔘 , measure the length of one hypotenuse (a)
   Press 🔘 , measure the length of another
   hypotenuse (b)
   Press 🔘 , measure the length of one leg (c)
   Device calculates the length of the leg in full line (x)

   Legs must short than hypotenuse, or there will
   be "err" shows on screen. In order to guarantee the
   accuracy, please make sure all measurements are
   start from the same point.

● **Addition / subtraction**
   The device can be used for length addition and
   subtraction. Press ⬛ to select the function once
   get the length measuring result.
   Short press ⬛ , "+" shows in the major display area,
   entering cumulation mode. Value of last
   measurement and the result of cumulation will be
   showed on the screen.
   Press ⬛ again, "-" shows in the major display area,
   entering regressive mode. Value of last
   measurement and the result of cumulation will be
   showed on the screen.
   Do round-robin selection between continous addition
   and continuous subtraction by pressing button ⬛ .

Not only length can be calculated in addition and subtraction, but area and volume can do the calculation as well. Take area as sample:

Area cumulative function: Measure the first area as showing in PIC1. Then press button ⬚, and measure the second area as showing in PIC2, there is a "+" in the left bottom. At last, press button ⬚ to get the summation result of these two areas which is showing in PIC3.
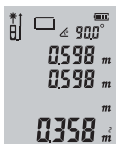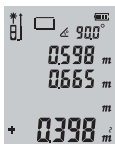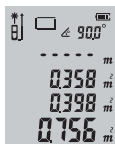
| PIC1 | PIC2 | PIC3 |

Record Function

Long press button ⬚ for 3s to record your measuring result under measuring mode.

It can also record the result under Area, Volume and Pythagoras mode. All the calculating records can be saved by the device.

● **Read / Delete the Record:**

Short press button 🔲, read the records by press button 🔲 and 🔲. Short press 🔲 to delete recent record and long press 🔲 to clear up all the records. Press 🔲 to exit record mode.

● **Angle measurement**

The angle information is displayed at the top of the screen, and the angle measurement range is -90.0° to 90.0°.

You may get some warning information as below:

Info message	Cause	Solution
Err	Out of distance measurement range	Use the device within the range
Err1	Signal is too weak	Chose the surface with stronger reflectance. Use the reflecting plate.
Err2	Signal is too strong	Chose the surface with weaker reflectance. Use the reflecting plate.
Err3	Low battery voltage	Charge the battery
Err4	The working temperature is out of working range	Use the device in the specified temperature.
Err5	Pythagoras measuring error.	Re-measure and ensure that Hypotenuse is bigger than Cathetus.
Err6	Angle sensor error	Depot Repair

Technology specifications:

Item	Specifications
Working Range	0.05~70m
Distance measurement precision	±2mm*
Continuous measurement function	yes
Area measurement function	yes
Volume measurement function	yes
Pythagorean proposition measurement function	Full mode
Add and subtract measurement function	yes
Min/Max value	yes
Delay Measurement	yes
Self-Calibration	yes
Laser level	II
Laser type	630~670nm,<1mW
Max storage	99 units
Automatically cut off laser	20s
Automatic shutdown	150s
Battery life	8000 times for single measurement
Buttons sound	yes
Storage temperature	-20˚C~60˚C
Working temperature	0˚C~40˚C
Storage humidity	20%~80%RH
Battery	3.7V 850mAh lithium battery
Battery charge times	500 times
Angle range	±90º
Dimension	112x50x25mm

Note: Use a reflector to increase the measurement range during daylight or if the target has poor reflection properties. Low power supply can also cause wrong measuring results.

* Typical Tolerance: ±2mm, when reflectivity 100% (white surface), environment light <2000 LUX. 25°C Tolerance is usually affected by the distance, reflectivity, and environment light etc. It probably gets tolerance around ±(2mm+0.2mm/m).

FCC Declaration: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)This device may not cause harmful interference, and (2)this device must accept any interference received, including interference that may cause undesired operation.

Instrument Maintenance:

- The meter should not be stored in high temperature and strong humidity environment for long time; if it is not used very often, please place the meter in the allocated potable bag and store in cool and dry place.

- Please keep the device surface cleaning. Wet soft cloth is applied to clean dust, but erosion liquid is never allowed to use for the meter maintenance. Laser output window and its focus lens can be maintained according to maintenance procedures for optical device.

Please check if the accessories are completed according to the below list.

NO.	Item	Unit	QTY	Note
1	Laser distance meter	pc	1	
2	Portable bag	pc	1	
3	Hand strap	pc	1	
4	User manual	pc	1	
5	Gift box	pc	1	
6	Reflector	pc	1	
7	USB cable	pc	1	

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