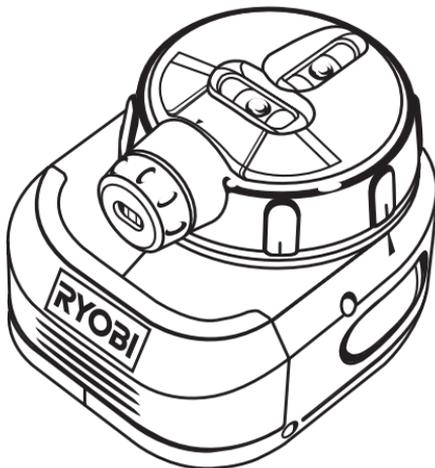




OPERATOR'S MANUAL AIRgrip™ LASER LEVEL ELL0001



Your laser level has been engineered and manufactured to Ryobi's high standards for dependability, ease of operation, and operator safety. When properly cared for, it will give you years of rugged, trouble-free performance.



WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for buying a Ryobi product.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

This laser level has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

SAFETY RULES



WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.



CAUTION:

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



CAUTION:

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

The laser guide radiation used in this laser level is Class IIIa with $< 5\text{mW}$ and 635 nm wavelengths. These lasers do not normally present an optical hazard although staring at the beam may cause flash blindness.

- **Avoid direct eye exposure when using the laser and do not project the laser beam directly into the eyes of others.** Serious eye injury could result.
- **Do not remove or deface any product labels.** Removing product labels increases the risk of exposure to laser radiation.
- **Do not place the laser level in a position that may cause anyone to stare into the laser beam intentionally or unintentionally.** Serious eye injury could result.
- **Do not operate the laser level around children or allow children to operate the tool.** Serious eye injury could result.
- **Always turn the laser level off when not in use.** Leaving the tool on increases the risk of someone inadvertently staring into the laser beam.
- **Do not operate the laser level in combustible areas such as in the presence of flammable liquids, gasses or dust.**
- **Do not use push pins unless you plan to affix the base to a soft wood, wallboard, or other easily penetrated surface.** This could result in injury because the pins are very sharp instruments.
- **Always ensure the laser beam is aimed at a surface without reflective properties.** Shiny reflective materials are not suitable for laser use.
- **When using the base, always check to be sure the laser level is securely seated.** Damage to the tool and/or serious injury to the user could result if the laser level falls.
- **All repairs should be made by an authorized service representative or the laser manufacturer.**
- **Handle the laser level with care.** Treat it as you would any other optical device such as a camera or binoculars.

SAFETY RULES

- **Avoid exposing the laser level to shock, continuous vibration or extreme hot or cold temperatures.** Damage to the tool and/or serious injury to the user could result.
- **Save these instructions.** Refer to them frequently and use them to instruct others who may use this laser level. If you loan someone this laser level, loan them these instructions also.

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	DANGER:	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING:	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION:	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION:	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE

This laser level has no serviceable parts. If the unit fails due to normal wear and tear within two years of purchase, return with original receipt for a replacement unit at no charge. Call 1-800-525-2579 for your nearest **RYOBI AUTHORIZED SERVICE CENTER**.



WARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. Save this operator's manual and review frequently for continuing safe operation and instructing others who may use this product.

SAVE THESE INSTRUCTIONS

FEATURES

PRODUCT SPECIFICATIONS

Recommended Use	Indoor
Length of Laser Line.....	Up to 40 ft., Horizontal or Vertical
Laser	Class IIIa, <5mW, 635 nm
Power Supply	2 AA, 1.5 Volt Batteries
Battery Life — Laser Only	40 Hours Continuous Use—Alkaline Batteries
Battery Life — w/Vacuum.....	2.5 Hours Continuous Use—Alkaline Batteries
Operating Temperature	32°F to 104°F
Dimensions.....	4-1/4 in. x 2-7/8 in. x 3 in.
Weight	8 oz. Without Batteries
Accuracy	$\pm 1/2"$ at 20 ft. (Laser Lens Facing Battery Compartment)
	$\pm 3/4"$ at 15 ft. (Laser Lens 180° Opposed Battery Compartment)

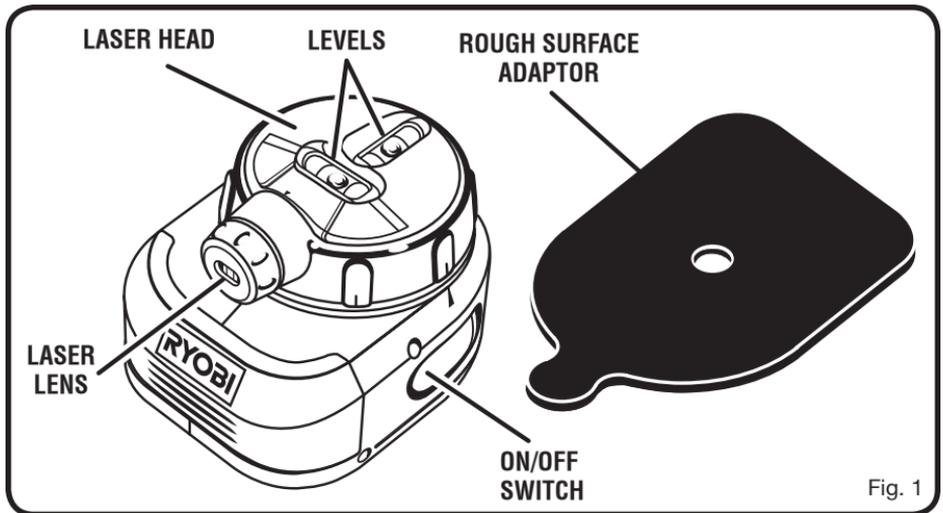


Fig. 1

FEATURES

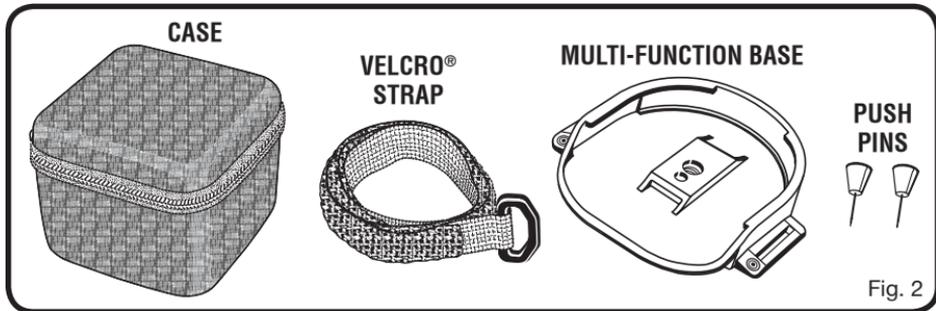


Fig. 2

KNOW YOUR LASER LEVEL

See Figures 1 - 2.

Before attempting to use this product, familiarize yourself with all operating features and safety rules.

AIRgrip™ VACUUM TECHNOLOGY

Your laser level uses a vacuum base that can adhere to smooth surfaces. Using the vacuum seal prevents wall damage caused by nails, pins or adhesive tape.

CASE

A padded and zippered case stores and protects your laser level when not in use.

LASER HEAD

The laser head on your level rotates 360°.

LASER LENS

Your level's laser lens rotates 90° for wrapping around inside corners and uneven surfaces.

MULTI-FUNCTION BASE

The multi-function base allows your laser level to be used on irregularly shaped walls or objects, as well as on a tripod. It features built-in loops for a Velcro® strap, built-in angled holes for push pins, and has a standard 1/4 in. - 20 tripod mounting hole. The base also protects the laser level when using on a dusty or dirty surface and during storage.

ON/OFF SWITCH

Your laser level conveniently turns on and off at the touch of a switch.

ROUGH-SURFACE ADAPTOR

The rough-surface adaptor increases the number of surfaces on which the AIRgrip™ vacuum can be used.

VELCRO® STRAP/PUSH PINS

A Velcro® strap and push pins are provided for attaching the laser level to a variety of surfaces.

ASSEMBLY

UNPACKING

This product has been shipped completely assembled.

- Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please call 1-800-525-2579 for assistance.

PACKING LIST

Laser Level

Case

Velcro Strap

Push Pins (2)

Multi-function Base

Rough Surface Adaptor

AA Batteries (2)

Operator's Manual



WARNING:

If any parts are missing, do not operate this tool. Please return to the place of purchase or call 1-800-525-2579 for assistance.



WARNING:

Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

OPERATION



WARNING:

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

APPLICATIONS

You may use this laser level for the following purposes:

- Hanging pictures
- Hanging wallpaper and wallpaper borders
- Lining up floor or wall tile
- Lining up electrical outlets
- Decorative angles for faux painting
- Putting up chair rail

NOTE: This product is not a rotary laser. It will need to be relevelled for each direction it is pointed to.

INSTALLING BATTERIES

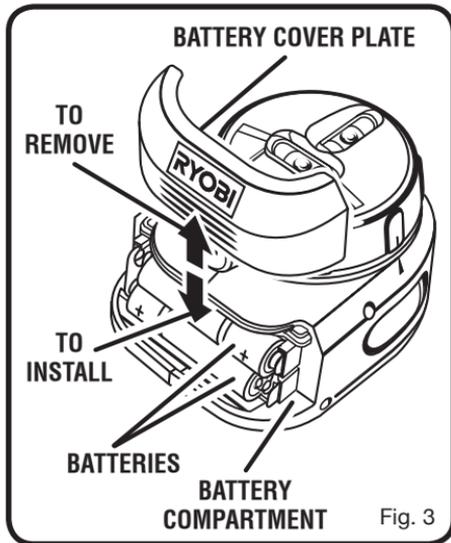
See Figure 3.

The battery compartment is located beneath the ridged area at the front of the laser level.

To open:

- Push the battery cover plate straight up and remove.
- Install two AA batteries according to polarity indicators inside the battery compartment.

- Place the battery cover plate back onto the laser level and slide down to secure.



WARNING:

When turning on the laser level, always protect the eyes of yourself and those around you. Never point the laser beam at anyone's face, including your own.

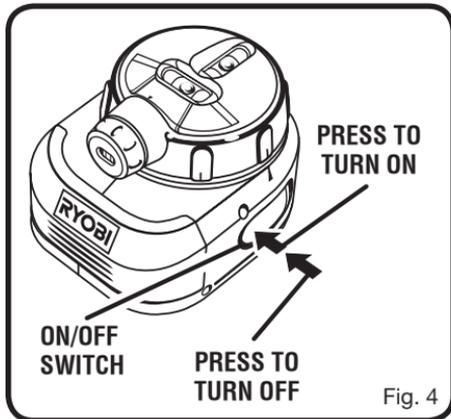
NOTE: The horizontal and vertical vials are to be used for reference only. This tool is not intended to be a standard box beam level.

OPERATION

TURNING ON/OFF

See Figure 4.

Press the switch located on the right side of the laser level to turn it **ON** and **OFF**. Always wait for at least 5 seconds between stopping and restarting the laser level.



POSITIONING THE LASER LEVEL

The laser level has several positioning options available to suit the needs of your project.

For a quick reference or alignment between two points, the laser level can be hand held or placed on a horizontal surface.

USING THE AIR-GRIP VACUUM

See Figure 5.

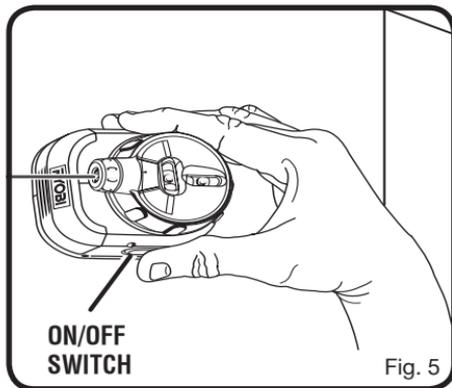
The laser level's vacuum grip technology allows attachment to most smooth surfaces.

NOTE: The multi-function base is **not** used when mounting by vacuum grip.

- Place the laser level on the surface you want it secured to and push in slightly to seal.
- Continue to hold the laser level against the surface while pressing the on/off switch.
- Release the laser level when you hear a change in motor sound.

NOTE: To release the vacuum seal, turn the laser level's power off. For fast release, press the protrusion on the back of the unit. Pulling the laser level off the wall without releasing the vacuum could damage the tool.

The laser will automatically shut off 15 minutes prior to battery failure, but the motor will remain on. Press the on/off switch to power down the unit and replace the batteries.



OPERATION

ROUGH SURFACE ADAPTOR

See Figure 6.

Using the rough-surface adaptor, you can use the laser level's AIRgrip™ feature to position the unit on many non-smooth surfaces, including brick and painted cinderblock.

NOTE: The AIRgrip™ feature cannot be used with stucco or unpainted cinderblock.

- Position the rough-surface adaptor on the surface where you want to secure the laser level.

NOTE: The dotted lines on the adaptor should be visible.

- Place the laser level against the adaptor on the dotted lines, and push in slightly to engage the seal.
- Continue to hold the laser level against the surface while pressing the on/off switch.

- Release the laser level when you hear a change in motor sound.

USING MULTI-FUNCTION BASE

See Figure 7.

Velcro® strap, push pin, and tripod mounting methods are available only when the multi-function base is installed. To install the base:

- While holding the laser level with the power switch facing you, align the raised ridge on the base with the groove on the level.
- Slide the laser level and base completely together.

NOTE: If the base is seated correctly, the vacuum will not operate when the power is turned on.

VELCRO® STRAP: The strap can be used to attach the laser level to irregularly shaped

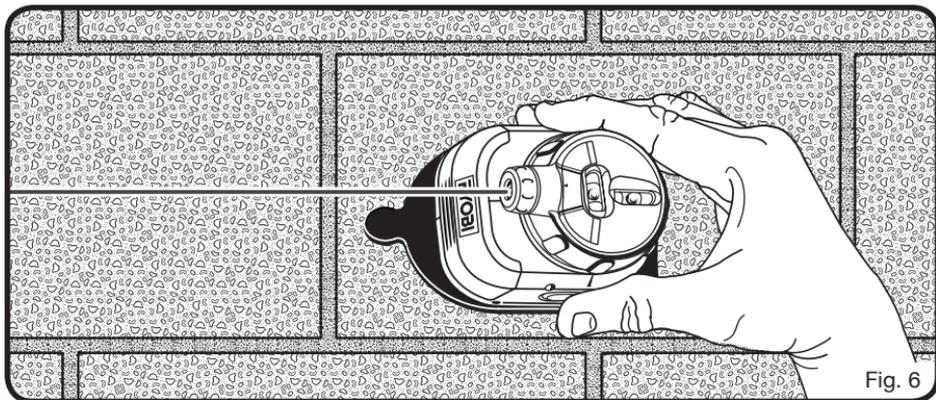


Fig. 6

OPERATION

objects such as pipes, 2x4s, 2x6s, or metal grates.

- Attach the strap to one side of the laser level base by threading it through the loop and fastening.
- Position the laser level on the surface where you want it mounted.
- Wrap the strap around the object being mounted (pipe, board, etc.).
- Place the loose end of the strap through the remaining loop on the laser level base and secure.

PUSH PINS: Push pins allow the laser level to be mounted to stucco and permeable surfaces.

- Place the laser level on the surface where you want it mounted.

- Align push pin with angled hole located on one side of laser level base and push in to secure.
- In the angled hole on the other side of laser level base, secure the second push pin.

TRIPOD: The laser level base has a standard 1/4 in.-20 threaded fitting for attaching to a tripod base (not included). This method of mounting is ideal for leveling kitchen cabinets, countertops, window framing, and more.

CAUTION:

Use caution when using laser level in base. Do not orient in a way that will allow the laser level to slide or fall out of the base.

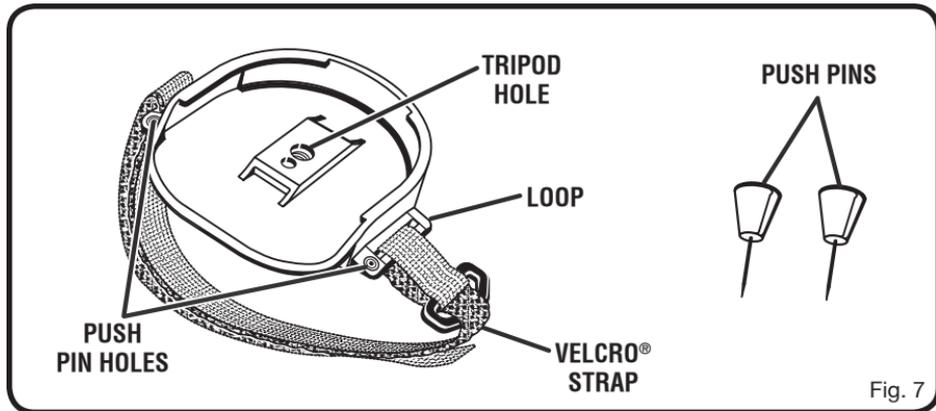


Fig. 7

OPERATION

ADJUSTING THE LASER LINE

See Figure 8.

The laser level will project a straight line across an obstruction or interference, as well as around inside corners and onto adjacent surfaces. The line can be adjusted in two ways:

- The line can be rotated 360° by turning the laser head in a clockwise or counterclockwise direction. To move the line in 45° increments, align one of the raised
- The line can also be rotated up to 90°, from vertical to horizontal, by turning the lens adjustment ring in a clockwise or counterclockwise direction.

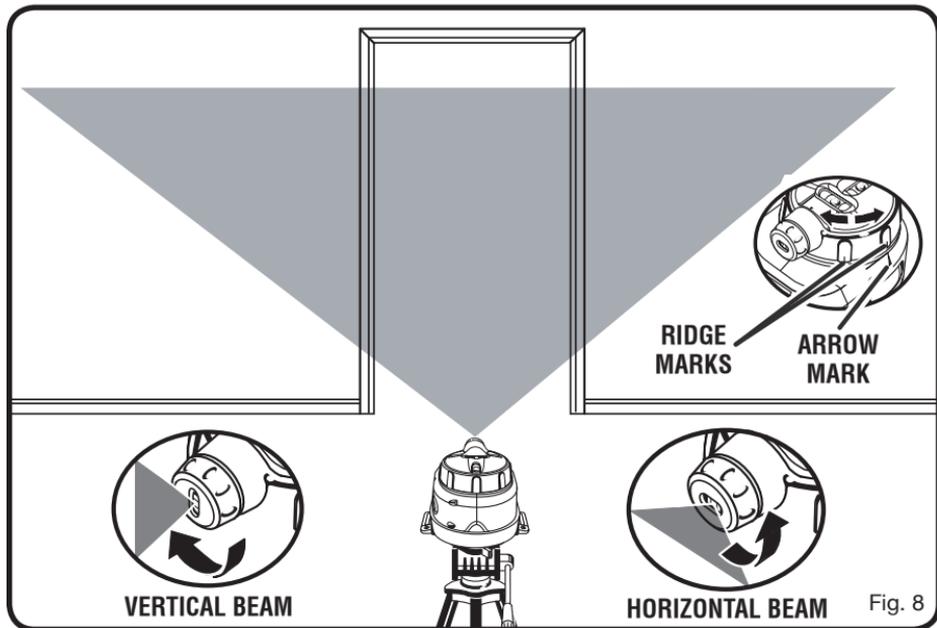


Fig. 8

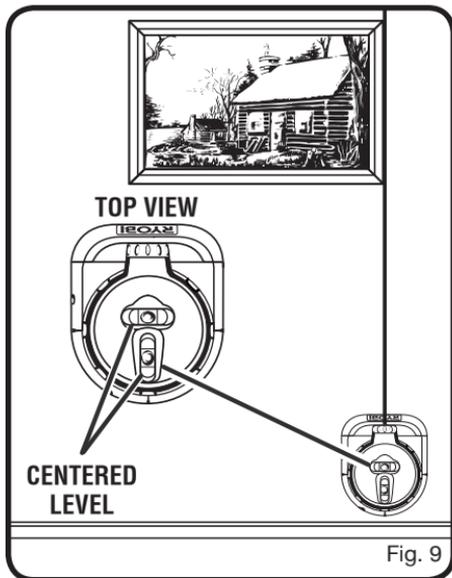
OPERATION

OPERATING THE LASER LEVEL

See Figures 9 - 10.

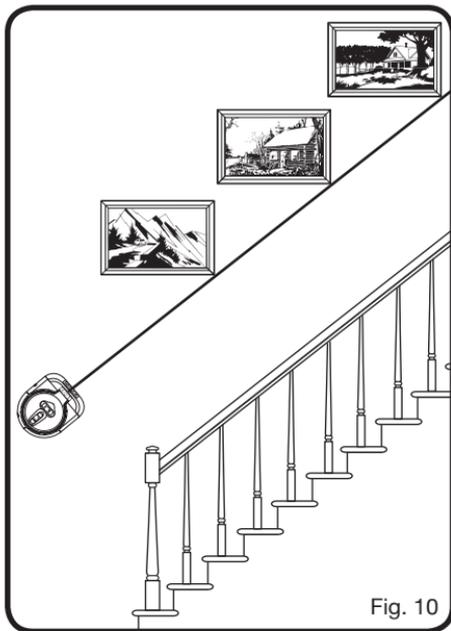
- Place the level in the area where you want the laser line projected.
- If a true vertical line or level horizontal line is desired, level the tool by centering the bubbles inside the vials located on top of the laser head.

NOTE: To ensure plumb lines or level horizontal lines across adjacent surfaces, level both vials and position the tool directly in front of the work area.



- Turn on the laser.
- Rotate the laser head to position the laser line where needed.
- With the laser beam pointed away from you, rotate the laser lens to achieve the desired angle of beam.

NOTE: Due to construction inaccuracy, walls may not be perfectly straight. This may cause the laser to have slight variances when in the level position.



MAINTENANCE



WARNING:

To avoid serious personal injury, always remove the batteries from the tool when cleaning or performing any maintenance.



WARNING:

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

GENERAL MAINTENANCE

- Before initial use, wipe AIRgrip™ vacuum base with a damp cloth to remove any residue.
- Store the laser level indoors.
- When not in use, the laser level and base should be kept in the protective case.
- Keep the laser level free of dust and liquids. Use a damp cloth and mild soap to clean the outside casing. Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use.
- To clean the laser lens, if needed, use **ONLY** a soft cloth or cotton swab moistened with glass cleaner.
- Check the batteries regularly to avoid deterioration. Remove the batteries from the laser level if it is not going to be used for an extended time.
- Do not disassemble the laser level. This could cause exposure to hazardous laser radiation.
- Do not attempt to change any part of the laser lens.

ALWAYS BE AWARE of the location where the laser light is emitted when using the level. ALWAYS MAKE SURE that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser beam.

DANGER

**LASER RADIATION-
AVOID DIRECT EYE EXPOSURE**



**MAXIMUM OUTPUT < 5mW
WAVELENGTH 630-670 nm
Class IIIa LASER PRODUCT**

This product complies with 21 CFR 1040.10 and 1040.11

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Laser line projection is weak.	Batteries are low.	Replace with fresh batteries.
Laser is off, but motor is on and vacuum is working.	Batteries are low.	Replace with fresh batteries.
Laser line is hard to see.	Light in area is too bright.	Use in dimmer area or use laser-enhancing glasses.
Laser line is not level.	<ol style="list-style-type: none">1. Leveling bubbles not properly aligned.2. Level is mounted on base that isn't level.	<ol style="list-style-type: none">1. Make sure bubble on vial is centered.2. Make sure the bubbles are level after mounting to base.
Laser line is horizontal when a vertical line is desired.	Laser lens is in the incorrect position.	Turn the laser lens 90° to the vertical orientation.



OPERATOR'S MANUAL AIRgrip™ LASER LEVEL ELL0001

- **SERVICE**

This product has no serviceable parts. If unit fails due to normal wear and tear within two years of purchase, return with original receipt for a replacement unit at no charge. Please call 1-800-525-2579 for the nearest Ryobi Authorized Service Center. You can also check our web site at www.ryobitools.com for a complete list of Authorized Service Centers.

- **MODEL NO.**

The model number of this tool will be found on a label attached to the top of the laser level.

- **HOW TO ORDER REPLACEMENT PARTS**

When ordering replacement parts, always give the following information:

- MODEL NUMBER ELL0001

RYOBI TECHNOLOGIES, INC.

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