

JOHNSON[®]



**Model No. 40-6636 Self-Leveling
360° Line Laser**

**Model No. 40-6637 Self-Leveling
360° Line Laser w/4 Horizontal Dots**

**Model No. 40-6638 Self-Leveling
360° Line Laser with Detector**

**Model No. 40-6639 Self-Leveling 360° Line
Laser w/4 Horizontal Dots and Detector**

Instruction Manual

Congratulations on your choice of this Self-Leveling 360° Line Laser. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.

These lasers emit one 360° horizontal laser beam or one 360° horizontal laser beam with four dots that are 90° to each other. The laser features 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.

! WARNING:

This product contains one or more chemicals, including lead, known to the State of California to cause cancer and birth defects and other reproductive harm.

Wash hands after handling. 

Table of Contents

- | | |
|--|----------------------------------|
| 1. Kit Contents | 8. Self-Check & Fine Calibration |
| 2. Features and Functions | 9. Technical Specifications |
| 3. Safety Instructions | 10. Application Demonstrations |
| 4. Location/Content
of Warning Labels | 11. Care and Handling |
| 5. Location of Parts/Components | 12. Product Warranty |
| 6. Operating Instructions | 13. Warranty Registration |
| 7. Using the Product | 14. Accessories |

1. Kit Contents

Description Model No's 40-6636 & 40-6637

	Qty.
Self-Leveling 360° Line Laser	1
Wall Mount Bracket	1
"AA" Alkaline Batteries	4
Instruction Manual with Warranty Card	1
Soft-Sided Carrying Case	1

Description Model No's 40-6638 & 40-6639

	Qty.
Self-Leveling 360° Line Laser	1
Wall Mount Bracket	1
"AA" Alkaline Batteries	4
Detector with Bracket and 9V Battery	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 included in 40-6638 and 40-6639).
- 40-6636 and 40-6638 emit a self-leveling 360° horizontal line and the 40-6637 and 40-6639 emit a self-leveling 360° horizontal line and 4 dots that are 90° to each other.



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.

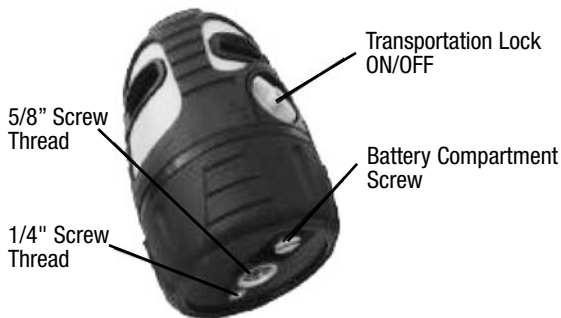
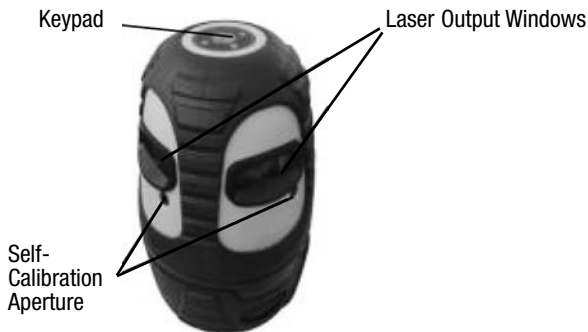


4. Location/Content of Warning Labels





5. Location of Part/Components

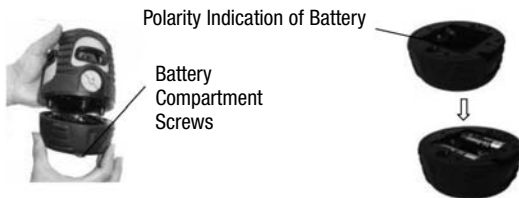


6. Operating Instructions

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 compartment screw, put 4 x AA alkaline batteries into the battery compartment according to the polarity indication shown in the battery compartment. Then put the battery compartment back on and tighten the battery door screw.

Note:

- When power indication LED is flashing, alkaline batteries should be replaced soon.
- Pay attention to the polarity of the batteries.
- Used (discharged) batteries are hazardous waste and should be disposed of properly.



7. Using the Product

Place the laser onto any flat surface.



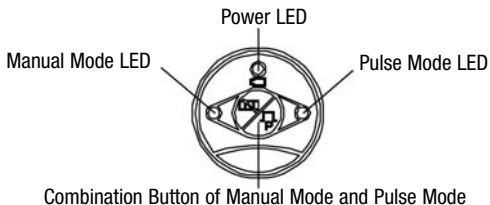
Connect the laser to the bracket with the 5/8" screw on the bottom of the bracket, attach the bracket to any metal surface or strap it to a column, or hang it on a wall.



The laser can also be placed on a 5/8" or 1/4" tripod.



Keypad Operations



Power LED:

Light On: Power on

Light Off: Power off

Light Flashing: Low Battery

Manual Mode LED:

Light Flashing: Manual mode is on and laser is on with compensator locked

Light Off: Manual mode is off

Pulse Mode LED:

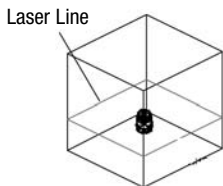
Light On: Pulse mode is on and the laser can be used with the 40-6780 detector (included with 40-6638 & 40-6639)

Light Off: Pulse mode is off

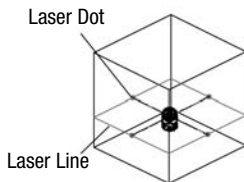
Note: When manual mode is on, the laser does not self-level and no out-of-level alarm is indicated.



Output of the Laser:



Output of 40-6636 & 40-6638



Output of 40-6637 & 40-6639

Combination Manual Mode Button/Pulse Mode Button:

When the laser is locked, press this button to enter into Manual Mode, the Power LED is on, the Manual Mode LED flashes and the laser line is on.

Press this button a second time, the Pulse Mode LED is on, the laser line gets less bright and can be used with the detector.

Press this button a third time, Manual Mode LED, Power LED and Pulse Mode LED are off.

When the laser is unlocked, the laser line will be on, press this button to enter into Pulse Mode. The Pulse Mode LED is on and the laser line will get less bright. Press this button again, and the laser will exit the Pulse Mode and the Pulse Mode LED will turn off. When the laser is locked, the laser line and LED will be off.

Notes:

1. The Manual Mode function is for out-of-level lines.





2. While the laser is in the unlocked position, the laser can not enter into Manual Mode and will enter into self-leveling.

Power On/Off:

Turn the laser on by turning the compensator transportation lock dial clockwise from the locked position to the unlocked position. The power LED is on and the laser beam is on. To turn the laser off, turn the compensator transportation lock dial counter-clockwise from the unlocked position to the locked position. The power LED and laser beam will turn off.





Detector Usage (included in Model Nos. 40-6638 & 40-6639)

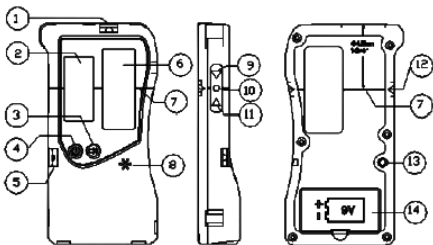
1. Technical Specifications

Detecting Accuracy:	0.019" ≤ 50 ft. (0.5mm ≤ 15m) 0.039" ≤ 100 ft. (1mm ≤ 35m) 0.059" ≥ 100 ft. (1.5mm ≥ 35m)
Automatic Shut-off:	6 minutes
Power Supply:	9V battery
Sound Indicator:	fast tone, double tone and solid tone
LCD:	Up arrow, Down arrow, Center sign
LED Indication:	Up, Middle, Down
Dimensions:	5.905" x 2.992" x 1.142" (150 x 76 x 29mm)
Weight:	0.386 lb. (0.175kg)
Others:	Rain and dust resistant

2. Components

With this laser detector, a line generated pulsed Johnson® laser can be used both indoors with bright light and/or outdoors in the sunlight where the beams are not visible.

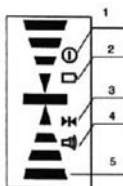




- | | |
|------------------------|----------------------------|
| 1. Horizontal Vial | 8. Beeper |
| 2. Reception Window | 9. Top Indicator Light |
| 3. Sound On/Off Key | 10. Middle Indicator Light |
| 4. Power On/Off Key | 11. Bottom Indicator Light |
| 5. Vertical Vial | 12. Rear On Grade Mark |
| 6. Display Window | 13. Rod Bracket Thread |
| 7. Front On Grade Mark | 14. Battery Door |

Display Window Symbols

1. Power On
2. Low Voltage
3. Coarse/Fine
4. Sound On
5. Position Indication Arrows





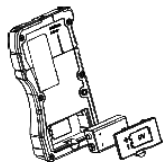
3. Operation Instructions

1. Battery Installation

Open the battery door, and put in one 9V battery according to the polarity shown inside. Then snap the battery door back.

Note:

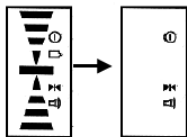
- Remove the battery when the unit is being stored for a long time.
- Replace the battery when the low voltage indicator shows a low battery.



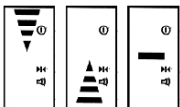
2. Operating Instructions

IMPORTANT: This detector will only work when the laser is in the pulse mode.

A. Press the Power on/off key: The detector will beep twice and all the symbols will be displayed on the display window. After 0.5 seconds the detector will enter its detecting mode.

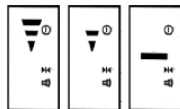


B. Detecting the horizontal laser signal: Put the detector in a vertical position and center the bubble in the horizontal vial with the reception window facing the laser. A down arrow shown on the display window and a lit red light indicates the laser signal is below the detectors on grade

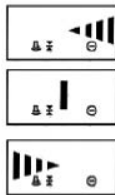


mark. An up arrow plus a yellow lit light indicates the laser signal is above the detectors on grade mark. A middle sign plus a lit green light indicates the laser signal is on grade.

Note: When the laser signal moves towards the center position, the displayed up or down arrows will decrease in size, until the center single line appears.



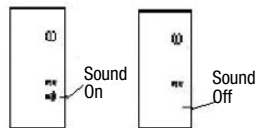
C. Detecting the vertical laser signal: Put the detector in a horizontal position (center the bubble in the horizontal vial) with the reception window and indicator lights facing up. Have the reception window face the unit to receive the vertical laser signal. Left arrow shown on LCD plus a lit red light indicates the laser signal is on the left side of center. A middle sign with a lit green light indicates the laser signal is on the middle position. A right arrow plus a lit yellow light indicates the laser signal is on the right side of center.



D. Press the Power on/off key to power off the detector. The detector will beep twice for off.

3. Sound Function

Pressing the sound key when the unit is powered-on. This will switch the unit between sound on and sound off, note the sound sign indication on LCD.



**Sound function on:**

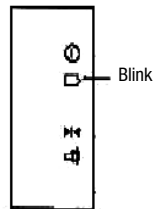
- If the laser signal is on the top (left) side, then the detector will give a fast tone.
- If the laser signal is on the bottom (right) side, then the detector will give a double tone.
- If the laser signal is on the middle, then the detector will have a solid tone.

4. Automatic Shut-Off Function

When not receiving a laser signal and with no operation of the keys for six continuous minutes, the unit will power off automatically to preserve battery life.

5. Low Battery Indicator Function

- When the power indicator sign is blinking, it indicates that the battery is low and should be replaced.
- A very low battery will result in an automatic power-off, which requires the user to replace before continued operation.





8. Self-Check & Fine Calibration

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

Accuracy Check

1. Set the device on a platform, a minimum of 5 meters away from an indoor wall, with laser squarely facing wall.
2. Turn the device on, and after it self-levels, make a mark on the wall (Label this mark 'A'), then draw a vertical line through 'A'.
3. Turn the device 90°, and after it self-levels, make a mark at the intersection of the laser line/vertical line. (Label this mark as 'B'). Do the same two more times, labeling the marks as 'C' and 'D'.
4. Measure the distance between the two points with the greatest distance among A, B, C, D. This will be measurement 'h'. If 'h'=2mm, the accuracy of the instrument is within spec. If 'h' > 2mm, the accuracy of the instrument is out of tolerance, and adjustment is necessary.

Adjustment of Self-Calibration

According to the results of #4 above, mark 'O' at 'h'/2. 'h'/2 is the center of the highest and lowest points among A, B, C, D.

1. Aim the self-calibration aperture 1 of instrument to the wall, and adjust to make the laser line meet 'O'.
2. Aim the self-calibration aperture 2 of instrument to the wall, and adjust to make the laser line meet 'O'.





When adjusting, note:

- a. Use a 2.5mm hex-head tool (allen wrench).
- b. The adjustment of each aperture may influence each other. This means that adjusting Aperture 1 may cause Aperture 2 to change, so a re-check of the previous Aperture adjustment may be required.
- c. The adjustment of the self-calibration screw should not exceed 4 complete rotations (clockwise or counter-clockwise direction).
- d. If the instrument cannot be calibrated via the Apertures (device is too far out of spec), then please contact a distributor, repair facility, or Johnson Level & Tool Customer Service.





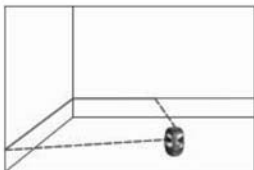
9. Technical Specifications

Laser Wavelength	635nm±10nm
Laser Classification	Class IIIa
Maximum Power Output	≤5mW
Accuracy	±1/8"/50 ft. (±1mm/10m)
Interior Range	Up to 200 ft. (60m) depending upon light conditions
Exterior Range	Up to 300 ft. (90m) with detector (included in 40-6638 & 40-6639)
Self-leveling Range	±5°
Power Supply	4 "AA" alkaline batteries
Battery Life	Approx. battery life 10 hours continuous use
Dimensions	3.74" x 5.11" (95 x 130mm)
Weight	1.869 lbs (0.7 Kg)
Working Temperature	14°F to 113°F (-10°C to +45°C)
Center Screw Thread	5/8" – 11
IP Protection	54

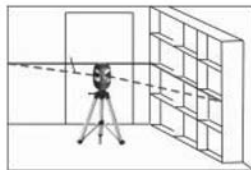




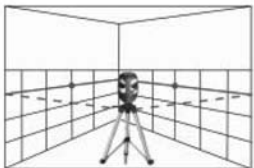
10. Application Demonstrations



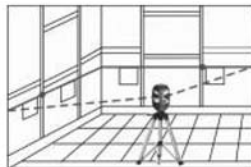
Installing baseboards



Installing partitions



Installing tile



Aligning doors and windows





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.

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

