GOBLIN TOOLS

SKU: LDXR50ML
Version 2026.1.0

50M
LASER DISTANCE MEASURER

LDX-R50ML

INSTRUCTION MANUAL

CONTENTS

SAFETY

Read the following safety instructions before attempting to operate this tool.

Keep these instructions in a safe place for future reference.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING!
Read and understand all instructions.

- Use the tool only with the specifically designated batteries.
- Do not use in a flammable, explosive environment.
- Discarded batteries or devices shall not be processed with household garbage. Please follow related laws and regulations.
- Do not place the tool in a position which may cause anyone to intentionally or unintentionally stare into the laser beam. Serious eye injury could result.
- Do not position the tool near a reflective surface which may reflect the laser beam toward anyone's eyes. Serious eye injury could result.
- Do not operate the tool around children or allow children to operate the laser. Serious eye injury may result.
- Due to electromagnetic radiation interference to other equipment and devices do not use the tool in an aeroplane or around medical equipment.
- Do not use optical tools such as a telescope or transit to view the laser beam. Serious eye injury could result.
- Store the tool out of reach of children and other untrained persons. Laser tools are dangerous in the hands of untrained users.
- Do not remove or deface warning labels.
- Tool service must be performed only by qualified repair personnel. Repairs, service or maintenance performed by unqualified personnel will void the warranty. Only approved and authorised service technicians can carry out warranty repairs.

WARNING!
Do Not Disassemble The Laser Measurer.

There are no user serviceable parts inside. Disassembling the tool will void all warranties on the product. Do not modify the product in any way. Modifying the tool may result in hazardous laser radiation exposure.

CAUTION!
Class 2 Laser Product

- Never look into the laser beam directly and intentionally.
- Do not use optical tools to view the laser beam.
- Do not let children come in contact with the laser.

ITEM CHECKLIST

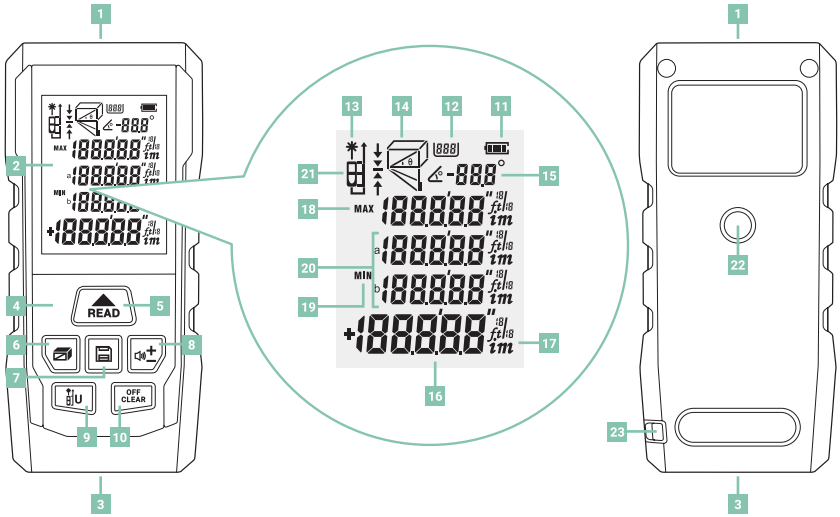
The following items are included with your laser measurer.

1. Laser measurer (LDX-R50ML)
2. USB charging cable
3. Carry pouch

LASER LEVEL OVERVIEW

LDX-R50ML

1. Laser emitter
2. LCD display screen
3. Rechargeable battery charging port
4. Control panel
5. Power on / measure button
6. Area / volume / pythagoras button
7. Data storage
8. Sound / addition / subtraction button
9. Reference point / unit button
10. Power off / clear button
11. Battery level indicator
12. Data storage indicator
13. Laser emission indicator
14. Measurement mode indicator
15. Digital angle indicator
16. Measurement indicator
17. Unit indicator
18. Maximum indicator
19. Minimum indicator
20. Auxillary display
21. Reference point indicator
22. 1/4" x 20 thread for tripod operation
23. Wrist strap attachment



USING THE LASER MEASURER

POWER SUPPLY

- The laser level is supplied with one rechargeable lithium-ion battery as its power source.
- The battery is supplied only partially charged. Fully charge the battery before use.
- The battery level indicator will flash when the battery is low. The laser measurer should be re-charged as soon as possible.
- Battery capacity decreases at low temperatures; a depleted battery may not function when cold.

Battery Maintenance

- Fully charge the battery before long term storage. And charge it at least once every 6 months to avoid battery damage.

WARNING! Only use the supplied charger. Using an incorrect charger will void the warranty.

Charging the batteries

- Insert the charging cable into the charging port on the bottom of the laser measurer (Fig.1).
- Insert the power adaptor into the power outlet (it is recommended to use a mobile phone charging power outlet).
- Progress will be shown by the power indicator display on the battery as below:

Battery bars (flash): Battery is charging

Battery bars (solid): Battery is charged

Charging time is approximately 1.5 hours for depleted batteries.

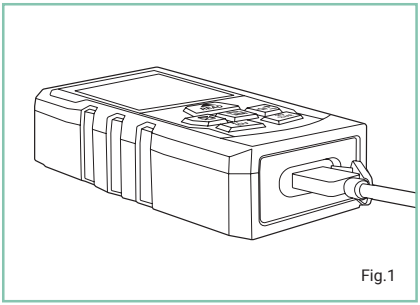


Fig.1

OPERATION

Powering on

- Press the ***power on / measure button*** and the laser measurer will power on and emit a laser beam. The laser measurer is ready for measuring.

In bright outdoor conditions, visible distance will be significantly reduced. For outdoor use, it is recommended to use the included detector(s).

Powering off

- Press and hold the ***power off / clear button*** for 3 seconds and the laser measurer will power off.
- The laser measurer will also power off after 150 seconds without operation.

Unit setting

- To change the unit of measurement, long press the ***reference point / unit button***.
- The default unit is 0.000m. There are six units for selection as below:

Optional units		
Length	Area	Volume
0.000m	0.000m^2	0.000m^3
0.00m	0.00m^2	0.00m^3
0.0in0	0.00ft^2	0.00ft^3
0.00ft0	0.00ft^2	0.00ft^3
0 1/16 in	0.00ft^2	0.00ft^3
0’00’ 1/16”	0.00ft^2	0.00ft^3

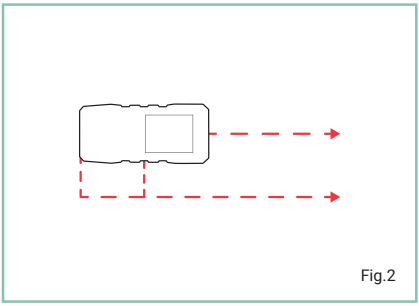


Fig.2

Reference point setting

- Press the ***reference point / unit button*** to change the reference point.
- The default reference point is bottom. There are 3 reference points: top, middle and bottom (Fig.2).

Backlight setting

- The backlight is set to turn on / off automatically. The backlight will turn on and remain on while operating, and will automatically shut off again after 15 seconds without operation.

Sound on / off

- Press the ***sound / addition / subtraction button*** to turn on / off the sound.

MEASUREMENT

Single measurement (Fig.3)

- Press the ***power on / measure button*** and the laser measurer will emit a laser beam. The laser measurer is ready for measuring.
- Re-press the ***power on / measure button*** for a single distance measurement (a). Results will be displayed on the display screen.

Continuous measurement (Fig.4)

- Press and hold the ***power on / measure button***. Minimum and maximum results will be displayed on the display screen.
- Press the ***power on / measure button*** or the ***power off / clear button*** to exit continuous measurement.

Angle measurement

- The angle of the laser measurer is displayed on the display screen.
- The angle measurement range is between -90.0° and 90.0°.

Area measurement (Fig.5)

- Press the ***area / volume / pythagoras button***. A rectangle will be displayed on the display screen with one edge flashing.
- Press the ***power on / measure button*** to measure the length (a). The second edge will start flashing.
- Press the ***power on / measure button*** to measure the width (b).
- Area will be calculated automatically with results shown on the display screen.
- Press the ***power off / clear button*** to exit area measurement.

Volume measurement (Fig.6)

- Press the ***area / volume / pythagoras button*** twice. A cube will be displayed on the display screen with one edge flashing.
- Press the ***power on / measure button*** to measure the length (a).
- Press the ***power on / measure button*** to measure the width (b).
- Press the ***power on / measure button*** to measure the height (c).
- Volume will be calculated automatically with results shown on the display screen.
- Pressing the ***power off / clear button*** after any of the measurements will clear the result if a remeasure of that edge is required.
- Press the ***power off / clear button*** a second time to exit volume measurement.

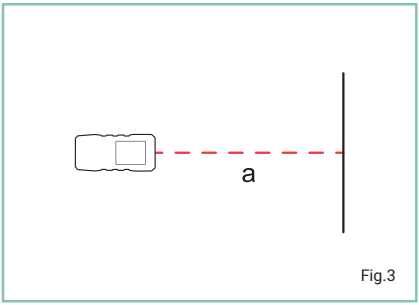


Fig.3

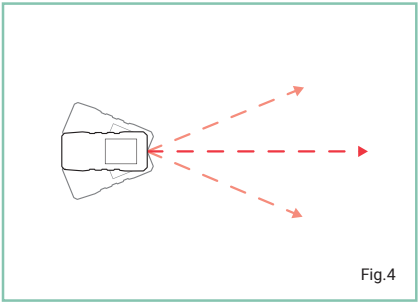


Fig.4

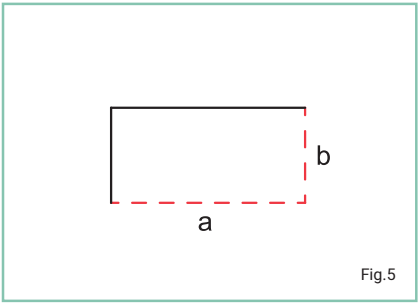


Fig.5

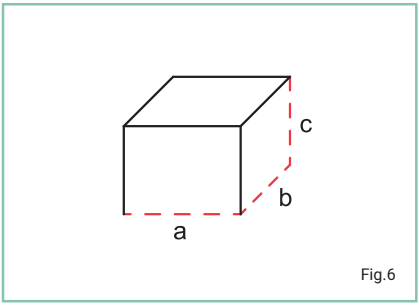
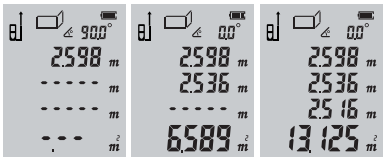


Fig.6

Painter Function (Fig.7)

- Press the ***area / volume / pythagoras button*** 3 times. A corner will be displayed on the display screen with one edge flashing.
- Press the ***power on / measure button*** to measure the height of the wall (a).
- Press the ***power on / measure button*** to measure the bottom edge of the first wall (b).
- Press the ***power on / measure button*** to measure the bottom edge of another wall. The results of the sum of these two areas will be shown on the display screen (c).
- Repeat these operations for more walls. Press the ***power off / clear button*** to clear the previous measuring result and start a new measurement.
- When there is no data in auxiliary diplay area, press the ***power off / clear button*** to exit the mode.



a b c

Fig.7

Pythagoras measurement

- To calculate the unilateral distance of a triangle pythagorean mode can be used.
- To ensure the accuracy of measurement, take measurements from the same starting point of the first order hypotenuse. Then follow with the measurement of the right side.
- There are four pythagorean modes. Please follow the instructions according to the method required.

When taking measurements of the triangle, ensure the length of the right side is shorter than the length of the hypotenuse. If not, the instrument will display an error signal.

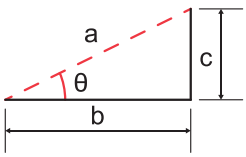


Fig.8

Calculate the sides of a right angle triangle (Fig.8)

- Press the ***area / volume / pythagoras button*** 4 times. A triangle will appear on the display screen with the hypotenuse flashing.
- Press the ***power on / measure button*** to measure the hypotenuse (a) and the angle (θ).
- The triangle length (b) and the width / height (c) will be calculated automatically and shown on the display screen.

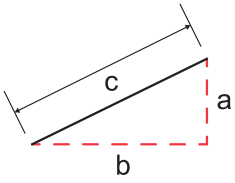


Fig.9

Calculate the hypotenuse of a right angle triangle (Fig.9)

- Press the ***area / volume / pythagoras button*** 5 times. A triangle will appear on the display screen with the width / height flashing.
- Press the ***power on / measure button*** to measure the width / height (a). The length on the triangle will start to flash.
- Press the ***power on / measure button*** to measure the length of the triangle (b).
- The hypotenuse (c) will be calculated automatically with results shown on the display screen.

Calculate the partial length of a right angle triangle (Fig.10)

- Press the ***area / volume / pythagoras button*** 6 times. A triangle will appear on the display screen with the hypotenuse flashing.
- Press the ***power on / measure button*** to measure the length of the first hypotenuse (a).
- Press the ***power on / measure button*** to measure the length of the second hypotenuse (b).
- Press the ***power on / measure button*** to measure the length of the rectangular side (c).
- The length of the vertical side (x) will be calculated automatically with results shown on the display screen.

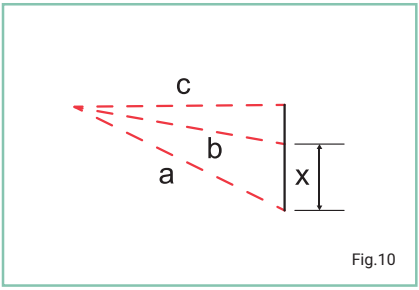


Fig.10

Calculate the third side of a triangle (Fig.11)

- Press the ***area / volume / pythagoras button*** 7 times. A triangle will appear on the display screen with the hypotenuse flashing.
- Press the ***power on / measure button*** to measure the first hypotenuse (a).
- Press the ***power on / measure button*** to measure the length (b).
- Press the ***power on / measure button*** to measure the second hypotenuse (c).
- The length of the vertical side (x) will be calculated automatically with results shown on the display screen.

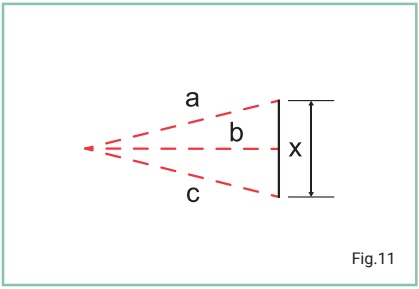


Fig.11

ADDING AND SUBTRACTING FUNCTION

Addition

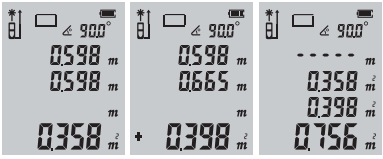
- Take the first reading by pressing the ***power on / measure button***.
- Press the ***sound / addition / subtraction button***. A '**+**' symbol will appear on the display screen.
- Take a second measurement by pressing the ***power on / measure button***. The values will be added automatically with the results shown on the display screen.

Subtraction

- Take the first reading by pressing the ***power on / measure button***.
- Press the ***sound / addition / subtraction button*** twice. A '-' symbol will appear on the display screen.
- Take a second measurement by pressing the ***power on / measure button***. The values will be subtracted automatically with the results shown on the display screen.

Area & volume addition & subtraction (Fig.12)

- Take the first area or volume measurement (a).
- Press the ***sound / addition / subtraction button***. A '-' symbol will appear on the display screen.
- Take a second area or volume measurement (b).
- Press the power on / measure button and the results will be shown on the display screen (c).



a b c
Fig.12

DATA STORAGE FUNCTION

- Press and hold the ***data storage button*** for 3 seconds. The current measuring result will be stored in the memory of the unit. A number will be displayed on the display screen to indicate the what number this result is stored under.
- Press the ***data storage button*** to view the stored measurements. Browsing can be done using either the ***area / volume / pythagoras button*** or the ***sound / addition / subtraction button***.
- Press the ***power off / clear button*** to delete the current stored measurement.
- Long press the ***power off / clear button*** to delete all stored measurements.
- Press the ***power on / measure button*** to exit data storage.

CARE & MAINTENANCE

1. This is a precision measuring tool and should always be handled with care and transported within the carry pouch provided.
2. The tool should not be stored in a high temperatures or humid environments for a long periods of time. Whenever possible, store the laser level in a dry, shady location.
3. Clean the tool with a dry, soft cloth after use in dusty, damp or wet conditions before storing. Do not use corrosive liquid to clean the tool.
4. Smudges and fingerprints may be removed with a damp tissue or a soft, lint-free cloth.

WARRANTY

All Goblin Tools measurement tools are carefully checked and tested to our precise quality assurance standards.

We offer a warranty in accordance with the following conditions:

1. Our warranty provides the correction of deficiencies to the tool once verified by an authorised service centre that the deficiencies were caused by a manufacturing fault within the warranty period.
2. The warranty does not cover:

   a) Calibrations and components that are subject to wear and tear.

   b) Defects in the tool caused by non-compliance with the operation instructions, improper use, abnormal environmental conditions, inappropriate operating conditions or insufficient maintenance.

   c) Defects caused by using accessories or spare parts other than approved parts.

   d) Services or repairs carried out by non-authorised persons.

3. Defects recognised by an authorised service centre as being covered by the warranty shall be corrected either by repair or replacement of the tool.
4. The warranty claim must be lodged within the warranty period. This requires the complete tool with the original sales receipt containing the purchase date and place of purchase. Partial or disassembled tools cannot be submitted for a warranty claim.
5. Services provided under warranty do not lengthen or renew the warranty of the tool.

The above guarantees apply to tools that are purchased in the countries and regions specified online at www.goblintradetools.com

4 YEAR STANDARD WARRANTY PERIOD

1. The warranty period for your tool is 4 years from the date of purchase.
2. Calibrations are not covered under warranty as they are deemed wear and tear.
3. All products have a standard warranty period, you do not have to register your products to obtain the standard warranty period.
4. To claim under this warranty, the date of purchase of the tool must be documented by an invoice/receipt.

TROUBLE SHOOTING

Error	Cause & Solution
ERR	**Out of range** Use the device within the range.
ERR1	**Signal is too weak** Measure target locations that have stronger reflecting surfaces.
ERR2	**Signal is too strong** Measure target locations that have weaker reflecting surfaces.
ERR3	**Low battery voltage** Charge the battery.
ERR4	**Beyond working temperature** Use the tool in the specified temperature.
ERR5	**Improper measurement in pythagorean mode** Re-measure and ensure the length of the hypotenuse is longer than that of the right side.
ERR6	**Angle sensor error** Contact the supplier.

CUSTOMER SUPPORT

To assist you with any queries or technical questions please contact customer support.

Australia: 1300 905 846

New Zealand: 0800 005 736

United Kingdom: 0808 189 1152

All other countries / regions:
Visit www.goblintradetools.com for more information

Registered Business Address:

74 McKillop Street
Geelong, VIC 3220 AUSTRALIA

RESPONSIBLE DISPOSAL

Please do not throw any electrical equipment (including those marked with the crossed out wheeled bin symbol) in your bin.

This device complies with all necessary standards for the free movement of goods within the EU. This product is an electric device and must be collected separately for disposal according to the European Directive on waste electrical and electronic equipment.

SPECIFICATIONS

Specifications	LDX-R50ML
Product code	LDXR50ML
Warranty	4 years
Accuracy	±1.5mm
Operating range	0.05-50m
Angle range	±90°
Angle accuracy	±1°
Continuous measurement function	Yes
Area measurement function	Yes
Volume measurement function	Yes
Pythagorean measurement function	Yes
Add and subtract measurement function	Yes
Wall area measurement	Yes
Min/max value	Yes
Buttons sound	Yes
Laser class	630-670nm, <1mW
Laser type	2 red
Max storage	99
Automatic laser cut off	20s (single measurement)
Automatic shutdown	150s
Storage temperature	-20°C - 60° C
Working temperature	0°C - 40° C
Storage humidity	20% - 80% RH
Battery type	3.7V 850mAh Li-ion battery
Weight (g)	113 (including battery)
Dimensions (mm)	54 x 25 x 118