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LASER DISTANCE METER 900

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Congratulations on the purchase of your **900**. The safety instructions can be found in the back of the booklet. The safety instructions and the user manual should be read through carefully before you use the product for the first time.

Complete set:

Laser distance meter	1
Battery	1
Carrying case	1
User manual	1
Handstrap	1

Start-up
inserting/replacing battery:

1. Remove the battery compartment lid and attach handstrap.
2. Insert tha battery, observing correct polarity.
3. Close tha battery cover. Replace the battery when the symbol ▭ flashes permanently in the display. Remove the battery before any long period of non-use to avoid the danger of corrosion.

Note:

1. Replace the battery when the indicator shows absence of a charge .
2. If the indicator of the battery charge shows one division, you can make approximately 100 measurements .
3. The power indicator blinks when the battery is low .

Use of the instrument:

1. Measurements of linear distances.
2. Carrying out of indirect measurements (Pythagorean method).
3. Calculation of the area and volume.
4. Minimum/maximum measurements.

Changing the reference point:

The instrument can take measurements from two points:

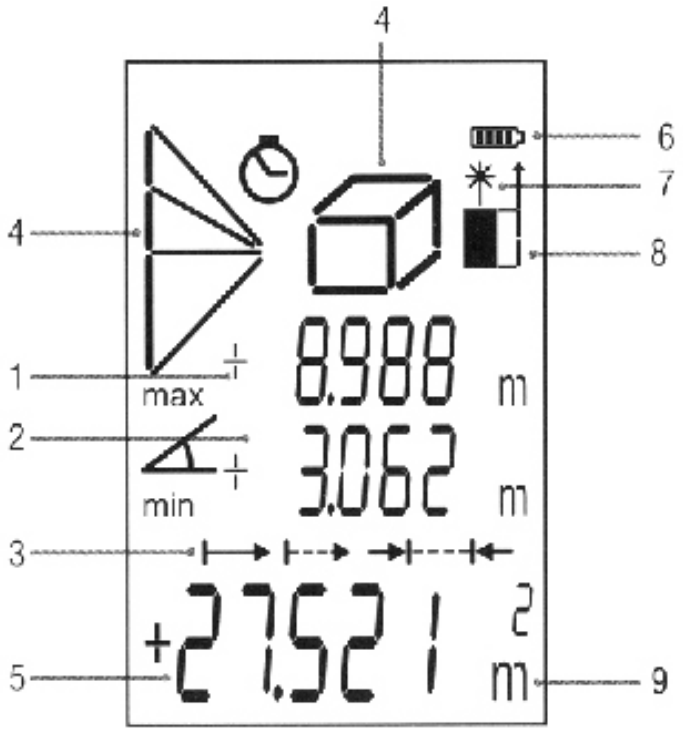
1. From a back edge of the instrument.
2. From a forward edge of the instrument.

Switching of reference points is carried out by consecutive pressing the button . Thus the corresponding indicator lights up on the display.

Operation:

1. Belt holder.
2. LCD Display.
3. Measuring button.
4. Plus (+) / minus (-) button.
5. Area / volume / wall area button
6. Indirect measurement button.
7. Reference button / Unit of measurement.
8. ON - OFF / Clear button

Display:



1. Maximum measurement.
2. Minimal measurement.
3. Single/continous measurement.
4. Area / volume / wall area / indirect measurement.
5. Main line.
6. Battery status.
7. Laser active.
8. Measuring reference.
9. Measuring units.

Technical data:

Laser type	650nm/Classe II/<1mW
Range	0.1m - 40m (0.33 ft - 131 ft)*
Meas. accuracy Typically	± 2mm (± 1/13 in)**
Smallest unit displayed	1mm (1/16 in)
Autom. switch off Laser: Instrument:	 45 sec 180 sec
Storage temperat. range	-25°C / +70°C (-13°F / +158°F)
Operat. temperat. range	0°C / +40°C (+32°F / +104°F)
Dimensions	110mm x 43mm x 26mm (4.33 in x 1.69 in x 1.02 in)
Weight	70g

* 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 10m (33ft). In unfovourable conditions, such as intense sunshine, poorly reflecting target surface or high temperature variations, the deviation over distances above 10m (33ft) can increase.

Menu functions setting:

1. Unit setting

The following unit can be set:

	Distance	*Area*	*Volume*
1	0.000m	0.000m²	0.000m³
2	0'00" 1/16	0.000ft²	0.000ft³
3	0000 1/16 in	0.000ft³	0.000ft³
4	0.000ft	0.000ft²	0.000ft³

1.1 In order to change meas. units press and hold  .

1.2 In order to switch to the next unit repeat 1.1 again.

2. Beep

You can switch the beep on or off +/-. Press for longer to switch.

3. Display -keypad backlight

Automatic illumination of the display. Backlight cannot be switched off. Every time you switch on the meter or press any button - backlight switch on for 30 seconds.

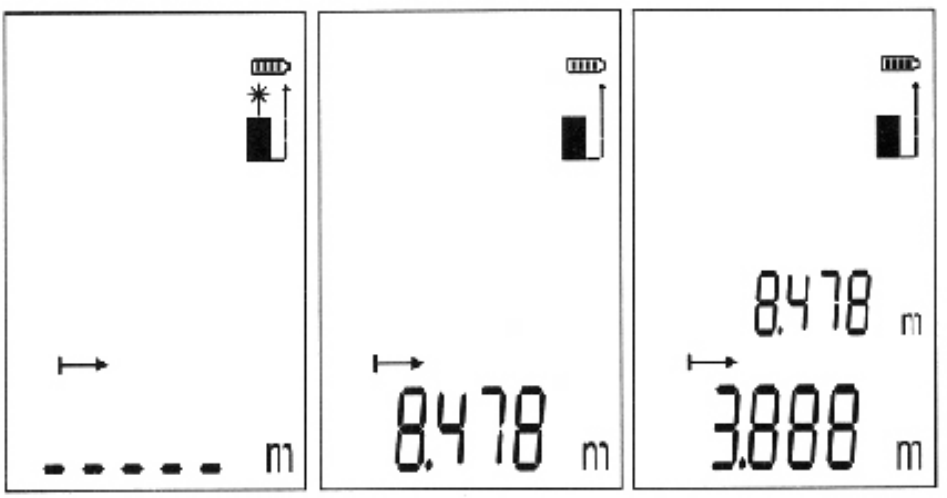
4. Single distance measuring mode

A. DIST press once. Activate the product and all symbol display for checking. The display standby mode. When the meter switching on pause should

be as short as possible. Measuring time in single mode should be < 0,5 sec to 90% Kodak grey card at distance <15m. Lighting condition < 2000 LUX. Indoors.

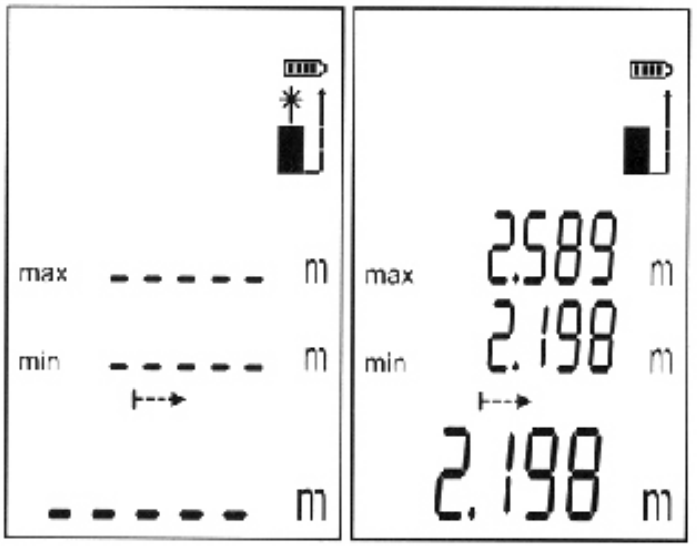
B. Press DIST button for turn on the laser beam to aim at object which you want to measure.

1	Press DIST	Result appears in lower (big) string. Laser switched off.
2	Press DIST once again	Laser switch on for targeting. Previous result moves to second string.
3	Press DIST	New measured result appears in «big» lower string. Laser switched off.
4	Press DIST once again	Laser switch on for targeting. Both previous results moves up (upper & second string).
5	Press DIST	Last measurement appears in lower (big) string. Laser switched off.



5. Continuous distance mesuring mode:

Press and hold DIST button to switch into continuous mesuring mode, the laser beam will be also activated. The data will be display simultaneity. Maximum value appears in top string, Minimum in middle string, Current value in lower string. Press any of buttons DIST or C to stop continuous laser. Catch the final lenght display on the screen. Measuring time in continuous mode should be < 0.3 sec to 90% Kodak grey card at distance <15m. Lighting condition < 2000 LUX Indoors.

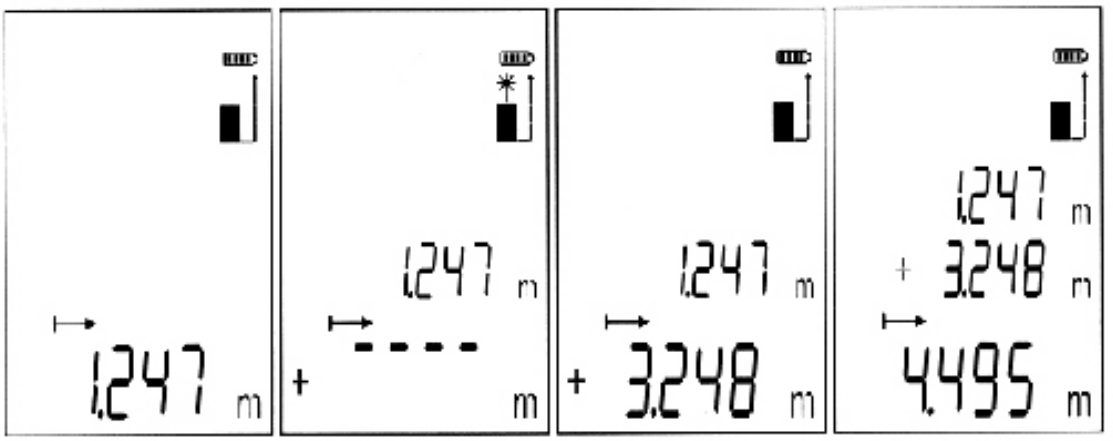


6. Addition / Subtraction:

Make 4A and 4B operation for switching on the product and the laser beam.

1	Press DIST once again to measure	Result appears in lower (big) string. Laser switched off.
2	Press +/- button one or two times to choose appropriate action.	Sign + or - appears. Previous result moves to top string. Laser switch on for targeting.
3	Press DIST	Measured result appears in middle string. Calculated value appears in lower string.

↺ the last step is cancelled .

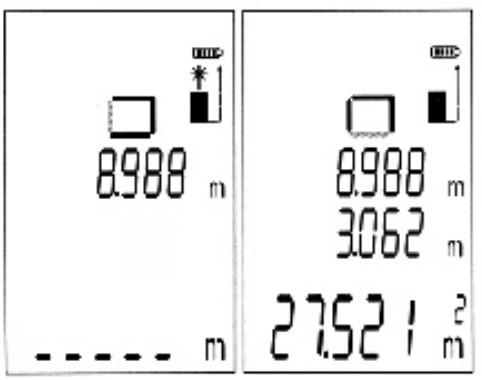


7. Area

Make 4A and 4B operation for switching on the product and the laser beam.

1	Press button once	The symbol appears in the display.
2	DIST Press this button to take the first length measurement (height).	Measured result appears in upper string.
3	DIST Press this button to take the second length measurement (width).	Measured result appears in second string. Calculated volume appears in lower (big) string. Laser switched off.

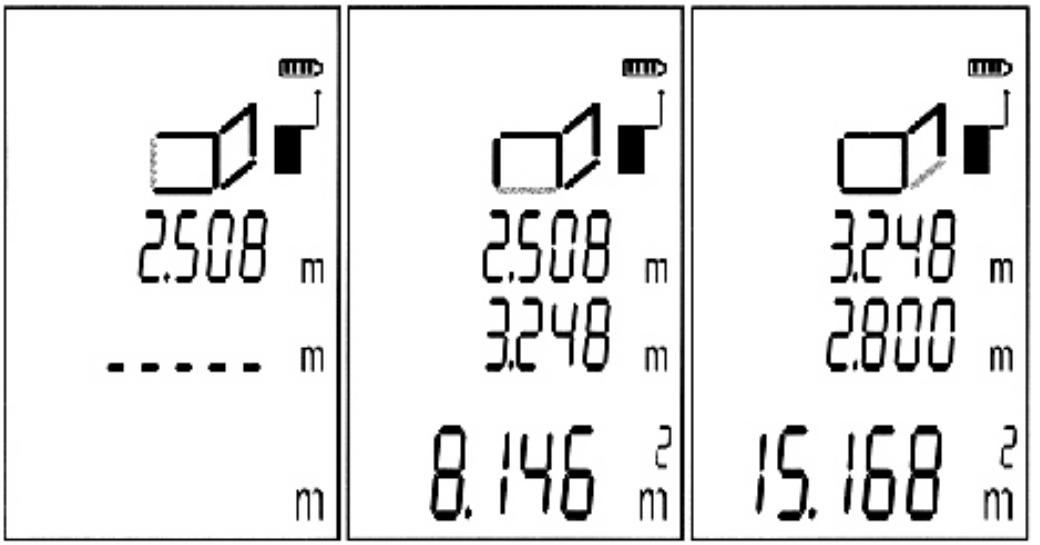
Press button to cancel this mode.



8. Wall Area Calculation

1	Press button twice.	The symbol appears in the display.
2	DIST Press this button to take the first measurement (height)	First measurament result(height) appears in upper string.
3	DIST Press this button to take the second length measurement (first wall length)	Second measurament result (length) appears in second string. In lower (big) string appears intermediate calculating result in square meters.
4	DIST Press this button to take the third length measurement (second wall length)	First measurament result (height) disappear, second result (width) moves to upper string. Current measurement (length) appears in second string. In lower (big) string appears calculated result in square meters. Laser switched off.

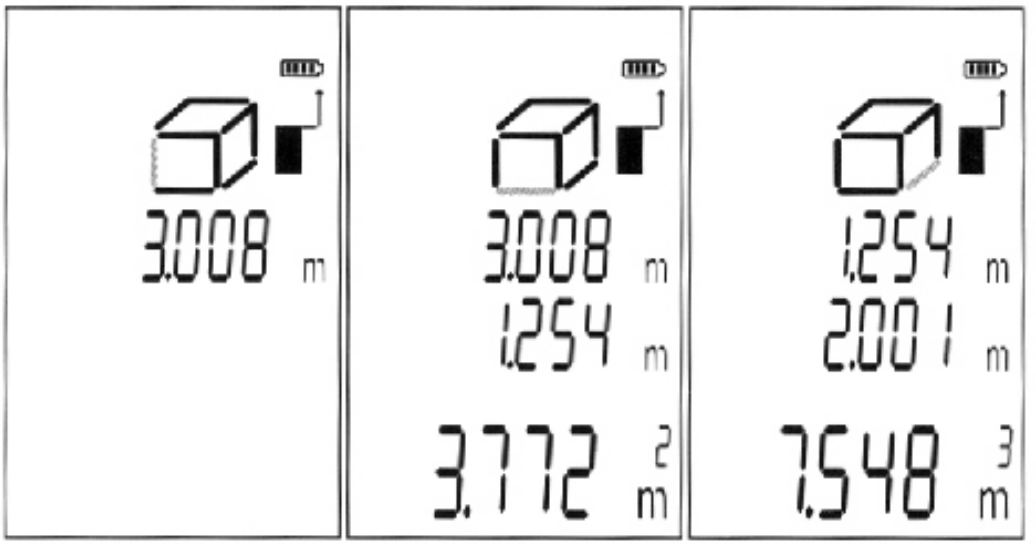
Press ↺ button to cancel this mode.



9. Volume:

Make 4A and 4B operation for switching on the product and the laser beam.

1	Press ⬚ button thrice.	The symbol ⬚ appears in the display.
2	DIST Press this button to take the first length measurement (height)	First measurament result (height) appears in upper string.
3	DIST Press this button to take the second length measurement (width).	Second measurament (length) result appears in second string. In lower (big) string appears intermediate calculating result in square meters.
4	DIST Press this button to take the third length measurement (length)	First measured result (length) disappear, second result (width) moves to upper string. Current measurement (height) appears in second string. In lower (big) string appears calculated result in cubic meters. Laser switched off.

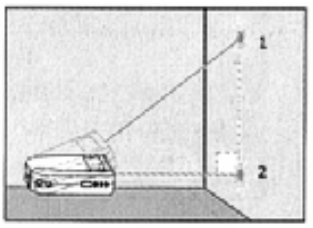


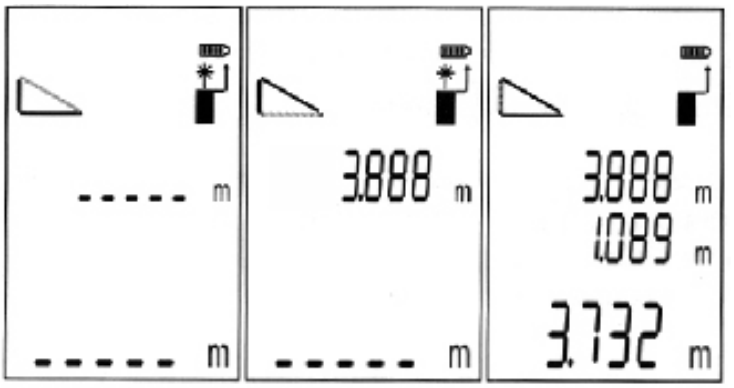
10. Simple Pythagoras: Use Pythagorean Theorem ($a^2 + b^2 = c^2$) to mesure height indirectly and calculate angle.

Make 4A and 4B operation for switching on the product and the laser beam.

1	Press button once to switch to simple Pythagoras function	The symbol appears in the display.
2	DIST Press this button to measure the first (long) side of the triangle.	First measurament result (Hypotenuse) appears in upper string.
3	DIST Press this button to measure the second (short) side of the triangle.	Previously measured result disappear, current value (Cathetus) appears in upper string. Calculated angle indicated middle string. Calculated CATHETUS appears in lower (big) string.

Press ↺ button to cancel this mode.



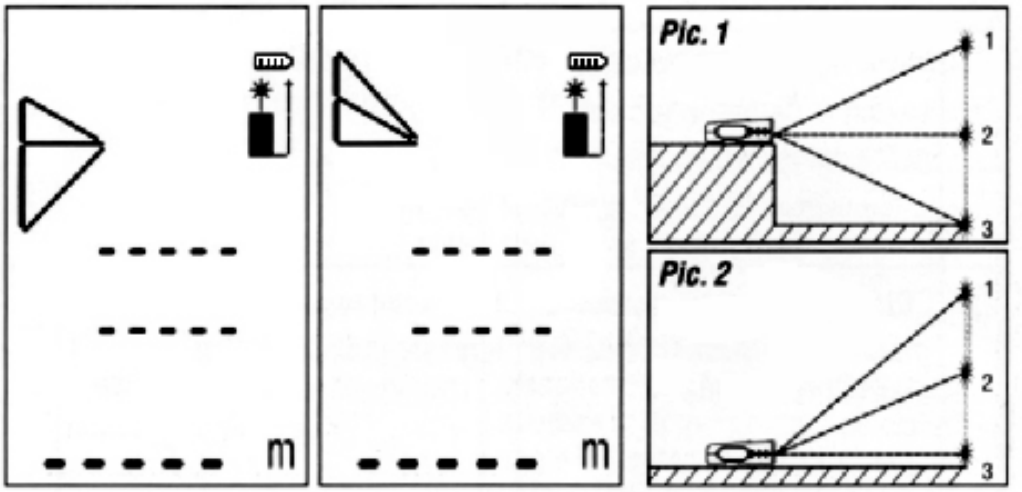


11. Extended Pytagoras:

Use Pythagorean Theorem ($a^2 + b^2 = c^2$) to measure height indirectly. Then add measured heights.

1	Press ◿ button twice to switch to Cathetus addition mode using Pythagoras.	The ◺ symbol appears in the display.
2	DIST Press this button to measure the first (LONG) top side of the triangle.	First measurament result (Hypotenuse) appears in upper string.
3	DIST Press this button to measure the second (SHORT) side of the triangle.	Second measuramenrt value (Cathetus) appears in middle string.
4	DIST Press this button to measure the third (LONG) button side of the triangle.	Previously measured Cathetus moves to upper string. Current result (Hypotenuse) appears in middle string. Calculated summary value of CATHETUS appears in lower (big) string.

Press ↺ button to cancel this mode.



Message codes

The following errors can be corrected:

Code	*Cause*	*Renedy*
301	Distance is out of range	Keep in correct measure range
302	Reflected signal is too weak	Measure on a better surface
303	Out of display range	Reset zero by press Power-Key
304	Pytagorean theorem calculation error	Check value is correct
305	Low battery	Change new battery
306	Temperature too low	Warm up instrument
307	Temperature too high	Cool down instrument
308	Ambient light is too strong	Measure in a darker background

Measuring range

The range is limited to 40m.

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.

Warranty

The 900 comes with a one year warranty

SAFETY INSTRUCTIONS

The User Manual can be found in the first part of the booklet, forms a part of the Safety Instructions. Carefully read the Safety Instructions and the User Manual before using this product. The person responsable for the instrument must ensure that all users understand these directions and adhere to them.

Symbols used The symbols used in the Safety Instructions have the following meanings:

WARNINGindicates a potentially hazardous situation or an unintended use which, if not avoided, will result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in minor injury and/or in appreciable material, financial and environmental damage.
¡Important paragraphs which must be adhered to in practice as they enabled the product to be used in a technically correct and efficient manner.

PROHIBITED USE

Using the instrumen 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 after misappropriation.