

名称	快速指南	料号	
迈测型号	S2N	尺寸	展开 420x285mm 成品 70x142.5mm
客户型号	无	版本	
材质及工艺	105g 铜板纸，正反面四色印刷		
设计		日期	

RYOBI

OWNER'S OPERATING MANUAL LASER DISTANCE MEASURER MODEL LDM-52

SPECIFICATIONS	
Max. measuring range.....	0.2-50m
Measuring accuracy.....	±(2.0 mm +5x10 ⁻⁵ D)
Measuring units.....	m / ft / in / ft+in
Laser class.....	Class 2
Laser type.....	630-670nm, <1mW
Operating temperature.....	0°C-40°C
Storage temperature.....	-10°C-50°C
Battery type.....	2 x 1.5V AAA
Battery life.....	5000 measurements approx.
Auto laser off.....	30 seconds
Auto switch off.....	180 seconds
Product size.....	120 x 48 x 27mm

THANK YOU FOR BUYING A RYOBI LASER DISTANCE MEASURER

Your new laser measurer has been engineered and manufactured to Ryobi's high standard of dependability, ease of operation and operator safety. Properly cared for, it will give you years of rugged, trouble free performance. If you use your laser measurer properly and only for what it is intended, you will enjoy years of safe, reliable service.

CAUTION: Carefully read through this entire owner's manual, paying close attention to the general safety rules and rules for safe operation, before using.

KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY INSTRUCTIONS

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.

SAFETY ALERT SYMBOL
Indicates danger, caution or warning. May be used in conjunction with other symbols or pictures.

Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

Do not attempt to operate this tool until you have read thoroughly and completely understood the safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save this Owners Operating Manual and review it frequently for continual safe operation and for instructing others who may use this tool.

INTENDED USE
Your Ryobi laser distance measurer has been designed for use for domestic use only. It may be used for measuring distances, lengths and heights. The laser distance measurer can be used indoors and outdoors.

WARNING! To reduce the risk of injury, the user must read and understand the operator's manual.

SAFETY INSTRUCTIONS
WARNING! LASER RADIATION. AVOID DIRECT EYE EXPOSURE.
DO NOT stare into the laser source.

Never aim light at another person or object other than the workpiece.

The laser light can damage your eyes.
Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself.

This laser complies with class 2 according to IEC 60825-1:2014. Do not replace the laser diode with a different type. If damaged, have the laser repaired by an authorized repair agent.

Do not use the laser for any purpose other than projecting laser lines.

SAFETY INSTRUCTIONS
WARNING! Working safely with the laser measurer is possible only when the operating and safety information are read completely and the instructions contained therein are strictly followed. Never make warning labels on the product unrecognizable.

Never aim the beam at a workplace with a reflective surface. Bright shiny reflective sheet steel or similar reflective surfaces are not recommended for laser use. Reflective surfaces could direct the beam back toward the operator.

Take care to recognize the accuracy and range of the device. Measurement may not be accurate if used beyond the rated range of the device.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The use of optical instruments with this product will increase eye hazards.

Have the laser measurer repaired only through a qualified specialist using original spare parts. This ensures that the safety of the laser measurer is maintained.

Do not allow children to use the laser measurer without supervision. They could unintentionally blind other persons.

Do not point the laser beam at persons or animals and do not look into the laser beam yourself, not even from a large distance.

Do not use laser viewing glasses as safety goggles. Laser viewing glasses are used for improved visualization of the laser beam, but they do not protect against laser radiation.

SAFE OPERATING PROCEDURES
Use of controls or adjustments or performance of procedures other than those specified in this manual, may result in hazardous radiation exposure.

The use of optical instruments with this product will increase eye hazard.

ALWAYS: Make sure that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser measurer.

DO NOT remove or deface any warning or caution labels. Removing labels increases the risk of exposure to laser radiation.

DO NOT stare directly at the laser beam or project the laser beam directly into the eyes of others. Serious eye injury could result.

DO NOT place the laser measurer in a position that may cause anyone to stare into the laser beam intentionally or unintentionally. Serious eye injury could result.

DO NOT use any optical tools such as, but not limited to, telescopes or transits to view the laser beam. Serious eye injury could result.

ALWAYS remove the batteries when cleaning the laser light aperture to laser lens.

DO NOT operate the laser measurer around children or allow children to operate the laser measurer. Serious eye injury could result.

ALWAYS turn the laser measurer "OFF" when not in use. Leaving the laser measurer "ON" increases the risk of someone inadvertently staring into the laser beam.

DO NOT operate the laser measurer in combustible areas such as in the presence of flammable liquids, gases or dust.

ALWAYS position the laser measurer securely. Damage to the laser measurer and/or serious injury to the user could result if the laser measurer falls.

ALWAYS use only the accessories that are recommended by the manufacturer of your laser measurer. Use of accessories that have been designed for use with other laser measurer could result in serious injury.

DO NOT leave laser measurer "on" unattended in any operation mode.

ALWAYS repair and servicing must be performed by a qualified repair facility. Repairs performed by unqualified personnel could result in serious injury.

DO NOT use this laser measurer for any purpose other than those outlined in this manual. This could result in serious injury.

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

IMPORTANT NOTE
During daylight or if the target has poor reflection properties, please use a target plate.

In favorable conditions (good target surface properties, room temperature), the device can reach up to rated measuring range.

In unfavorable conditions, such as intense sunshine, poorly reflecting target surface (black surface) or high temperature variations, the deviation over 10m of distance may increase.

ELECTRICAL SAFETY WARNINGS
WARNING! Batteries can explode or leak, and can cause injury or fire. To reduce this risk:

ALWAYS follow all instructions and warnings on the battery label and package.

DO NOT short any battery terminals.

DO NOT charge alkaline batteries.

DO NOT mix old and new batteries. Replace all of them at the same time with new batteries of the same brand and type.

DO NOT mix battery chemistries.

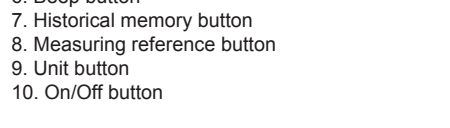
DISPOSE of batteries per local code.

DO NOT dispose of batteries in fire.

KEEP batteries out of reach of children.

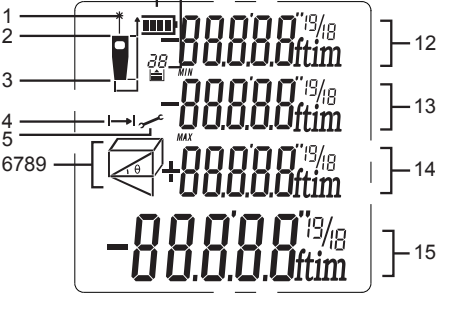
REMOVE batteries if the device will not be used for several months.

BUTTON FUNCTIONS



1. Measure button
2. Area/Volume/Pythagorean button
3. Return/Clear button
4. Continuous measurement button
5. Add (+)/Subtract (-) button
6. Beep button
7. Historical memory button
8. Measuring reference button
9. Unit button
10. On/Off button

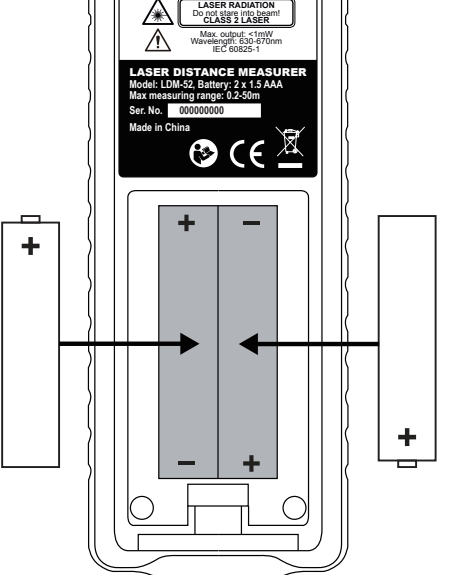
LCD DISPLAY



1. Laser on
2. Reference point (front)
3. Reference point (rear)
4. Distance/Continuous measurement
5. Setting
- 6,7,8 & 9. Measuring mode indication
10. Battery status
11. Historical memory
12. Value 1
13. Value 2/ Min value
14. Value 3/ Max value
15. Summary line (latest value / calculation result)

INSTALLING THE BATTERIES

Remove the battery compartment lid and then insert 2, 1.5V AAA batteries according to the direction icons on the inside of the battery compartment. Replace the lid.



BATTERY REPLACEMENT

If the instrument does not switch on or the battery symbol has no bars, replace the batteries as previously stated above.

BATTERY DISPOSAL

You, as the end user, are legally bound to return all used batteries, disposal in the household garbage is prohibited! You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold.

Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle.

BATTERY SAFETY REMINDERS

Please dispose of batteries responsibly; always observe local, state, and federal regulations with regard to battery disposal.

Never dispose of batteries in a fire. Batteries may explode or leak.

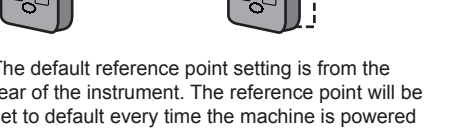
Never mix battery types. Always install new batteries of the same type.

OPERATION

TURNING THE UNIT ON AND OFF
Long press **ON** to turn on the unit.
Long press **OFF** to turn the unit off.

RETURN/CLEAR FUNCTION
When measuring, press **RETURN/CLEAR** to undo the last action or clear the measured value.

ADJUSTING THE MEASURING REFERENCE
Press **REF** to switch the measuring reference point between the front and the rear of the instrument. A beep warning tone will be heard when the reference point is changed.



The default reference point setting is from the rear of the instrument. The reference point will be set to default every time the machine is powered off.

UNIT CHANGE
Press **UNIT** to change the distance unit between m, ft, in, ft + in.

TURNING THE SOUND ON & OFF
Press **BEEP** to switch on/off the beep when the device is not taking measurements.

DISTANCE MEASUREMENT

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

CONTINUOUS MEASUREMENT
Press **CONT** to activate continuous measurement mode. The maximum and minimum distances measured are shown in the display.

The last measured value is displayed in the summary line.

The function will be stopped automatically after 5 minutes of inactivity.

The user can press **ON** or **OFF** to stop the function.

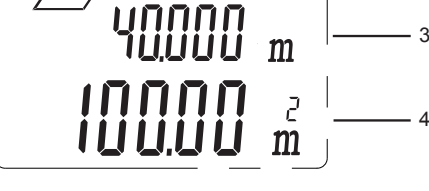
FUNCTIONS

AREA MEASUREMENTS

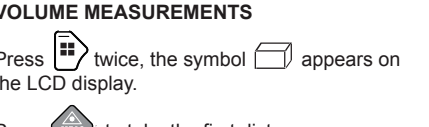
Press **AREA** once, the symbol **AREA** appears on the LCD display.

Press **MEAS** to take the first distance measurement (length).

Press **MEAS** again to take the second distance measurement (width).



The results of length, width, perimeter and area are displayed in the screen as shown below.



1. The first distance (length)
2. The second distance (width)
3. The perimeter
4. The area

VOLUME MEASUREMENTS

Press **VOLUME** twice, the symbol **VOLUME** appears on the LCD display.

Press **MEAS** to take the first distance measurement (length).

Press **MEAS** again to take the second distance measurement (width).

Press **MEAS** again to take the third distance measurement (height).

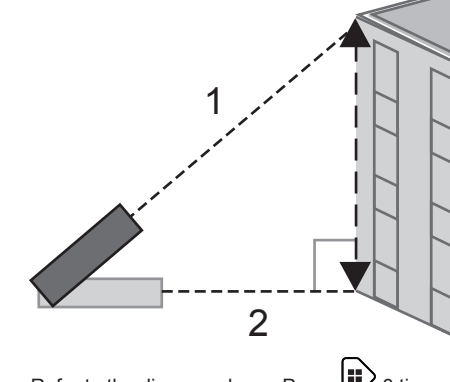


The results of length, width, height and volume are displayed in the screen as shown below.



1. The first distance (length)
2. The second distance (width)
3. The third distance (height)
4. The volume

PYTHAGOREAN METHOD - TWO POINTS

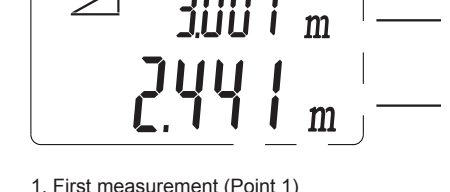


Refer to the diagram above. Press **MEAS** 3 times to activate the function, symbol **PT** appears on the LCD display.

Press **MEAS** to take the first distance measurement (Point 1 in above diagram).

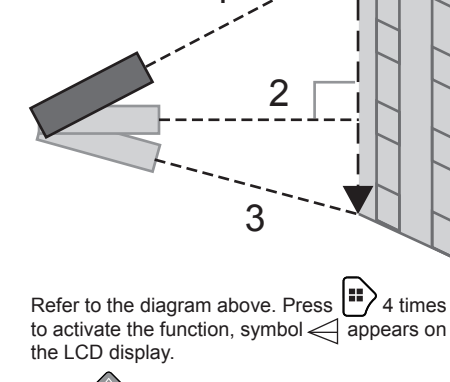
Press **MEAS** again to take the second distance measurement (Point 2 in above diagram).

The height of the object will be calculated automatically and displayed on the screen as shown below.



1. First measurement (Point 1)
2. Second measurement (Point 2)
3. Calculation result (Height)

PYTHAGOREAN METHOD - THREE POINTS



Refer to the diagram above. Press **MEAS** 4 times to activate the function, symbol **PT** appears on the LCD display.

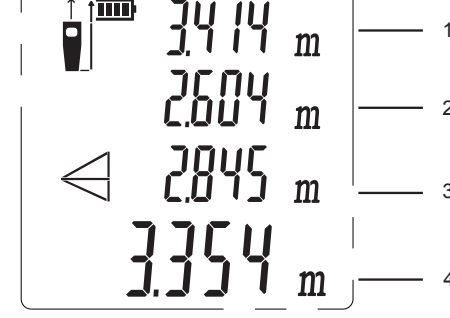
Press **MEAS** to take the first distance measurement (Point 1 in above diagram).

Press **MEAS** again to take the second distance measurement (Point 2 in above diagram).

Press **MEAS** again to take the third distance measurement (Point 3 in above diagram).

The height of the object will be calculated automatically and displayed on the screen.

Press **DEL** to delete any measured length.
Press **RE-MEAS** to re-measure.



1. First measurement (Point 1)
2. Second measurement (Point 2)
3. Third measurement (Point 3)
4. Calculation result (Height)

ADDITION/SUBTRACTION

Addition: Short press **ADD**
Subtraction: Long press **SUB**

Take a measurement, then press **ADD**. The addition/subtraction symbol will appear on the LCD display.

Press **MEAS** to take the second measurement. The second Value will be automatically added/subtracted from the first measurement.

Note: This process can be repeated as required.

HISTORICAL MEMORY

Press **HIST** to view the historical memory. The last 20 measured values will be displayed in reverse order.

Press **QUIT** to quit historical value viewing.

MAINTENANCE

GENERAL MAINTENANCE
This instrument is designed to provide years of dependable service. If the following care instructions are performed:

Keep the laser measurer dry and free from dust.

Use and store the laser measurer in nominal temperature conditions. Temperature extremes can shorten the life of the electronic parts and distort or melt plastic parts.

Handle the laser measurer carefully and avoid shock and vibration. Dropping the meter may damage the electronic parts or the case.

Keep the laser measurer clean. Wipe the case occasionally with a damp cloth. DO NOT use chemicals, cleaning solvents, or detergents.

Use only fresh batteries of the correct type. Remove old or weak batteries so they do not leak and damage the unit.

If the laser measurer is to be stored for long periods, the batteries should be stored separately to prevent damage to the unit.

TROUBLESHOOTING

CODE	CAUSE & CORRECTIVE ACTION
204	Calculation error. Repeat the procedures in 'OPERATION'.
208	Excessive current. Please contact your distributor.
220	Battery low. Replace batteries.
253	Temperature too low. Warm up the device.
255	Received signal is too weak or measurement time is too long. Use a target plate or a good reflective surface.
256	Received signal is too strong. The target is too reflective. Use a target plate or do not aim at a strong light objective.
261	Outside of the range of measurement. Select the measurement distance within the range of measurement.
500	Hardware error. Switch the device On/Off several times. If the code still appears contact your distributor.

RECYCLING AND DISPOSAL

GENERAL MAINTENANCE
Recycle unwanted materials instead of disposing of them as waste. All tools, hoses and packaging should be sorted, taken to the local recycling centre and disposed of in an environmentally safe way.

Recycle rather than dispose of unwanted material in landfill whenever possible. The machine must be delivered in rigid packaging to avoid damage during transportation. The packaging and the machine itself are manufactured from recyclable materials and should be disposed of accordingly.

Only dispose of electrical/electronic/battery terms in separate collection schemes, which cater for the recovery and recycling of materials contained within. Your cooperation is vital to ensure the success of these schemes and for the protection of the environment.

Recycle packaging where facilities exist.

This symbol is known as the Crossed out Wheelie Bin Symbol. When this symbol is marked on a product or battery, it means that it should not be disposed of with your general household waste. Some chemicals contained within electrical/electronic products or batteries can be harmful to health.

SERVICE

Now that you have purchased your tool, should a need ever exist of repair or service, simply contact your nearest Ryobi Authorised Service Centre or other qualified service organisation. Be sure to provide all pertinent facts when you call or visit.

SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

Safety Alert Symbol. Indicates danger, warning or caution. It means attention! Your safety is involved.

Recycle Symbol. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

CE Marking. Conforms to relevant safety standards.

Read the Instruction Manual. Your manual contains special messages to bring attention to potential safety concerns as well as operating and servicing information. Please read all the information carefully to ensure satisfaction and safe use.

Warning! Laser radiation.

RYOBI POWER EQUIPMENT WARRANTY

Subject to the warranty conditions below, this RYOBI tool (hereinafter called "the Product"), is warranted by Ryobi (herein called "the Company") to be free from defects in material or workmanship for a period of 24 months from the date of original purchase covering both parts and labour. Under the terms of this warranty, the repair or replacement of any part shall be the opinion of the Company or its authorised agent. Should service become necessary during the warranty period, the owner should contact the authorised Ryobi retailer from whom the product was purchased, or the nearest Company branch office. In order to obtain warranty service, the owner must include the Sales Docket and Warranty Certificate to confirm date of purchase. This Product is sold by the dealer or agent as principal and the dealer has no authority from the Company to give any additional warranty or guarantee on the Company's behalf except as herein contained or herein referred to.

Warranty Conditions
This warranty only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such warranty does not cover consumable components, damage, malfunction or failure resulting from

misuse, neglect, abuse, or used for a purpose for which it was not designed, or is not suited and no repairs, alterations or modifications have been attempted by other than an Authorised Service Agent. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear. Accessories such as bits, blades, sanding discs, cutting lines, etc., are excluded from this guarantee. Normal consumable parts, such as carbon brushes, bearings, chucks, cord assembly's, spark plugs, recoil pulleys and bump head assembly's are specifically excluded from this guarantee. The Company accepts no additional liability pursuant to this warranty for the costs of traveling or transportation of the Product or parts to and from the service dealer or agent - which costs are not included in the warranty. Nothing herein shall have the effect of excluding, restricting or modifying any conditions, warranty, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.



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THIS WARRANTY FORM SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES.

For your record and to assist in establishing date of purchase (necessary for in-warranty service), please keep your purchase docket and this form, completed with the following particulars.

PURCHASED FROM:.....
ADDRESS OF DEALER:.....
DATE:..... MODEL NO..... SERIAL NO.....

Present this form with your Purchase Docket when Warranty Service is required.