



LASER LEVEL BLACK & DECKER

MODEL: BDL310S

User Manual



⚠ **WARNING: Read and understand all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Safety Instructions

⚠ **DANGER: Laser Radiation, avoid direct eye exposure, serious eye injury can result.**

- Do not use optical tools such as a telescope or transit to view the laser beam.
- Position the laser so unintentional eye contact will be avoided.
- Do not operate the laser around children or allow children to operate the laser.
- Do not disassemble. Modifying the product in any way can increase the risk of laser radiation.

⚠ **WARNING:** Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous laser radiation exposure.

- Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Use only with the specifically designated batteries. Use of any other batteries may create a risk of fire.
- Store idle product out of reach of children and other untrained persons. Lasers are dangerous in the hands of untrained users.
- Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one laser, may create a risk of injury when used on another laser.
- Repairs and servicing **MUST** be performed by a qualified repair facility. Repairs performed by unqualified personnel could result in serious injury.
- Do not remove or deface warning labels. Removing labels increases the risk of exposure to radiation.
- For indoor use only.
- This product is intended for use in a temperature range of 41°F(5°C) - 104°F(40°C).

⚠ **CAUTION:** Use caution when drilling, nailing or cutting into walls, floors and ceilings which may contain electrical wiring or pipes. **Always turn off the power when working near electrical wires.**

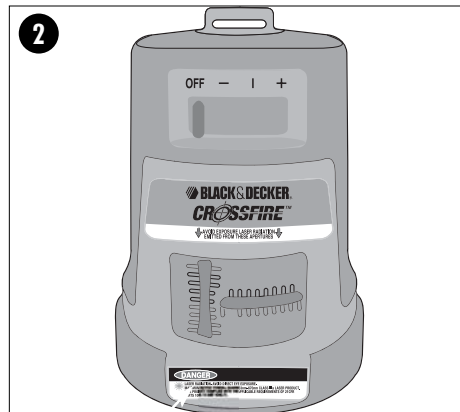
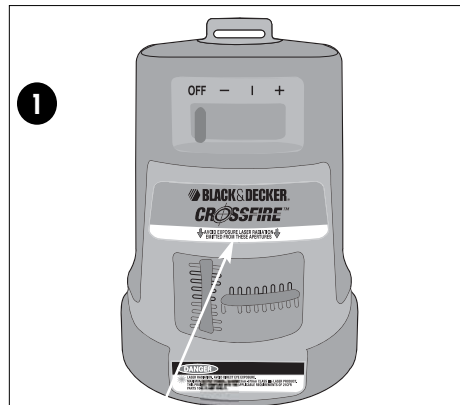
⚠ **CAUTION:** Use of controls or adjustments or performance of procedures

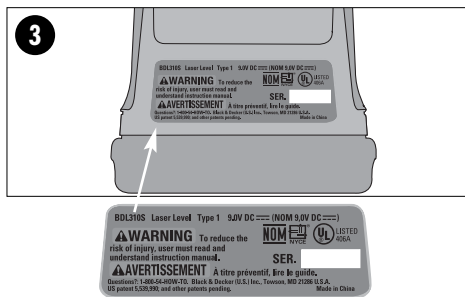
other than those specified in this manual may result in hazardous laser radiation exposure.

The label on your tool may include the following symbols.

Vvolts
mWmilliwatts
nm.....wavelength in
nanometers
IIIa.....Class IIIa Laser

For your convenience and safety, the following labels are on your laser.





Installing the Battery

Ensure laser on/off switch is in the left "OFF" position. Remove the battery compartment cover by pressing the tab of the cover in towards the center of the laser and out as shown in **figure 4**. A rubber plug is located inside the compartment. The plug is used to protect the laser from transportation damage.

Remove the plug by rotating it 90° and pulling it straight out.

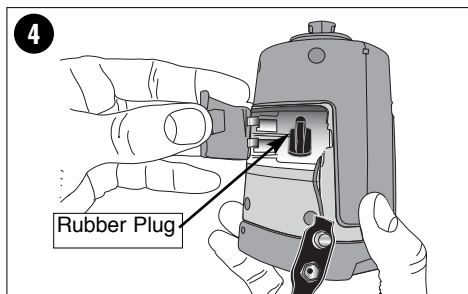
Connect a fresh 9 volt alkaline battery making sure to match (+) and (-) terminals correctly. Replace the battery compartment cover.

Note: When transporting the laser or storing it for extended periods of time, remove the battery and replace the rubber plug.

⚠ WARNING: Choking hazard. Store rubber plug out of the reach of children.

⚠ WARNING: Batteries can explode, or leak, and can cause injury or fire. To reduce this risk:

- Carefully follow all instructions and warnings on the battery label and package.
- Always insert battery correctly with regard to polarity (+ and -), marked on the battery and the equipment.
- Do not short battery terminals.
- Do not charge batteries.
- Remove dead battery immediately and dispose of per local codes.
- Do not dispose of batteries in fire.
- Keep batteries out of reach of children.
- Remove battery if the device will not be used for several months.



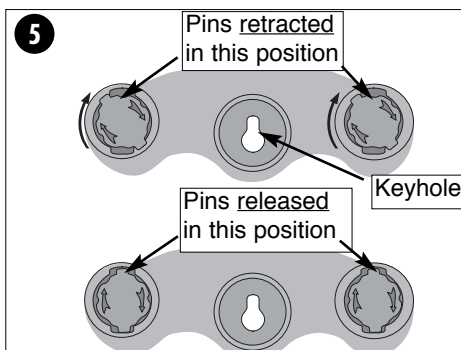
Assembly / Set-up

Vertical Mounting

The wall / tabletop mounting bracket uses push pins or a screw hole to secure it to a vertical surface.

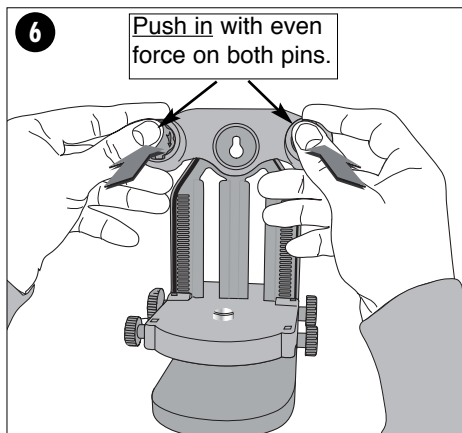
⚠ CAUTION: Pins are sharp and should be handled with care. NOTE: The pins are only for use when hanging the bracket on drywall, NOT other surfaces including plaster. For surfaces other than drywall, the key hole can be used with a standard screw or nail in a predrilled hole.

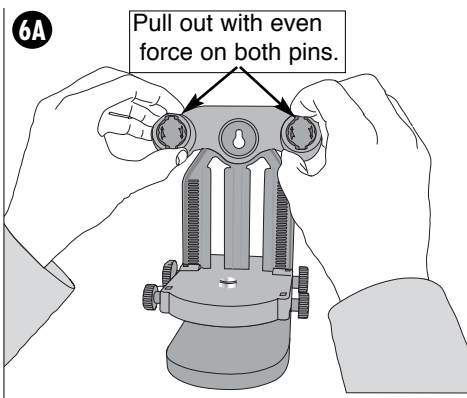
The pins stay retracted until you are ready to mount the bracket. To release the pins, twist the black knobs shown in **figure 5** clockwise until they stop.



Position the bracket on a vertical surface. Hold the bracket as shown in **figure 6**, keeping your fingers on the front, and push in with even pressure on both knobs. Make sure it is seated firmly and that the unit is secure on the wall.

IMPORTANT: When attaching or removing the bracket, be sure to **push in** or **pull out** with even pressure on both push pins.



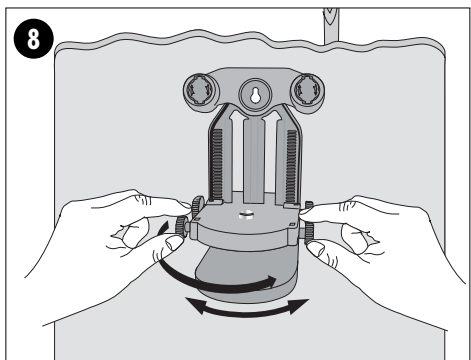
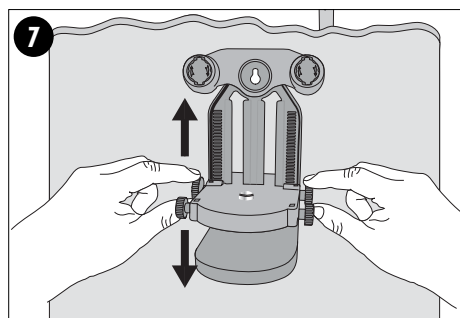


Laser Line Adjustment

The **horizontal or level laser line** can be **elevated** as shown in **figure 7** by turning either of the right or left adjustment knobs located at the rear of the moveable platform.

The **vertical or plumb laser line** can be **rotated** to the right or left by turning either of the knobs located at the front of the platform as shown in **figure 8**.

⚠ CAUTION: When making any laser line adjustments, be sure to look at the target laser line and not at the unit. Do not stare into the laser beam.

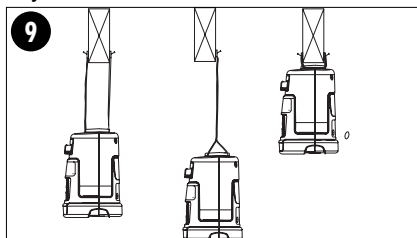


Hanging the Laser

The laser can also be hung from a joist or other secure structure by means of a hanging strap (not included).

⚠ CAUTION: Make sure laser is securely suspended by the strap.

To hang, thread the strap through the slot in the top of the laser and fasten the hook as shown in **figure 9**. Adjust the laser so that it hangs relatively straight. The self-leveling function will then compensate for any minor error $\pm 5^\circ$.

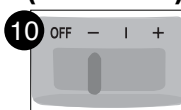


Laser operation

- Before attempting to use the laser, make sure the tool is positioned on a relatively smooth, flat and stable surface.
- Brightness of area may effect line visibility.
- When attaching to a mounting bracket or using the hanging strap, mount the laser securely.
- Be aware that extreme temperature changes can cause movement or shifting of building structures, equipment, etc. which can effect accuracy. Verify your set-up before each use as the laser may have moved.
- This product is not recommended for outdoor use.

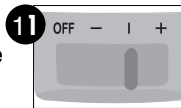
Turning the Laser On (Level Line)

Slide the on/off switch to the (-) position to operate the laser using a single horizontal laser beam as shown in **figure 10**.



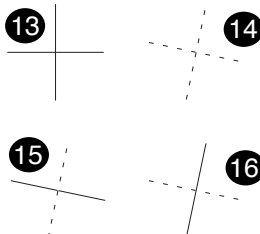
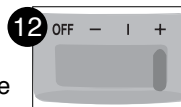
(Plumb Line)

Slide the on/off switch to the (I) position to operate the laser using a single vertical laser beam as shown in **figure 11**.



(Crosshair Lines)

Slide the on/off switch to the (+) position to operate the laser using both the vertical and horizontal laser beams as shown in **figure 12**.



Troubleshooting

Problem	Possible Cause	Solution
• Laser does not project on wall or laser beam dim.	• Weak battery.	• Replace with fresh battery.
• Laser lines are projected as a dashed lines.	• The self leveling range of the unit is +/-5 degrees. If the unit is not set within 5 degrees of vertical, one of the laser lines will project on wall as a dashed line.	• Be sure that the unit is as straight up and down as possible.
• Laser lines are projected but one line is solid and one line is dashed.	• The self leveling range of the unit is +/-5 degrees. If the unit is not set within 5 degrees of vertical, one of the laser lines will project on wall as a dashed line.	• Be sure that the unit is as straight up and down as possible.
• One laser line projected on wall is solid but not level.	• The self leveling range of the unit is +/-5 degrees. If the unit is not set within 5 degrees of vertical, one of the laser lines will project on wall as a dashed line. Dashed line is not turned on.	• Be sure that the unit is as straight up and down as possible. • Turn the second laser line On to verify laser alignment.

Out of Level Indicators

The laser is equipped with "out of level indicators" which break solid laser lines into dashed lines when unit is tilted out of auto-leveling range +/- 5°. Always use both lines to verify straightness of laser. Unit should be adjusted if any or both lines are broken or dashed. Figure 13 shows laser lines within auto-leveling range. Figures 14, 15 and 16 show laser lines out of auto-leveling range.

Storage

Always store the laser indoors with the switch in the "OFF" position. When storing it for extended periods of time, remove the battery and replace the rubber plug.

Maintenance

Use only mild soap and damp cloth to clean the tool. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

IMPORTANT: To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (other than those listed in this manual) should be performed by authorized service centers or other qualified service personnel, always using identical replacement parts.

Accessories

Recommended accessories for use with your tool are available from your local dealer or authorized service center. If you need assistance regarding accessories, please call:

1-800-54-HOW-TO (544-6986).

⚠ WARNING: The use of any accessory not recommended for use with this tool could be hazardous.

Service Information

All Black & Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black & Decker location nearest you. To find your local service location, refer to the yellow page directory under "Tools—Electric" or call: **1-800-544-6986 or visit www.blackanddecker.com**