



**Self-Leveling Cross-Line Laser Level  
with 3 Vertical Lines  
Model No. 40-6602**



## Instruction Manual

*Congratulations on your choice of this Self-Leveling Cross-Line Laser Level with 3 vertical lines. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.*

This laser emits one laser beam cross and two vertical lines at 90°. The laser features quick damping, visual and audible out of range indication, and a pendulum-locking design. Beam visibility depends upon lighting conditions in the work area.

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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### 1. Kit Contents

<b>Description</b>	<b>Qty.</b>
Self-Leveling Cross-Line Laser Level with 3 Vertical Lines	1
Tripod/Wall Mount Bracket	1
"AA" Alkaline Batteries	3
Tinted Goggles	1
Magnetic Target	1
Instruction Manual with Warranty Card	1
Soft-Sided Carrying Case	1

### 2. Features and Functions

- Indoor and outdoor use (for outdoor use, must use 40-6780 detector, not included)
- Simultaneously projects three vertical lines and one horizontal line to form a cross line in front of the laser.
- Locking mechanism protects inner pendulum during transportation.
- Self-leveling with visual and audible alarms when beyond leveling range.
- Emits continuously both a solid and pulse beam (pulse beam for use with detector).
- Manual mode allows unit to tilt to extreme angles.





### 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:  $\leq 5\text{mW}$   
Wavelength: 625-645nm

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



#### **ATTENTION**



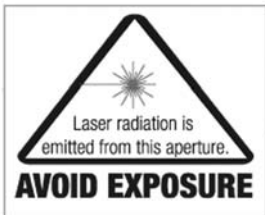
#### **IMPORTANT**

- 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





## 6. Operating Instructions

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

### Battery Installation

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



Loosen the battery door screw, put 3 x AA alkaline batteries into the battery case according to the polarity indication shown in the battery case. Then put the cover back on and tighten the battery door screw.

Note:

- Pay attention to the polarity of the batteries.
- Used (discharged) batteries are hazardous waste and should be disposed of properly.





## Wall Mount/Tripod Adapter

1. Put the instrument into the tripod/wall mount. The unit can rotate 360°.
2. The wall mount can be mounted on a wall.
3. The benchmark locator insert can be used to find a point on the ground.
4. The tripod/wall mount can be attached to a tripod.



Rotating 360°

Hanging on Wall



Connected to a tripod

Put the bench  
mark locator  
into 5/8" screw  
thread hole.

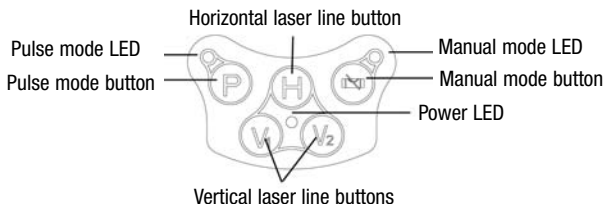


Put the center  
of the bench-  
mark locator  
on the mark  
on the floor,  
then put in the  
instrument.

Benchmark locator insert usage



## 7. Using the Product



### Power LED:

Light On: Power on

Light Off: Power off

Light Flashing: Low Battery

### Pulse mode LED:

Light On: Pulse mode on and the laser can be used with the 40-6780 detector (not included)

Light Off: Pulse mode is off

### Manual mode LED:

Light On: Manual mode is on and laser can be turned on with compensator locked

Light Off: Manual mode is off

**Note: When manual mode is on, the laser does not self-level and no out-of-level alarm is indicated.**





## Compensator Transportation Lock

Hold the upper housing of the instrument, and turn the base in the direction of the arrow.



To unlock the compensator transportation lock, turn the base to the on position.

To lock the compensator transportation lock, turn the base to the off position.

When the instrument is in the “Unlock” position, the power LED will light. When the instrument is in the “Lock” position, the power LED will be off.

## Pulse Mode:

Unlock the transportation lock and press the horizontal and/or vertical laser line buttons. Then press the pulse mode button to turn on the pulse mode, the pulse mode LED will turn on and the laser beam line will dim. The laser line can now be located by a detector (not included). Press the pulse mode button again to switch off the pulse mode, the pulse mode LED will turn off. The laser line now can not be located with a detector.

## Manual Mode:

Press the manual mode button with the transportation lock knob in the “Locked” position. The power LED will light and the manual





mode LED will flash. The instrument is now in the manual mode.

**Note: When manual mode is on, the laser does not self-level and no out-of-level alarm is indicated.**

Press the manual mode button again and the instrument will power off.

1. If the instrument is in manual mode and the instrument is turned to the “Unlock” position, the instrument will exit manual mode and enter self-leveling mode.
2. If the instrument is in the “Unlock” position, pressing the manual mode button will not get a response.

### Output of the laser line



Press **H** button to form the horizontal laser line above



Press **V1** button to form the vertical laser line as shown above



Press **V2** button to form the two vertical laser lines shown above



Press all buttons to form the laser lines shown above





## 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 for Level

1. Set the wall mount/tripod adapter on a tripod or flat surface approximately 10 ft. away from a reference wall.
2. Unlock the transportation lock on the unit.
3. Set the laser inside the wall mount/tripod adapter.
4. Press the horizontal laser line button (H) and the Vertical Laser Line button (V1).
5. Point the cross line at the reference wall (**It is important to see the laser line very clearly. This test should be performed indoors and in low light conditions.**)
6. Mark the intersection of the cross line as point A.
7. Rotate the laser unit counter clockwise until the laser cross line is 8 feet away from point A (to the left of point A). Mark the laser line at point A as point B.
8. Rotate the laser unit clockwise until the cross line is 8 feet to the right of point A.
9. Mark the laser line at Point A as point C.
10. If the distance between point B and point C is greater than 1/16" the unit needs to be recalibrated. (See calibration information)





### 3 Vertical Lines for Plumb

1. Use a plumb line or known vertical reference point.
2. Turn the laser unit on following the instructions above.
3. Rotate the laser unit so the vertical laser line intersects the plumb line.
4. Check all three vertical lines.
5. If the vertical laser line is not parallel with the plumb line (i.e. intersects at the top and bottom), the unit needs to be recalibrated. (See calibration information).

### Self-Calibration Adjustment

#### Self-Calibrating the side vertical laser lines (not the front vertical laser line) for plumb

1. There are two self calibration ports inside the battery compartment.
2. Remove the rubber plugs.
3. Unlock the compensator.
4. Use a 2mm hex head wrench.
5. Turn the calibration screw counter clockwise to move the top of the side vertical lines back towards the battery compartment. Move one screw at a time.



- Do not rotate the screw more than 4 rotations.** If the vertical line is still not plumb after moving one screw 4 rotations, the second screw can be rotated in the same direction. **Do not rotate the second screw more than 4 rotations.**
6. If the vertical lines can not be brought into plumb after 4 rotations of each screw, the unit will need to be serviced by Johnson Level & Tool.





### Self-Calibrating the horizontal laser line and front vertical laser line

1. Locate calibration port on the side of the laser unit.
2. Remove the rubber plug.
3. Unlock the compensator.
4. Use a 2mm hex head wrench.
5. Rotate the screw counter clockwise to lower the left side of the horizontal line and to adjust the top of the front vertical line to the left. **Do not rotate the screw more than 4 rotations.**
6. If the laser lines can not be brought into calibration after 4 rotations the unit will need to be serviced by Johnson Level & Tool.



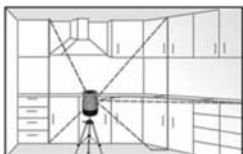
## 9. Technical Specifications

Laser Wavelength	635nm±10nm
Laser Classification	Class IIIa
Maximum Power Output	≤5mW
Accuracy	±3/16"/50 ft. (±3mm/10m)
Interior Range	Up to 200 ft. (60m) depending upon light conditions
Exterior Range	Up to 300 ft. (90m) with detector (not included)
Self-leveling Range	±3°
Power Supply	3 "AA" alkaline batteries
Battery Life	Approx. battery life 10 hours continuous use
Dimensions	3.55" x 5.83" (90 x 148mm)
Weight	2.2 lbs (1.0 Kg)
Working Temperature	14°F to 113°F (-10°C to +45°C)
Center Screw Thread	5/8" – 11
IP Protection	54

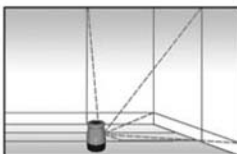




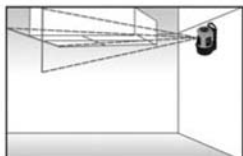
## 10. Application Demonstrations



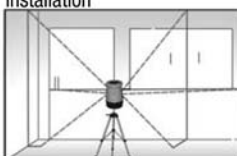
Reference for installing cabinets



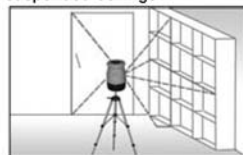
Plumb reference for baseboard installation



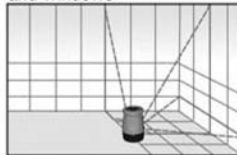
Reference for installing suspended ceilings



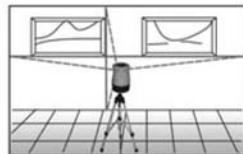
Reference for installing doors and windows



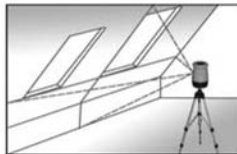
Reference for installing partitions



Reference for laying tile



Reference for hanging pictures



Reference for dormer installation





## 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](http://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](http://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.

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