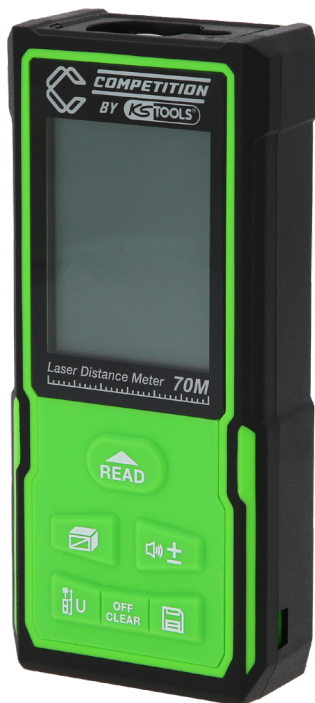


**COMPETITION**

BEDIENUNGSANLEITUNG - NOTICE D'UTILISATION - OPERATING INSTRUCTIONS

**512.3000**

-  Laser-Entfernungsmesser
-  Mètre laser
-  Laser range finder
-  Medidor de distancias láser
-  Misuratore di distanza laser
-  Laser-afstandsmåler
-  Dalmierz laserowy
-  Laserafstandsmeter
-  Лазерный дальномер
-  مقياس مسافة ليزري رقمي احترافي للاستخدامات الفنية والميكانيكية

DE/MLI/HBA/04-03-2026

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Introduction

Dear customer!

We are very pleased that you decided to purchase this product from kstools. Thank you for your confidence in us. You can find all the information you need in these operating instructions. Please read the instructions completely with care and observe the advice given. The operating instruction is part of the item and should be kept intact.

If you have any uncertainties or further questions, please contact:

customerservice@competitiontools.com

1. Provisions for use

The manufacturer is not liable for personal injuries and material damages which result from improper use.

2. Technical data

Working Range	0.05 ~ 70 m
Distance measurement precision	±2 mm*
Measurement unit options	m/in/ft
Continuous measurementfunction	yes
Outdoor target reflection board	yes
Area measurement function	yes
Volume measurement function	yes
Pythagorean proposition measurement function	Full mode
Add and subtract measurement function	yes
Delay Measurement	yes
Min/Max value	yes
Max storage	99 units
Automatic backlight	yes
Buttons/Keys sound	yes
Laser level	II
Laser type	630–670 nm, <1 mW
Automatically cut off laser	20 s
Automatic shutdown	150 s
Storage temperature	-20°C – 60°C
Working temperature	0°C – 40°C
Storage humidity	20 % – 80 % RH
Battery	2x 1,5 V AAA
Battery life	8000 times for single measurement
Angle Range	±90°
Dimension	112 x 50 x 25 mm

Note: Use a reflective board to increase the measuring range in daylight or if the target has poor reflective properties.



***Typical Tolerance:** ± 2 mm, if reflectance 100 % (white surface), ambient light < 2000 LUX. The 25°C tolerance is usually influenced by distance, reflectivity, ambient light, etc. The tolerance is probably $\pm (2 \text{ mm} + 0.2 \text{ mm/m})$.

3. Components

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

1x Laser distance meter

1x Portable bag

1x Hand strap

1x Reflection board

Note: Battery 1.5 V AAA*2 pcs. included

4. Safety and usage instructions

Tools may in principle only be used for the purpose intended, under the conditions envisaged and within the limitations as to their use.



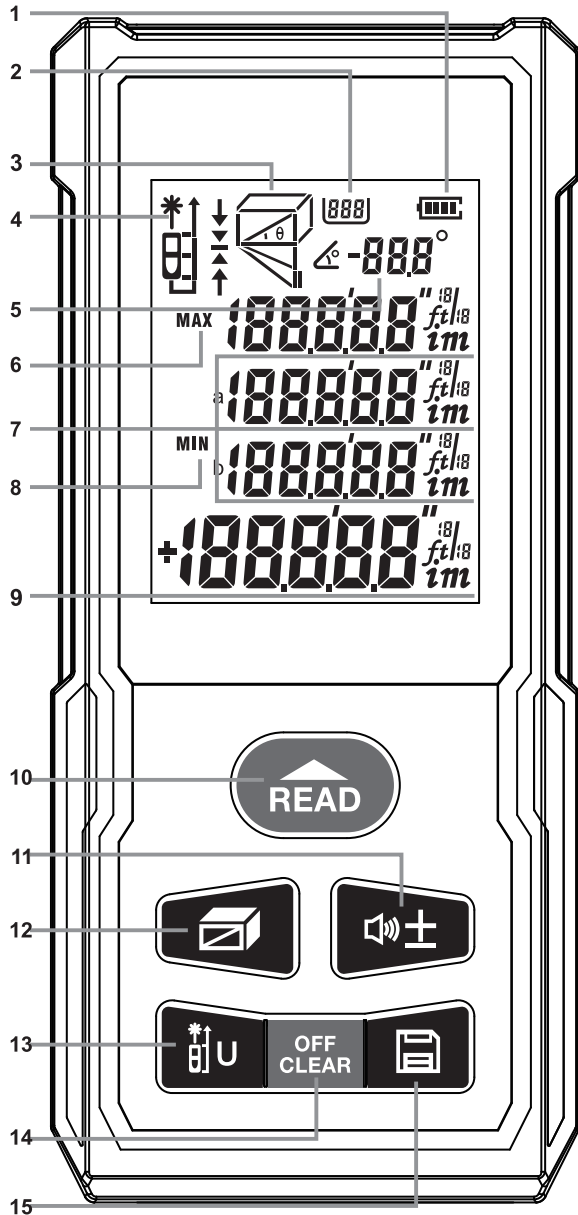
Please read the safety regulations and operation guide carefully before operating.

- Please read the entire operating instructions and the safety instructions in this manual before using the device. Improper operation without observing these instructions may result in damage to the device, influence the measurement result or cause physical injury to the user.
- The device must not be dismantled or repaired. It is prohibited to make illegal modifications or changes to the performance of the measuring device. Please keep the device out of the reach of children and prevent unauthorised personnel from using it.
- It is strictly forbidden to aim the laser at the eyes or other parts of the body; it is not permitted to aim the laser at highly reflective surfaces.
- Due to the electromagnetic radiation that can interfere with other devices, please do not use the meter in an aircraft or near medical equipment, and do not use it in a flammable or explosive environment.
- Discarded batteries or measuring devices must not be treated as household waste, but must be disposed of in accordance with the relevant laws and regulations.
- If you have any quality problems or questions about the measuring device, please contact your local dealer on time.



5. Display/Tastatur

Display	
1	Power Supply
2	Record
3	Length / Area / Volume and Pythagorean
4	Laser on
5	Angle
6	Maximum
7	Auxiliary Display
8	Minimum
9	Major Display
Keyboard	
10	Turn on / Measuring
11	Sound / Addition / Subtraction
12	Area / Volume / Pythagorean Measuring
13	Reference Point / Unit Switch
14	Turn off / Remove
15	Save

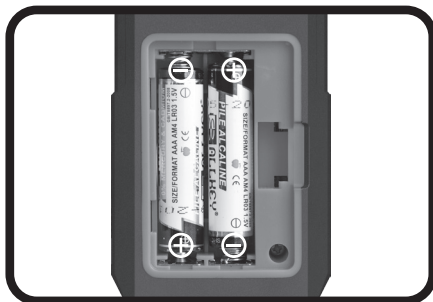
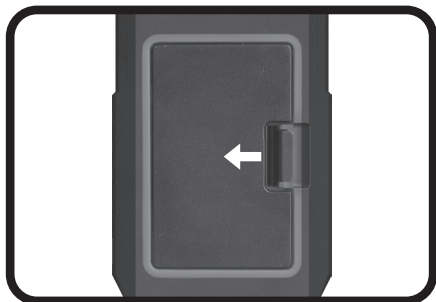




6. Operation

6.1 Battery Installation

Battery Installation and Replacement



- Open the battery compartment on the back of the device, insert the battery with the correct polarity and close the battery compartment.
- The measuring device is only operated with 1.5 V AAA alkaline batteries.
- If you do not use the device for a longer period of time, please remove the batteries to avoid corrosion of the measuring device.

6.2 Start the instrument / Menu Setting

6.2.1 Turn on/off the Instrument

Press the button  when the device is switched off. The device and the laser are started simultaneously and are ready for the measurement. When the device is switched on, press  and hold the button for three seconds to switch it off. The device switches off if it is not operated for 150 seconds.

6.2.2 Unit setting

Press and hold the button  to reset the current unit of measurement, the default unit is: 0.000 m. There are six units to choose from.

Units:

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



6.2.3 Changing Reference Point

Press the button  to change the reference point. The default reference point of the device is at the rear.

6.2.4 Delay Measurement

Press and hold  until a second number is displayed on the screen. The user can press  or  to set the time. Press  to start the countdown. The measurement starts when the time reaches zero.

6.2.5 Back Light On/Off

The backlight is set to switch on and off automatically. The backlight can be switched on for 15 seconds during operation and switches off automatically after 15 seconds if the device is not operated.

6.2.6 Sound On/Off

Press and hold  to switch the sound on and off.

6.3 Self-Calibration

This function can increase the precision of the device.

Instruction: Switch off the device by pressing and holding the  button and then pressing . Release the  button, then release the  button until „CAL“ and a number below are displayed on the screen. The user can adjust the number with the buttons   according to the accuracy of the meter. Setting range: -9 to 9 mm. Press and hold the  button to save the calibration result.

6.4 Length Measurement & Calculation

6.4.1 Single Distance Measuring

Switch on the laser beam by briefly pressing the  button under the measurement mode, press the  button again for a single length measurement, then the measurement results are shown in the main display area.

6.4.2 Continuous Measuring

In measurement mode, press and hold the  button to switch to continuous measurement mode. The maximum measurement result is shown in the auxiliary display area, the current result is shown in the main display area. Briefly press the  button or  to exit continuous measurement mode.

6.5 Area Measurement



Press the  button so that  is displayed on the screen. If one of the sides of the rectangle flashes on the display, please follow the instructions below to measure the area:

- Press  once for the length
- Press  again for the width
- The device calculates the result and displays it in the main display area. The current measurement result for length is shown in the auxiliary display area
- Press  to delete the result and measure again if necessary
- Press  again to exit the mode

6.6 Volume Measurement

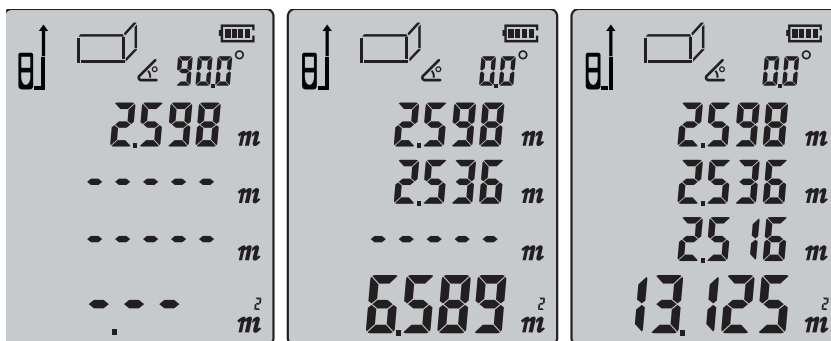
Press the  button twice to enter volume measurement mode. A  is displayed at the top of the screen. Please follow the instructions below to measure the volume:

- Press  for length
- Press  again for the width
- Press  a third time for the height
- The device calculates and displays the result in the main display area
- Press  to clear the result and measure again if necessary
- Press  again to exit the mode

6.7 Painter Function

If the measuring device is in area mode, you can use the addition/subtraction function to add the areas of several surfaces.

- Press  three times until  appears on the display
- Press  to measure the height of the wall first
- Press  to measure the bottom edge of the first wall, on the first surface in the main display area
- Press  to measure the bottom edge of the other wall. You will then obtain the sum of these two walls

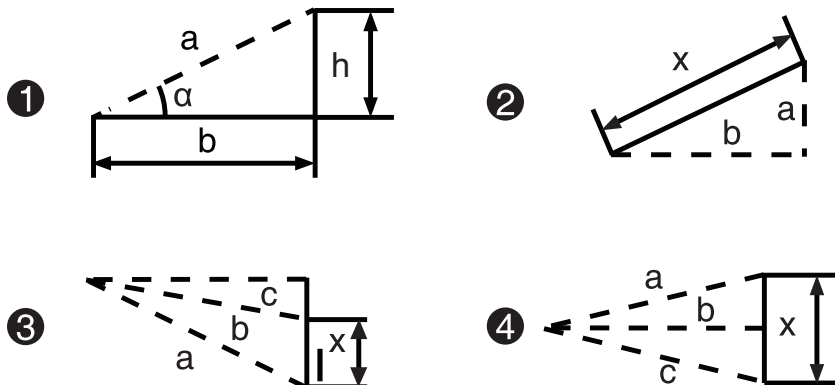


Repeat these procedures for other walls. Press the  button to delete the previous measurement result and start a new measurement.



If there is no data in the auxiliary display area, press the **OFF CLEAR** button to exit the mode.

6.8 Pythagoras



There are four Pythagoras modes in case the user has difficulty reaching the target.

1. Calculate the length of two cathets by measuring the hypotenuse and the angle.
 - Briefly press four times so that the hypotenuse of flashes
 - By pressing , the length of the hypotenuse (a) is measured and the angle (α) between the slope and the floor is calculated at the same time
 - The device calculates the horizontal distance (b) and the vertical height (h)
2. Calculate the hypotenuse by measuring the length of two cathets.
 - Press five times in quick succession until one cathetus of flashes
 - Press to measure the length of one cathetus (a)
 - Press to measure the length of the second cathetus (b)
 - The device calculates the length of the hypotenuse (x)
3. Press six times until a cathetus of flashes on the screen.
 - Press to measure the length of the cathetus (a)
 - Press to measure the length of the hypotenuse (b)
 - Press to measure the length of the other cathetus (c)
 - The device calculates the length of the line (x)
4. Press seven times until the hypotenuse of flashes on the screen.
 - Press to measure the length of one hypotenuse (a)
 - Press to measure the length of the other hypotenuse (b)
 - Press to measure the length of a cathetus (c)
 - The device calculates the length of the line (x)

The cathets must be shorter than the hypotenuse, otherwise „Err“ will be displayed on the screen. To ensure accuracy, you should make sure that all measurements are taken from the same point.



6.9 Addition/subtraction

The device can be used to add and subtract lengths. Press to obtain the result of the length measurement. Das Gerät kann zur Addition und Subtraktion von Längen verwendet werden.

By briefly pressing , "+" is displayed in the main display area and the addition mode is activated. The value of the last measurement and the result of the addition are displayed on the screen.

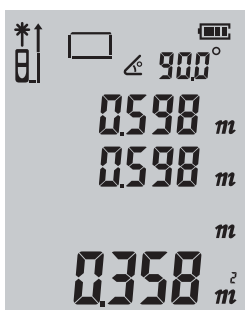
If you press again , "-" is displayed in the main display area and the subtraction mode is activated. The value of the last measurement and the result of the subtraction are displayed on the screen.

Select between continuous addition and continuous subtraction by pressing the button.

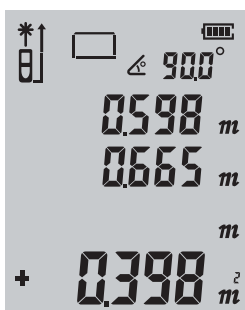
In addition to the length, the area and volume can also be calculated in addition and subtraction mode. Example of area calculation:

Addition of the area:

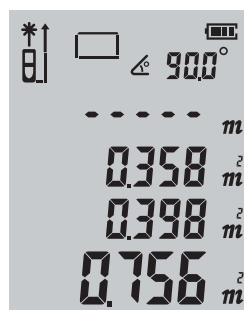
1. Measure the first area to get a result as shown in PIC1.
2. Then press the button and measure the second area to obtain a result as shown in PIC2. You will see a "+" in the bottom left-hand corner.
3. Finally, press the button to obtain the result of the addition of these two areas. This will give you a result as shown in PIC3.



PIC 1



PIC 2



PIC 3

6.10 Record Function

Press and hold the button for three seconds to record your measurement result in measurement mode. It can also record the result in area, volume and Pythagoras mode. All calculated values can be saved on the device.

6.11 Read/Delete the Record

Briefly press the button, read the data sets by pressing the and buttons. Press briefly to delete the last data record, press and hold to delete all data records. Press or to exit recording mode.



6.12 Angle measurement

The angle information is displayed at the top of the screen and the angle measurement range is $-90,0^{\circ}$ bis $90,0^{\circ}$.

6.13 Tips

You may receive the following warnings:

Info message	Cause	Solution
Err	Outside the distance measuring range	Use the device within the range
Err1	The signal is too weak	Select the surface with the highest reflectivity. Use the reflective board
Err2	The signal is too strong	Select the surface with the weaker reflectivity. Use the reflective board
Err3	Low battery voltage	Change the batteries
Err4	The operating temperature is outside the operating range	Only use the appliance at the specified temperature
Err5	Pythagoras measurement error	Measure and make sure that the hypotenuse is longer than the cathetus
Err6	Error of the angle sensor	Depot repair

7. Maintenance

Incorrect or defective replacement parts can lead to damage.

- The meter should not be stored for long periods at high temperatures and high humidity. If the meter is not used very often, please remove the batteries and place the meter in the enclosed bag and store it in a cool and dry place.
- Please keep the surface of the device clean. A damp, soft cloth can be used to clean dust, but erosion liquid should never be used to maintain the meter. The laser output window and focussing lens can be maintained according to the maintenance instructions for optical devices.

8. Maintenance

Incorrect or defective replacement parts can lead to damage.



9. Checks

All tools are to be checked for damage.

10. Disposal

The tool is to be disposed of or recycled in accordance with the legislation of the respective country.

11. Guarantee

The KS Tools Werkzeuge und Maschinen GmbH guarantee applies for all tools that are used under normal usage conditions.

The following are excluded from the guarantee:

- **Consumables** e.g. any type of cutting tools, cutting inserts and disks, cutting and scraping tools, brooms, brushes, files, batteries, bits or bit sockets, rotor blades in pneumatic devices, isolators on heating coils, any type of fuses, carbon brushes, etc.
- **Faulty functioning** of parts that show usage-related or other natural wear and tear, as well as tool defects that can be traced back to usage-related or other natural wear and tear.
- **Defects** in the tool that can be traced back to a failure to observe the operating instructions, improper use, use under abnormal environmental conditions or unsuitable operating conditions, overloading or improper maintenance.
Also defects in tools caused by the use of accessory parts or other parts that are not KS Tools original parts.
- Tools which have been modified or equipped with additions.
- Minor deviations from the intended quality that are however insignificant for the value and suitability for use of the tool.

The guarantee period is 12 months in cases of industrial or equal use.

The guarantee period starts on the date of purchase by the commercial end customer. The date of the original purchase receipt is decisive. For technical products with limited guarantee types A, B and C, the user must principally submit the purchase receipt in addition to the serial number of the device, if present.

The guarantee applies under consideration of the guarantee type for the duration specified in the price list valid on the day the product was purchased.

If no guarantee claim exists for the product (expiration of the guarantee time, guarantee exclusion for the reasons listed in Sec. 2) but the repair is still possible, this will only be carried out following approval of the cost estimate by the user.



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