JOHNSON®

Self-Leveling 3 Line or 3 Dot Laser

Model No. 40-6683

Instruction Manual

Congratulations on your choice of this Self-Leveling 3 Line or 3 Dot Laser. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.

This is a Class IIIa laser tool and is manufactured to comply with CFR 21, parts 1040 .10 and 1040 .11 as well as international safety rule IEC 285.

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2. Features and Functions

- Able to project three lines with two cross-line beams, consisting of two horizontal lines and one vertical line with a plumb down laser dot.
- Product simultaneously projects three laser beams (front, up and down).
- Magnetic dampening compensation system.
- Laser flashes/sounds audible alarm when beyond leveling range.
- Manual mode feature allows unit to be tipped at extreme angles without the audible alarm and laser flash being triggered
- Multi-functional magnetic base is included to allow hanging on wall, attach to metal, or connect to tripod (5/8"-11).
- Includes adjustable strap for attachment to pipe or conduit.
- Pendulum locking mechanism helps protect units inner mechanisms.

3. Safety Instructions

Please read and understand all of the following instructions, prior to using this tool. Failure to do so, may void the warranty.

DANGER!
Class IIIa Laser Product
Max. Power Output: ≤ 5mW
Wavelength: 625-645nm

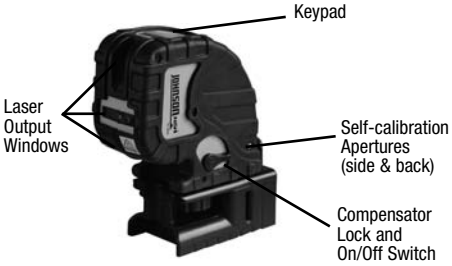
THIS TOOL EMITS LASER RADIATION.
DO NOT STARE INTO BEAM.
AVOID DIRECT EYE EXPOSURE.

ATTENTION **IMPORTANT**

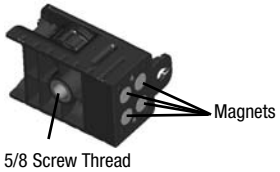
- Read all instructions prior to operating this laser tool. Do not remove any labels from tool.
- Do not stare directly at the laser beam.
- Do not project the laser beam directly into the eyes of others.
- Do not set up laser tool at eye level or operate the tool near a reflective surface as the laser beam could be projected into your eyes or into the eyes of others.
- Do not place the laser tool in a manner that may cause someone to unintentionally look into the laser beam. Serious eye injury may result.
- Do not operate the tool in explosive environments, i.e. in the presence of gases or flammable liquids.
- Keep the laser tool out of the reach of children and other untrained persons.
- Do not attempt to view the laser beam through optical tools such as telescopes as serious eye injury may result.
- Always turn the laser tool off when not in use or left unattended for a period of time.
- Remove the batteries when storing the tool for an extended time (more than 3 months) to avoid damage to the tool should the batteries deteriorate.
- Do not attempt to repair or disassemble the laser tool. If unqualified persons attempt to repair this tool, warranty will be void.
- Use only original Johnson® parts and accessories purchased from your Johnson® authorized dealer. Use of non-Johnson® parts and accessories will void warranty.

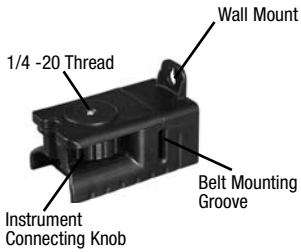
4. Location/Content of Warning Labels

5. Location of Part/Components



Multi-Functional Magnetic Base



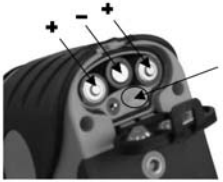


6. Operating Instructions

IMPORTANT: It is the responsibility of the user to verify the calibration of the instrument before each use.

Alkaline Battery Installation

Note: Always check to be sure that the on/off switch is in the off position before removing and replacing batteries.



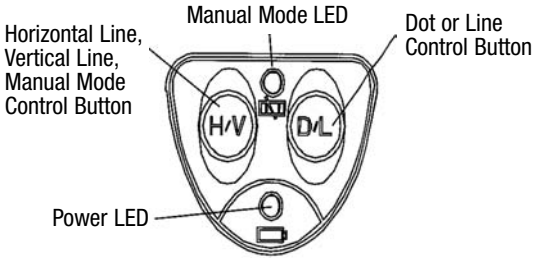
1. As shown in figure, put 3 “AA” alkaline batteries into the battery compartment noting the polarity as shown in the battery compartment. Snap the battery cover shut. Turn the on/off switch to on. If the power LED is flashing, the battery is low.

7. Using the Product

This base was specially designed for more extensive adaptability of the laser. The base can be connected to a standard 5/8"-11 tripod. The laser can be connected to a 1/4" – 20 tripod. With the use of the base, the laser can be rotated, hung on a wall, attached to a metal plate, or strapped to a column or pipe.

1. Install the laser on the base by rotating the connecting knob counter-clockwise.
2. The laser can be rotated on the base.
3. The laser can be hung on a wall with a nail or screw.

Operating Instructions



Power LED

LED is on: power is on

LED is off: power is off

LED is flashing: low voltage

Manual Mode LED

LED is flashing: the laser is in manual mode

LED is off: the laser is in self-leveling mode

Power On/Off

Unlock the laser by rotating the compensator lock and on/off switch from the off (down) position to the on (up) position as shown below, the laser is on, and the power LED is on.

Lock the laser by rotating the switch to the off (down) position, the laser is off, and the power LED is off.

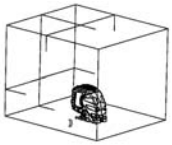
Locked

Unlocked

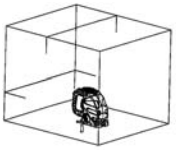
Note: Product must be within ± 3° of level for self-leveling feature to function properly. Greater than ± 3° will result in an alarm condition (flashing laser and intermittent beeping sound).

Beam Configurations

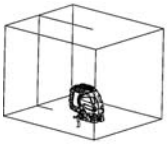
Unlock the laser and the laser is on, the configuration of the laser beams is as follows:



Press the H/V button once and the vertical line is off, the configuration of the laser beams is as follows:

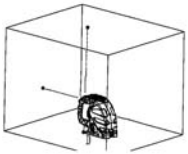


Press the H/V button once again and the horizontal lines are off and the vertical line is on, the configuration of the laser beams is as follows:



Press the H/V button once again, both horizontal lines and the vertical line will be off, there are no laser beams.

Press the D/L button, the laser will produce three laser dots (front, up and down dot).



Press the D/L button again, the laser will switch to line laser mode. The D/L button controls switching between the laser line and laser dot modes.

Manual Mode

With the laser in the locked position, press the  button and the laser will be in manual mode. The power LED is on and the manual mode LED is flashing.

When the laser is in manual mode, the dot and line control buttons are used as per the above descriptions.

When pressing the  button four times, all the laser lines will be off, one more press of the  button will turn the manual mode off. The manual LED is off, the power LED is off and the laser is off.

Note: When the Manual Mode feature is engaged, the self-leveling alarm is deactivated. If the laser is unlocked, it can not enter manual mode, if the laser is in the manual mode, and unlocked, the laser will exit the manual mode (manual LED is off) and the laser will enter the self-leveling mode.

8. Self-Check & Fine Calibration

IMPORTANT: It is the responsibility of the user to verify the calibration of the instrument before each use.

Horizontal Line Accuracy (Horizontal)

1. Place the unit on a tripod approximately 5m from a wall. Secure the laser on the tripod and level the unit.
2. Face the front of the laser to the wall, unlock the laser, and power on the laser lines. Make a mark on the wall where the cross-line is displayed. Label this as “A”.
3. Make a mark 2.5m from “A”, along the horizontal laser line, and label as “M”.
4. Turn the laser until the vertical line meets “M”, and then make a mark 2.5m from “M”, and 5m from “A”. Label this mark “B”. Also make a mark on the vertical line where it meets “B”.
5. Measure the height distance between “M” and where the horizontal laser line currently sits.
6. If e>1mm, the laser accuracy is out of tolerance, and calibration is necessary.

Horizontal Accuracy Self-Check (Vertical)

1. Stand up two straight poles/boards 5m from each other, or two walls which are parallel and more than 5m distance.
2. Place the laser on the tripod, and place in the center of the poles/boards/walls, and level the laser by adjusting the tripod.
3. Power on all laser lines, and make a mark where the cross laser meets target “A”. Mark this as “A1”.
4. Turn the instrument 180º, so that the cross line meets target “B”. Mark this as “B1”.

5. Move the tripod within .6m of target “A”. Make a mark where the cross meets target “A” and label as “A2”.
6. Rotate the laser 180º and make a mark where the cross meets target “B” and label as “B2”.
7. Calculate (A1-A2) - (B1-B2) = E. If the absolute value of E is above 1mm, the laser accuracy is out of tolerance and calibration is required.

Self-Check and Calibration

The instrument has two calibration apertures. Aperture “A” adjusts the horizontal axis. Aperture “B” adjusts the vertical axis.

Notes regarding adjustment:

- Use a 3mm hexagon tool for adjustment.
- The adjustment of each axis may influence the other. When making fine adjustments in the left/right direction horizontally, the front and back direction vertically may change. When adjusting the front/back direction vertically, the left and right direction will possibly change. Adjustments may need to be checked and repeated alternately.
- The adjustment of the self-calibration screw cannot exceed four turns in either direction.
- If the laser accuracy cannot be adjusted through self-calibration, please contact an authorized repair facility, or contact Johnson Level & Tool.

9. Technical Specifications

Laser Wavelength	635nm±10
Laser Classification	Class IIIa
Maximum Power Output	≤5mW
Accuracy	±1/8"/50 ft. (±2mm/10m)
Interior Range	Up to 150 ft. (45m) for lines depending upon light conditions Up to 200 ft. (120m) for dots depending upon light conditions
Self-Leveling Range	± 3°
Power Supply	3 “AA” alkaline batteries (included)
Battery Life	Approx. battery life 15 hours continuous use
Dimensions	5.31” x 4.84” x 2.56” (135 x 123 x 65mm)
Weight	1.869 lbs. (0.7 Kg)
Working Temperature	14°F to 113°F (-10°C to +45°C)
Center Screw Thread	1/4” - 20 on laser 5/8” - 11 on base
IP Protection Class	54

10. Application Demonstrations

Plumb reference for lamp installation

Reference for fence installation

Reference for pipeline installation

Reference for dormer installation

Reference for door frame installation

Reference for construction cubic partition

Reference for vertical partition

11. Care and Handling

- This laser unit is a precision tool that must be handled with care.
- Avoid exposing unit to shock vibrations and extreme temperatures.
- Before moving or transporting the unit, make sure that the unit is turned off.
- Remove the batteries when storing the unit for an extended time (more than three months) to avoid damage to the unit should the batteries deteriorate.
- Always store the unit in its case when not in use.
- Avoid getting the unit wet.
- Keep the laser unit dry and clean, especially the laser output window. Remove any moisture or dirt with a soft, dry cloth.
- Do not use harsh chemicals, strong detergents or cleaning solvents to clean the laser unit.

12. Product Warranty

Johnson Level & Tool offers a three year limited warranty on each of its products. You can obtain a copy of the limited warranty for a Johnson Level & Tool product by contacting Johnson Level & Tool's Customer Service Department, as provided below, or by visiting our web site at www.johnsonlevel.com. The limited warranty for each product contains various limitations and exclusions.

Do not return this product to the store/retailer or place of purchase. Non-warranty repairs and course calibration must be done by an authorized Johnson® service center or Johnson Level & Tool's limited warranty, if applicable, will be void and there will be NO WARRANTY. Contact one of our service centers for all non-warranty repairs. A list of service centers can be found on our web site at www.johnsonlevel.com or by calling our Customer Service Department. Contact our Customer Service Department for Return Material Authorization (RMA) for warranty repairs (manufacturing defects only). Proof of purchase is required.

NOTE: The user is responsible for the proper use and care of the product. It is the responsibility of the user to verify the calibration of the instrument before each use.

For further assistance, or if you experience problems with this product that are not addressed in this instruction manual, please contact our Customer Service Dept.

In the U.S., contact Johnson Level & Tool's Customer Service Department at 888-9-LEVELS.

In Canada, contact Johnson Level & Tool's Customer Service Department at 800-346-6682.

13. Warranty Registration

Enclosed with this instruction manual you will find a warranty registration card to be completed for your product. You will need to locate the serial number for your product that is located on the bottom of the unit. **PLEASE NOTE THAT IN ADDITION TO ANY OTHER LIMITATIONS OR CONDITIONS OF JOHNSON LEVEL & TOOL'S LIMITED WARRANTY, JOHNSON LEVEL & TOOL MUST HAVE RECEIVED YOUR PROPERLY COMPLETED WARRANTY CARD AND PROOF OF PURCHASE WITHIN 30 DAYS OF YOUR PURCHASE OF THE PRODUCT OR ANY LIMITED WARRANTY THAT MAY APPLY SHALL NOT APPLY AND THERE SHALL BE NO WARRANTY.**

14. Accessories

Johnson® accessories are available for purchase through authorized Johnson® dealers. Use of non-Johnson® accessories will void any applicable limited warranty and there will be NO WARRANTY. If you need any assistance in locating any accessories, please contact our Customer Service Department.

In the U.S., contact Johnson Level & Tool's Customer Service Department at 888-9-LEVELS.

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