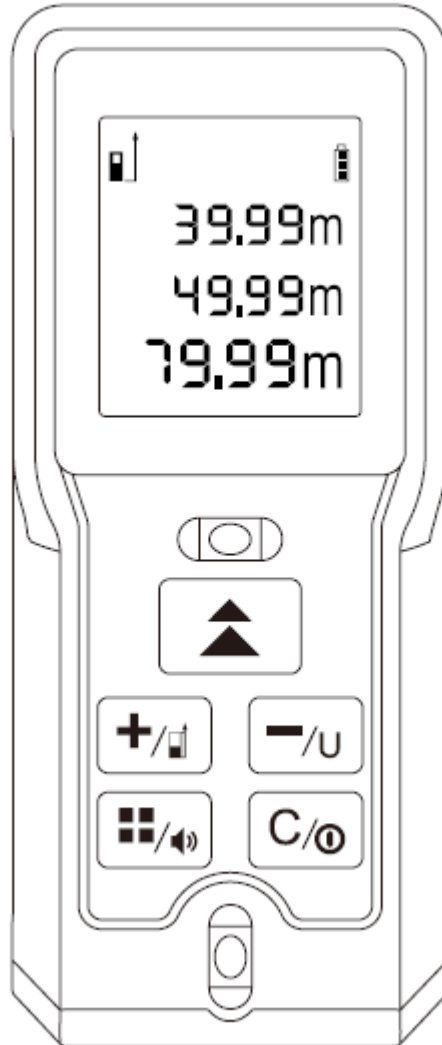


LASER DISTANCE METER

USER MANUAL



Version: MD50/70

-----Tavool Laser Distance Meter-----

CUSTOMER SERVICE: service@tavool.com

If any problem, question or concern, please feel free to contact us via email, we will provide you the best solution according to your issue.

Welcome

Thank you for your choice on our laser distance meter. PLEASE READ THIS INSTRUCTIONS CAREFULLY AND KEEP FOR FUTURE REFERENCE, otherwise it may result in hazardous laser radiation and electric shock.

IMPORTANT SAFTY PRECATIONS

1. This product is a class II laser product. Please DO NOT stare into beam at any time when operating this product!
2. Please DO NOT looking directly into the beam with optical aids to avoid causing serious laser radiation!
3. Please DO NOT remove any safety labels on this product!
4. Do not use this device under the flammable and combustibile environment. Please dispose your wasted device according to your local laws and regulations.
5. Do not place the device on somewhere the children could touch and reach.
6. Do not try to repair this device by yourself for your personal safety. If the device was damaged please feel free to contact us.
7. Please keep this instruction for reference when use.

PACKAGE

Laser distance meter	1pc
AAA battery	2pc
User manual	1pc
Packing box	1pc
Hand rope	1pc

BASIC FUNCTION

Single Measurement	√
Continuous Measurement (Max/Min)	√
Area/Volume/Pythagoras	√
Plus and Minus	√
Unit Conversion	√

Measuring Reference	√
Silence Function	√
Historical Data Review	20Groups
Error Code	√
Battery Power Indication	√
Laser Auto Switch of	30s
Instrument Auto Switch off	180s
Measuring Range	50m: 0.05m-50m 70m: 0.05m-70m
Measuring Accuracy	±2.0mm
Measuring Unit	m,ft,in
Area Unit	m ² ,ft ²
Volume Unit	m ³ ,ft ³
Laser Type	620~690nm
Laser Class	class II ,<1mW
Operating Temperature	0~+40°C
Storage Temperature	-20~+65°C
Batteries	AAA(Alkaline),2×1.5V
Working time(Fully charged)	>5000 times
Weight (Without batteries)	Approximate 72g
Dimension (L*W*H)	110X46X25mm

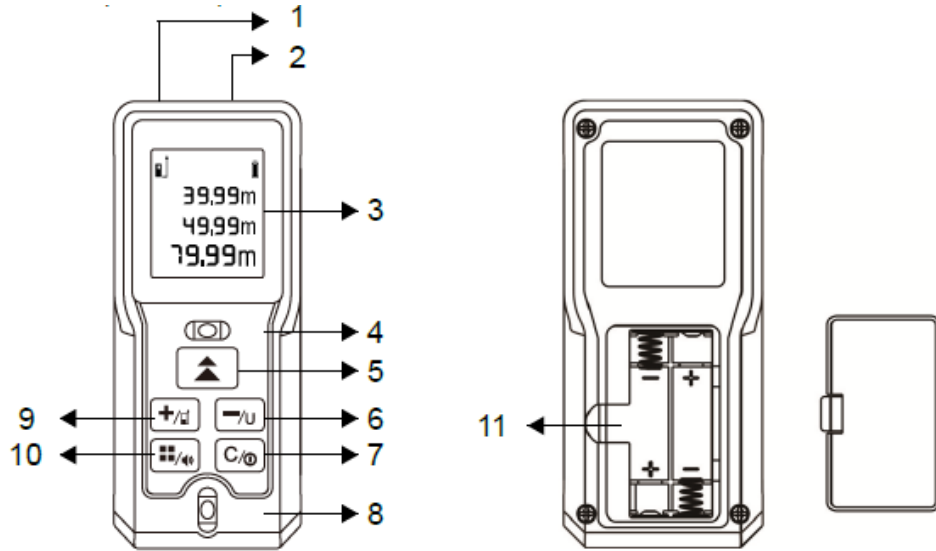
ATTENTION:

* For different measurement targets and test environment, the range and accuracy will be affected. The measuring accuracy is higher than or equal to the industry standard in the factory test environment.

*Industry Standard: When measurement range is within 10m, the measurement accuracy is ±2mm; More than 10m, the measurement accuracy is calculated as follows: $\pm 2\text{mm} \pm 0.05 * (D-10)$ (D is the measurement distance, unit: m).

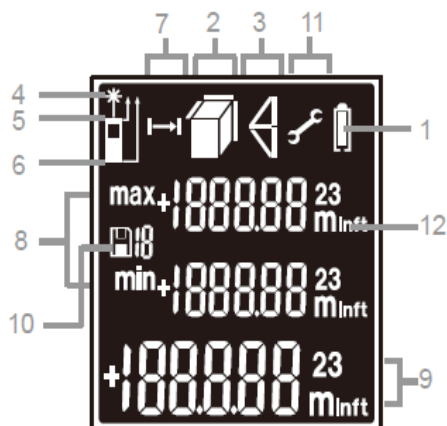
PRODUCT DETAIL

1. OVERVIEW



1. Laser emitter	7. Clear key/Exit key/OFF key
2. Laser receiver	8. Spirit bubble
3. Display screen	9. Plus key/Reference switch key
4. Spirit bubble	10. Function key/Sound key
5. Power key/Measuring key	11. Battery compartment
6. Minus key/Unit switch key	

2. Display Symbol Indication



1	Battery Power	2	Area / Volume
3	Pythagorean	4	Laser Indication
5	Fore Basis	6	Back Basis
7	Continuous Measuring	8	Maximum and Minimum
9	Current Reading	10	Historical Data Readings
11	Hardware Error	12	Measuring Unit

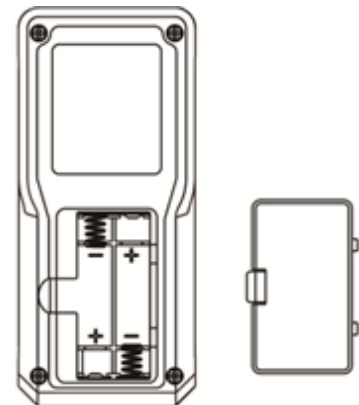
OPERATION

1. Battery Installation:


According to figures, remove battery compartment lid and insert 2*AAA batteries (alkaline).

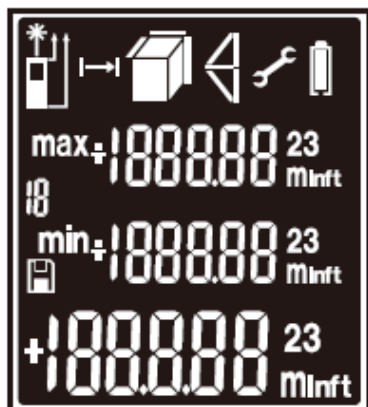
*Attention

1. Please do not mix new and old batteries
2. Please replace batteries when the symbol flashes permanently in the display
3. Please remove the batteries before any long period of non-use
4. Waste batteries should be recycled in accordance with national or local regulations





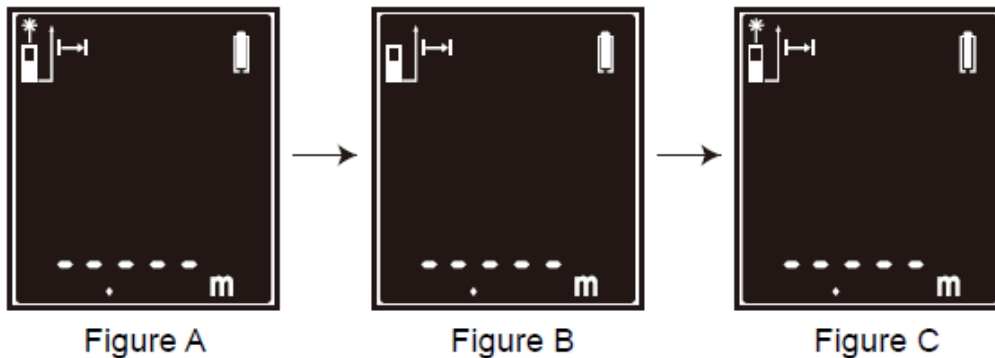
2. Switch-on

Short-time press  to switch on the equipment, the screen will show as follows:




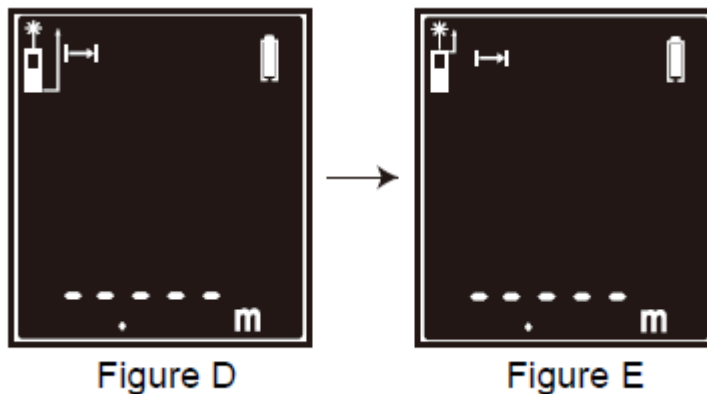
Then the meter in Single Measurement Mode and laser point opens automatically, indication shown as figure A. Laser point is automatically shut down after 30 seconds without operations. Or short-

time press  to close the laser point, indication as shown as figure B. Short-time press  again to open laser point, indication as shown as figure C.








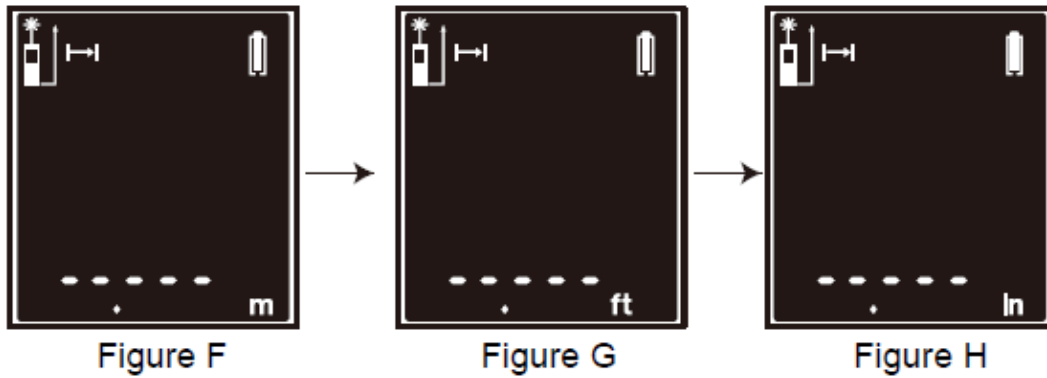
3.Change Reference Edge

Default reference edge is the bottom of meter, indication is shown as figure D. Long-time press  to change the measuring reference to the top of meter, indication as shown as figure E.








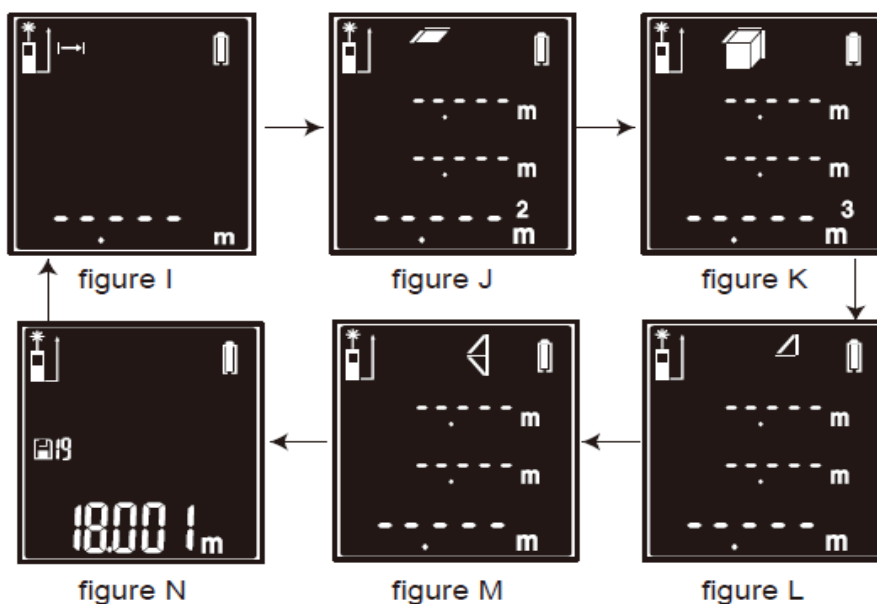
4.Unit Conversion

- Factory default that unit is m, indication is shown as figure F. Long-time press  to switch unit m to Ft, indication as shown as figure G.
 - Long-time press  again to switch the unit Ft to In, indication is shown as figure H.
- (Note: Long-time press  to switch the unit of measurement, the value will switch correspondent at the same time if there is value of measurement.)
- When the unit is m², Long-time press , the unit will switch unit m² to Ft².
 - When the unit is m³, Long-time press , the unit will switch unit m³ to Ft³.
 - When you switch on meter later, the meter will remember the last measuring unit you used.




5. Change Measurement Mode

- ◆ Default setting of measurement is Single Measurement Mode, indication is shown as figure I.
Short-time press  to switch Area Measurement Mode, indication is shown as figure J.
- ◆ Short-time press  again to switch Volume Measurement Mode, indication is shown as figure K. Short-time press  again to switch Single Pythagorean Theorem Measurement Mode, indication is shown as figure L.
- ◆ Short-time press  again to switch Dual Pythagorean Theorem Measurement Mode, indication is shown as figure M.
- ◆ Short-time press  again to switch Historical Data Review Mode, the last measuring data will be displayed, indication is shown as figure N.
- ◆ (Note: In the Historical Data Review Mode, there will be some measuring data that factory tested. It does not mean this equipment has been used.)




5. Switch off

The equipment can be switched off at any time by long-time press .

MEASUREMENT MODE

1. Single measurement

In the Single Measurement Mode, aim the laser onto target. Short-time press . The measuring result will be displayed immediately shown as figure O.

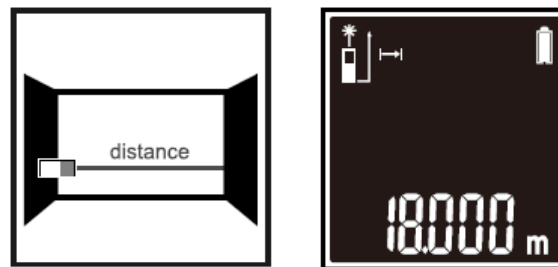



figure O

2. Continuous measurement

Single Measurement Mode only, aim the laser onto target, then long-time press  to enter the continuous measurement, the Max measuring value, Min measuring value and Current measuring value will be displayed at screen. Indication as shown as figure P.

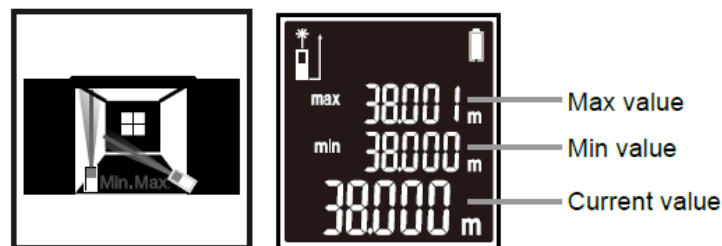



Figure P

3. Area Measurement

In the Area Measurement Mode, aim the laser onto target. Short-time press  to measure the two side lengths of the target respectively, area calculated value will be displayed as shown as figure Q.

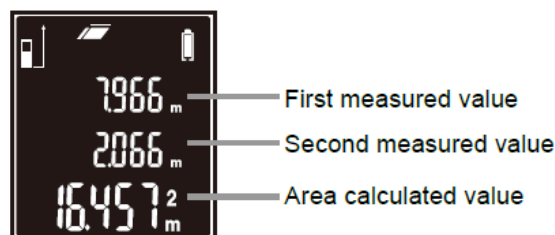



Figure Q

4. Volume Measurement

In the Volume Measurement Mode, aim the laser onto target. Short-time press  to measure three lengths of the dimensional target orderly. The volume calculated value will be displayed immediately shown as figure R. (Note: the length value of third side do not display at screen, because the screen can display three lines only.)

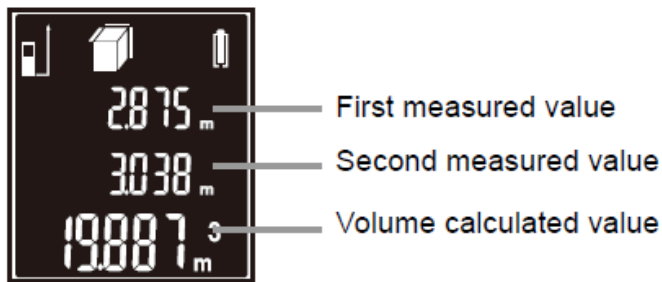
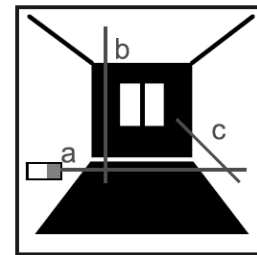



Figure R



$$V = a \times b \times c$$

5. Single Pythagorean Theorem Measurement

In Single Pythagorean Theorem Measurement Mode, aim the laser onto target. Short-time press  to measure the length of the hypotenuse and right-angle side of a right triangle. The height calculated value of the right triangle will be displayed immediately on the screen as shown as figure S.

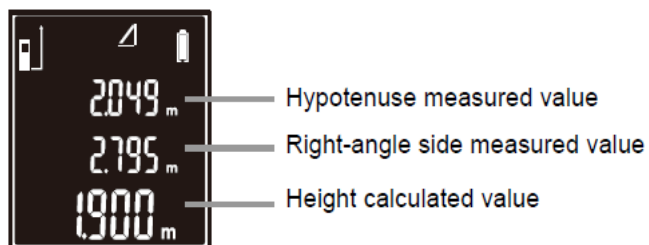
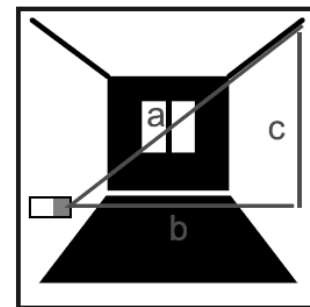


Figure S



$$c^2 = a^2 - b^2$$

6. Dual Pythagorean Theorem Measurement


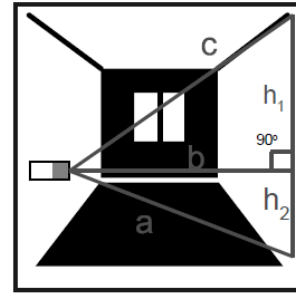
In Dual Pythagorean Theorem Measurement Mode, aim the laser onto target. Short-time press  to measure the length of the hypotenuse, right-angle side, and other hypotenuse of a triangle orderly. The total height calculated value will be displayed immediately on the screen shown as figure T. (Note: the length value of another hypotenuse do not display at screen, because the screen can display three lines only.)



Figure T

First measured value
 Second measured value
 Height calculated value



$$h_1^2 + h_2^2 = (c^2 - b^2) + (a^2 - b^2)$$

7. Historical Data Review and Delete




Press the button  for 5 times into the historical data reading. Short-time press  to view the previous measurement data. Short-time press  to delete the measurement one by one. Historical Data range: 0-19. The screen shown as figure U.



Figure U

8. Addition and Subtraction Functions



Short-time press button , the next measuring data add the previous measuring data, the screen shown as figure V. Short-press button  again, the previous measuring data subtract the current measuring data, The screen shown as figure W.



Figure V

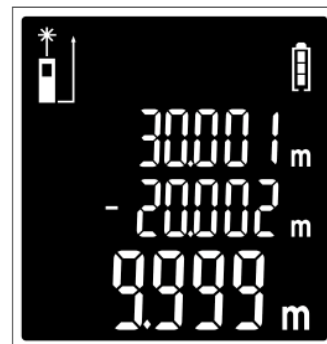


Figure W

USING TIPS

1. Power Indication

When the battery power indication as shown as figure X, it means you need to change the battery.

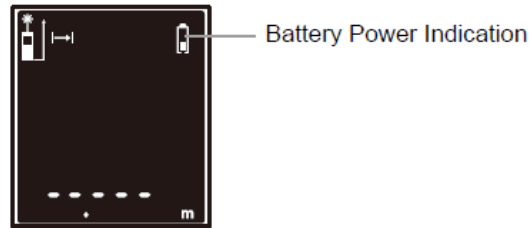



Figure X

2. Silence Function

At any state, long-time press  to switch on or switch off the Buzzer.

3. ERROR CODE


Error code	Indication	Solution
Err10	Low battery	Replace the battery
Err15	Out of range	Please measuring the target in the distance range
Err16	Signal is too weak	Change high reflective target or use reflector
Err26	The display value exceeds the display scope of the display screen	

Questions You May Encounter While Using

1、 Q: Will it work for outdoor?

A: Yes, but it is not recommended in direct sunlight if it is too bright outdoor because it is hard to see the target laser dot with the bare eye. If the sunlight is too strong, you may need to use a reflector to reduce error.


2、 Q: Can it be change from feet to meters?

A: Yes, You can switch units from inch/meter/feet freely by long pressing button .

3、 Q: Does this unit take into account its own length in the measurement?

A: It can do both, it comes with a setup to measure from the base or from the front.

4、 Q: Does this laser measure has a mute function?

A: Yes, long-time press  to switch on or switch off the Buzzer.

5、 Q: Can this device measure in the darkness?

A: Yes. the back lit display is readable in darkness, but it might be not that accurate if it is too dark, the laser may not be able to detect obstacles if it's too dark. Our research team is working on this to improve the accuracy.

6、 Q: Does it have memory? How many distances can it remember?

Yes, it can store 19 measurements.

7、 Q: Will this work outside to measure dirt areas or does it have to hit a wall or something?

A: It is laser based, so there has to be something physical to point it to. If someone held a board at the end of the dirt area, that would work.

8、 Q: Will this measure height from the ground to the top of a tree?

A: If there is a barrier on the top of the tree, you may measure the height. If there is no barrier, or it is bright outdoor, you can also use the Pythagorean theorem measuring. You can measure to the top leaf from a point some distance from the base of the tree, and then the distance to the base of the tree, and the device can calculate the height of that point. it's a great aid for when you can't get a direct measurement.

MAINTENANCE

Please do not immerse the instrument in water. Wipe the surface dust with a soft cloth.

Please do not use an aggressive cleaning solution. to wipe the surface of the optical components (including the laser exit window and the signal receiving lens) in the same way as the camera lens.

SERVICE AND WARRANTY

Tavool laser distance meter is covered by the manufacturer's ONE YEAR WARRANTY from date of purchase. If any Tavool laser distance meter ever fails for any reason, please contact us by email and Tavool will provide you the best solution(refund or replacement) according to your issue.

Customer service: service@tavool.com

If you have any other questions, product problem or concerns, please also feel free to contact us by email, we will try our best to solve it for you within 24 hours. We will provide you the best solution once get your email.

If you have bad using experience with this device, or if you need more help about how to use facial steamer, please kindly contact us via email firstly. We will try our best to help you solve your issue.