PCWork

User Manual PCW11A

Laser Distance Meter

EN – User Manual

Please check www.pcworktools.com for the latest manual and digital version.

Safety Instructions

- The instrument is designed according to the requirements of the IEC60825-1 standard and therefore classified as a class 2 laser device.
- Read this manual carefully before using the device and strictly follow the instructions when using it. Otherwise safety for the user cannot be guaranteed.
- Do not provide children access to the device. Parents are fully responsible for any safety hazards caused by non-compliance.

- The operator of this device is obliged to ensure that every other person using this device has read and understood the manual. Only qualified users are permitted to operate the device.
- Never look directly at the laser from the laser emission port. Non-compliance bears the risk of permanently damaging your eyesight.
- Please comply with the local and national safety code. Do not use around medical equipment. The device is not waterproof and cannot be put in water. Do not use the instrument around explosive gas, steam, or in an wet environment.
- Never use the device if the device is damaged or the display does not work.
- Opening, repairing, or maintenance should only be executed by qualified professionals.
- The device, the lens, and the laser emitting port must be kept clean. Use cloth or neutral screen cleaner for cleaning. Never use acid, alkaline, solvents or alcohol.
- Any change related to the design or construction of the device is not permitted.
- Warranty and any liability in regards to material damage or personal injury are suspended in the following cases:
  - Improper usage and operation of the device
  - Not following the instructions and safety regulations provided by the manual
  - Operation and usage without wearing proper personal protection equipment
  - Usage and installation of non-approved spare parts
  - Improper maintenance and changes related to the design or construction of the device; removal of the type plate

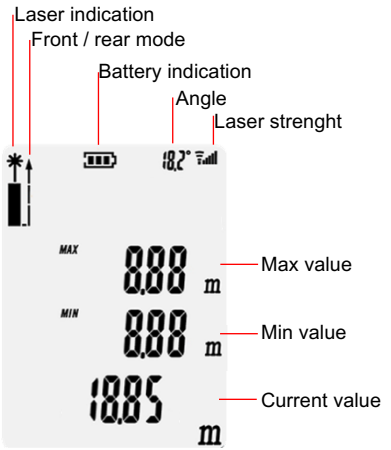
Layout

General Operating Instructions

1. Never look directly at the red laser from the emission port. Non-compliance bears the risk of permanently damaging your eyesight.
2. Do not cover the receiving lens and laser emitting port when measuring. Place the device on a fixed or plane underground if possible.
3. The device cannot be moved until the measurement result is shown on the display.
4. The better the laser's throwback (scattering, non-reflection) effect on the target surface, the farther is its range. When the laser spot falls on the surface of the following objects, the results will be inaccurate:
   a. Transparent surfaces (e.g. water, glass)
   b. Mirroring surfaces (e.g. polished metals)
   c. Porous surfaces (e.g. soundproof materials)
   d. Textured surfaces (e.g. rough plaster walls, natural stone)
5. If necessary, place a reflective item (e.g. paper) on those surfaces, in order to receive accurate results.
6. Check if front or rear measurement mode
   e. Front mode: Device measures without taking the device's length into account
   f. Rear mode: Device measures with taking the device's length into account

Display Layout & Important Symbols

Front / rear mode symbols:



Basic Operation

On/Off

a. Press the main button for 0.5 seconds to turn on the device.
b. Press the off-button for 2 seconds to shut down the device.

Switching between front/rear measurement mode

In the power-on state, press the function button for about 1 second to change the measurement mode.

Note: The selection of the measurement mode should be before the start of the measurement or after the end of a single measurement. Do not switch the mode during the measurement process.

Changing the numerical unit

In the shutdown state, press the main button and keep it pressed. The device will turn on and enter the unit switching mode. Once the desired unit is selected, release the main button. The unit can be switched between m (meter) / ft (feet) / in (inch).

Other functions

a. Press the button for about 0.5 seconds to return to the previous measurement function or data.
b. Press the off-button for about 1 second to turn off/on the LCD backlight.

Simple measurement

a. Single measurement

When the device is powered on, press the main button for 0.5 seconds to turn on the laser. Short press again to take a measurement. The data is displayed on the screen.

The laser will automatically shut down after 20 seconds of no operation. After 60 seconds of no operation, the device will turn off.

b. Consecutive measurement

Long press the main button for about 1 second to enter the consecutive measurement mode. When moving the device to a new position, the real-time distance measurement data will be displayed on the screen. The device will automatically display the maximum and minimum value of the measured data

Advanced Function Operation

Switching between measurement functions:

When the device is powered on, short press the function button to switch between the different measurement functions.

Area measurement

In this mode, the area can be measured and automatically calculated. Short press the main button to measure the length and short press again to measure the width. The device will automatically calculate the area.

Length

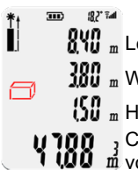
Width

Calculated area value

Area measurement symbol

Volume measurement

In this mode, the volume can be measured and automatically calculated. Short press the main button to measure the length, short press again to measure the width, and short press again to measure the height. The device will automatically calculate the volume.



Length

Width

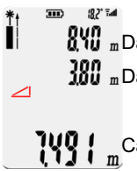
Height

Calculated volume

Volume measurement symbol

Primary Pythagorean

In this mode, the device uses the Pythagorean law a2+b2=c2. This mode can calculate the length of the target edge by running the Pythagorean law once, which is called Primary Pythagorean mode. Short press the main button to measure datapoint c, and press again to measure datapoint b. After measuring the two values, the device automatically calculates datapoint a.

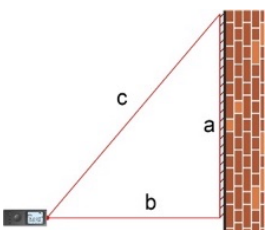


Datapoint c

Datapoint b

Calculated datapoint a

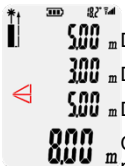
Primary Pythagorean symbol



Position of device and datapoints

Secondary Pythagorean (data addition)

This device can measure height in two segments by taking three measurements. Press the main button the get datapoint c, datapoint b, and datapoint e, the device automatically calculates the length of datapoint a1+a2.



Datapoint c

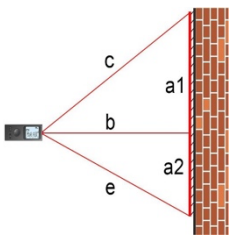
Datapoint b

Datapoint e

Calculated data-point a1+a2

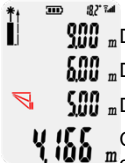
Secondary Pythagorean symbol (data addition)

Position of device and datapoints



Secondary Pythagorean (data subtraction)

This device can measure height in two segments by taking three measurements. Press the main button to get datapoint e, datapoint b, and datapoint c, the device automatically calculates the length of datapoint a.



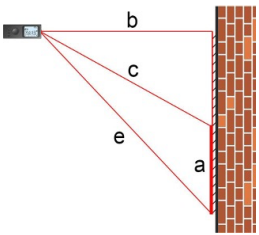
Datapoint e

Datapoint b

Datapoint c

Calculated datapoint a

Secondary Pythagorean symbol (data subtraction)



Position of device and datapoints

Information regarding waste disposal:

You are not permitted to dispose of this device in household garbage. This multimeter corresponds to the EU-directive concerning the “Waste of Electrical and Electronic Equipment”. Please dispose of the device in your local collection point.

Specifications

Range (normal conditions)	0.03-30m
Accuracy (normal conditions.)	±2mm
Range (unfavorable conditions)	0.03-20m
Accuracy (unfavorable conditions)	±3mm
Display unit minimum	1mm
Laser type	Class 2, 620-670nm, <1mw
Battery capacity	250mAh
Charging	DC 5V <1A
Operation temperature	0-40°C
Storage temperature	-20-60°C
Relative air humidity	80%

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Importer

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