Laser Distance Meter
Laser-Distanzmesser
Laser distance-mètre
Metro di distanza laser
Medidor Láser de Distancia

User Manual

**Please read this manual before switching the unit on.
Important safety information inside.**

Content

The compact and handy base model was specifically designed for indoor applications. Shortcut and Soft grip keys for addition, subtraction, area and volume calculation make measuring fast and very reliable.

1.Safety Instruction

Permitted Use

- Measuring distances
- Computing functions, e. g. areas and volumes

Prohibited Use

- Using the instrument without instruction
- Using outside the stated limits
- Deactivation of safety systems and removal of explanatory and hazard labels
- Opening of the equipment by using tools (screwdrivers, etc.), as far as not specifically permitted for certain cases
- Carrying out modification or conversion of the product
- Use of accessories from other manufacturers without the express approval of CEM Technology.
- Deliberate or irresponsible behavior on scaffolding, when using ladders, when measuring near machines which are running, or near parts of machines or installations which are unprotected
- Aiming directly into the sun
- Inadequate safeguards at the surveying site (e.g. when measuring on roads, construction sites, etc.)

Laser Classification

There is a visible laser beam which emerges from the front of the instrument.

Laser Class 2 products:

Do not stare into the laser beam or direct it towards other people unnecessarily. Eye's protection is normally afforded by aversion responses including the blink reflex.

⚠ **WARNING:**

Looking directly into the beam with optical aids (e.g. binoculars, telescopes) can be hazardous.

Precautions:

Do not look directly into the beam with optical aids.

⚠ **CAUTION:**

Looking into the laser beam may be hazardous to the eyes.

Precautions:

Do not look into the laser beam. Make sure the laser is aimed above or below eye level.

2.Start-Up

Inserting/Replacing Batteries (See "Figure A")

1) Remove battery compartment lid.

2) Insert batteries, observing correct polarity.

3) Close the battery compartment again.

• Replace the batteries when the symbol "⊏▭⊐" flashes permanently
  in the display.

• Use alkaline batteries only.

• Remove the batteries before any long period of non-use to avoid
  the danger of corrosion

Figure A

Keypad (See "Figure B")

1- **ON/MEAS** button
2- **CLR/OFF** button
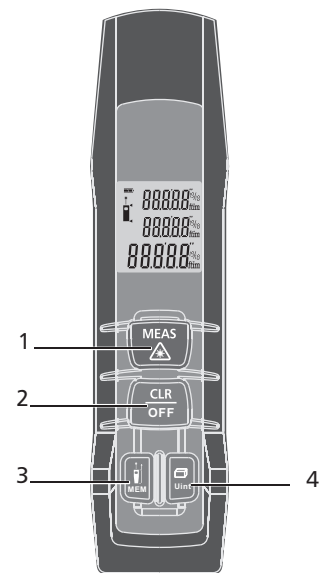3- **MEM/Reference** button
4- **Function(⬛)/Unit** Button

Figure B

LCD Display (See "figure C")

1- Laser active

2- Reference level (front)

3- Reference level (rear)

4- Battery status

5- Intermediate line 1

6- Intermediate line 2

7- Summary line

Figure C
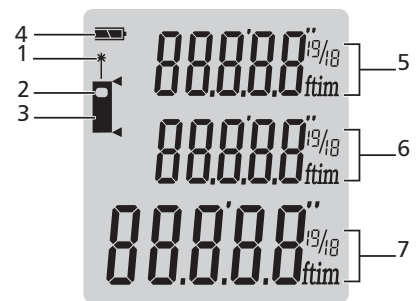
3.Initial Operation and Setting

Switching On and Off

⚠ **MEAS** Switches on the instrument and laser.

CLR OFF Press this button longer to switch off the instrument.
The instrument switches off automatically after three minutes of inactivity.

Clear Button

CLR OFF The last action is cancelled or the data display is cleared. If in the mode of History storage, press MEM button and Clear button simultaneously will clear all storage data in the memory.

Reference Level Setting (See "Figure D")

The default reference setting is from the rear of the instrument. Long press this button **i MEM** to take the selection from the front edge , A special beep sounds whenever the reference setting is changed. After a re-startup the reference returns automatically to the default setting (rear reference).
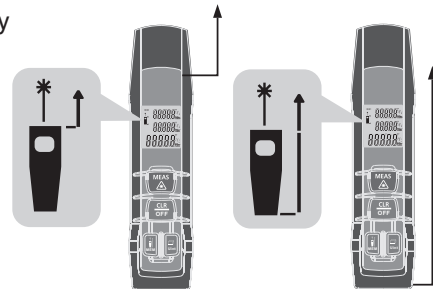

Figure D

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Distance Unit Setting For Instrument

[Uint] Click the button longer to change the next type of unit. The following unit can be set:

	Distance	**Area**	Volume
1	0.000 m	0.000 m^2	0.000 m^3
2	0.0 in	0.000 ft^2	0.000 ft^3
3	0 1/16 in	0.000 ft^2	0.000 ft^3
4	0.000 ft	0.000 ft^2	0.000 ft^3
5	0'00" 1/16	0.000 ft^2	0.000 ft^3

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4.Measuring

Single Distance Measurement

⚠ **MEAS**   Press to activate the laser.
Press again to trigger the distance measurement. The measured value is displayed immediately.

Continuous Measurement (Tracking) & Max and Min Measurement (See "Figure E")

The continuous measurement function (tracking) is used for the transferring of measurements, e.g., from construction plans. In continuous measurement mode, the measuring tool can be moved to the target, whereby the measured value is updated approx. Every 0.5 seconds in the third line. The corresponding minimum and maximum values are displayed dynamically in the first and second line.

As an example, the user can move from a wall to the required distance, while the actual distance can be read continuously.

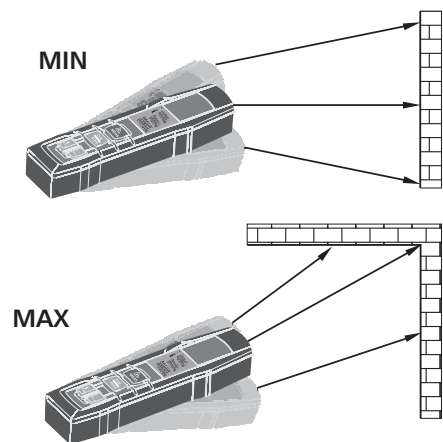For continuous measurement, long press the ⚠ **MEAS** button will start the continuous measurement.

MIN

MAX

Figure E

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And press ![MEAS] or ![CLR OFF] button
again to stop the function. The function is terminated automatically
after continuous 100 times measurement.
The MIN and MAX data will display in lines 1 and 2 individually.

5.Functions

Area Measurement

Press the ![Uint] button once will start the area measurement function.
Press ![MEAS] button to take the first length measurement (e.g. length).
Press ![MEAS] again to take the second length measurement (e.g. width).
The result of the area measurement is displayed in the third line, the individually measured values are displayed in
lines 1 and 2.

Whilst the first connection between the Phone/PC and the Laser distance meter is being established, a prompt for the Pin-code of the instrument may be displayed. In this case, enter the code 0000 into your Phone/PC.

Switching off BLUETOOTH

Press and hold Func/Unit button until the Bluetooth symbol disappears in the display.

The BLUETOOTH switches off as soon as the instrument is switched off.

Volume Measurement

Push 🔘 button twice will start volume measurement function .

🔺 press to takes first distance measurement (e.g. Length)

🔺 press to takes second distance measurement(e.g. width)

The result of the area measurement from the values already measured is displayed in the summary line.

🔺 Press to takes the third distance measurement(e.g. height). The value is displayed in the second line.

The result of the volume measurement is displayed in the summary line, the two previously measured values in lines 1 and 2.

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Historical Storage

The previous 20 records (measurements or calculated results) are shown in the reverse order. Use [MEAS] buttons to navigate through these records.
You can clear all records by press Storage button and Clear button simultaneously in historical storage mode.

Bluetooth function (Optional)

Switching on BLUETOOTH / sending measurements
Press and hold Func/Unit button until the Bluetooth symbol appears in the display. Then you can use our Meterbox APP installed on your phone to connect with this instrument.

6.Technical Data

Technical Specifications

Range (use target plate from about 50m)	0.05 to 30 m*(0.2 in to 98 ft*)
Measuring accuracy up to 10m **(2σ, standard deviation)**	Typically: ±1.5 mm** (± 1/16 in**)
Measuring units	m,in,ft
Laser Class	Class II
Laser Type	650 nm, <1mW
Smallest unit displayed	1mm
Area, Volume Calculations	√
Continuous Measurement	√
Min/Max Distance Tracking	√
Display illumination and multi-line display	√
Beep indication	√
BLUETOOTH® 4.0 EDR	O
Range of BLUETOOTH®	10m
BLUETOOTH® with Apple iPod/iPhone support	√
BLUETOOTH® with SPP support	√

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Dust Protect/Splash proof	IP 54
History measurement records	20
Keyboard Type	Super Soft-Touch (Long life)
Operating Temperature	0° C to 40° C(32° F to 104° F)
Storage Temperature	-10° C to 60° C(14° F to 140° F)
Batteries	Type AAA 2 x 1.5V
Battery Life	up to 5,000 measurements
Auto laser switch-off	after 30 seconds
Auto instrument switch-off	after 3 min
Dimension	135 x 33 x 24 mm
Weight	80g

* Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties!
** in favourable conditions (good target surface properties, room temperature) up to 10 m (33 ft). In unfavourable conditions, such as intense sunshine, poorly reflecting target surface or high temperature variations, the deviation over distances above 10 m (33 ft) can increase by ± 0.15 mm/m (± 0.0018 in/ft).

7.Troubleshooting – Causes and Corrective Measures

Code	Cause	Corrective measure
208	Received signal too weak, measurement time too long. Distance >50m	Use target plate
252	Temperature too high	Cool down instrument
253	Temperature too low	Warm up instrument
255	Hardware error	Switch on/off the device several times, If the symbol still appears, please contact your dealer for assistance.

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8.Measuring Sonditions

Measuring Range

The range is limited to 30m.

At night or dusk and if the target is in shadow the measuring range without target plate is increased. Use a target plate to increase the measurement range during daylight or if the target has poor reflection properties.

Target Surfaces

Measuring errors can occur when measuring toward colorless liquids (e.g. water) or dust free glass, Styrofoam or similar semi-permeable surfaces. Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors.

Against non-reflective and dark surfaces the measuring time may increase.

Care

Do not immerse the instrument in water. Wipe off dirt with a damp, soft cloth. Do not use aggressive cleaning agents or solutions. Handle the instrument as you would a telescope or camera.

9.Labelling
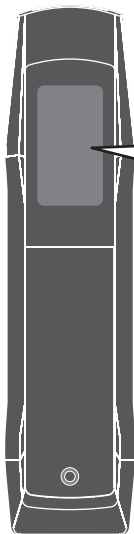
CAUTION

LASER RADIATION DO NOT STARE INTO BEAM
MAXIMUM OUTPUT <1mW
WAVELENGTH 630-670nm
CLASS 2 LASER PRODUCT   EN 60825-1:2007

⚠ PLEASE READ MANUAL   2 x "AAA"
FOR SAFETY.   1.5V batteries