JOHNSON®

Quad Line® Self-Leveling Cross-Line Laser with Plumb Beam

Model No. 40-6662

Instruction Manual

Congratulations on your choice of this Quad Line® Self-Leveling Cross-Line Laser with Plumb Beam. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.

This tool emits four cross line laser beams and one down plumb beam. 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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Table of Contents

1. Kit Contents

Description for Model 40-6662	Qty.
Quad-Line® Self-Leveling Cross-Line Laser	1
Tripodic Base	1
NiMH Rechargeable Battery Pack	1
Alkaline Battery Compartment (batteries not included)	1
6.4V Battery Adapter	1
Tinted Glasses	1
Magnetic Target	1
Instruction Manual with Warranty Card	1
Hard-Shell Carrying Case	1

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2. Features and Functions

- Indoor and outdoor use (for outdoor use must use 40-6780 detector-not included)
- Simultaneously projects four self-leveling cross lines plus one plumb down dot
- Locking mechanism protects inner pendulum during transportation
- Self-leveling with visual and audible alarms when beyond leveling range
- Emits continuously both a solid or pulse beam (pulse beam for use with detector)
- Manual mode allows unit to tilt for 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: ≤ 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.

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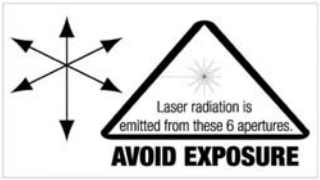
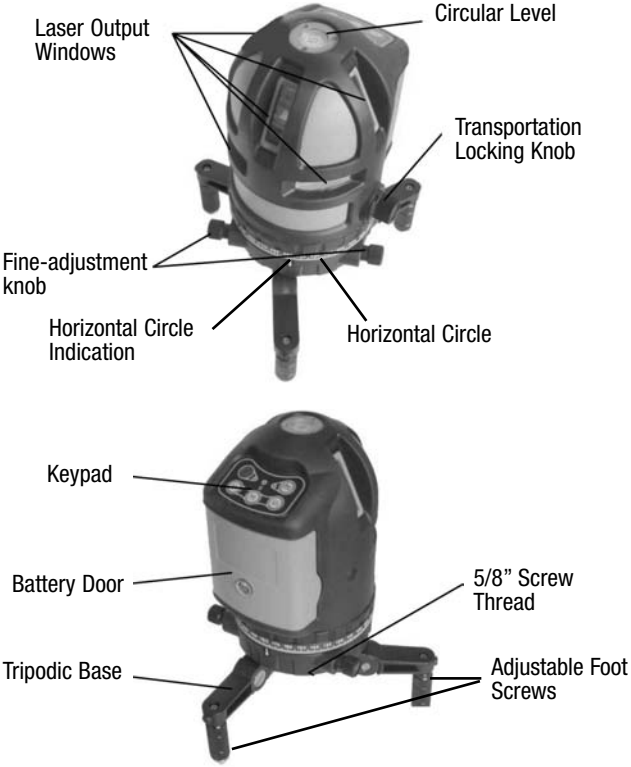
4. Location/Content of Warning Labels



5. Location of Part/Components



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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.

Alkaline batteries installation

Put 4 "AA" alkaline batteries into the battery compartment according to the polarity indication shown in the battery compartment. Put the battery compartment on the laser and tighten the locking screw.

Alkaline battery case

Rechargeable battery compartment installation

Put the rechargeable battery compartment on the laser and tighten the locking screw.

Rechargeable battery case

Adapter Usage

The rechargeable battery compartment can be charged off the laser or connected to the laser.

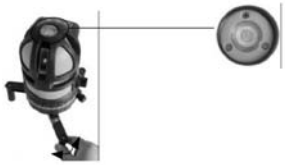
If the rechargeable battery compartment is on the laser and plugged into the adapter, the battery pack will charge and the laser will also operate. The DC power LED is red during charging and will turn green after the rechargeable battery pack is fully charged. The power LED operates the same when recharging the battery pack when it is off the laser.

Charging by connecting with the instrument directly

Charging solely

Adjustable Foot Screws

Adjust the three adjustable foot screws on the tripodic base, to put the bubble in the bullseye of the vial (the bubble centered means the instrument is in its self-leveling range).



Adjusting the bubble

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360º Rotation and Fine Adjustment

This laser can turn 360º and can also make angle fine-adjustments using the fine-adjustment knobs.

360º rotation

Fine adjustment

Connecting to the Tripod

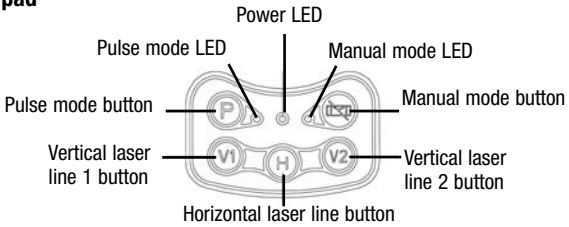
This instrument can be connected to a tripod using the 5/8" screw thread hole located either on the tripodic base or on the bottom of the instrument.

Connecting to a tripod with the tripodic base.

Connecting to a tripod with just the instrument.

7. Using the Product

Keypad



Power LED:

Light On: Power on
Light Off: Power off
Light Flashing: Low Battery

Pulse mode LED:

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

Manual mode LED:

Light Flashing: 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.

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Compensator Transportation Lock

Set the locking knob to “Unlock/On” position

Set the locking knob to “Lock/Off” position

When the locking knob is in the “Unlock/On” position, the top bubble will illuminate and the power LED will be on.
When the locking knob is in the “Lock/Off” position, the top bubble will not be illuminated and power LED will be off.

Output of the laser line

Pulse Mode:
Unlock the transportation lock and press the horizontal and/or vertical laser line buttons. 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 "Lock/Off" position. The manual mode LED will flash and the top bubble light will go on. The output of the laser lines are the same as in the self-leveling mode. Press the manual mode button again to turn the laser power off.

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

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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 laser unit on a tripod or flat surface approximately 10' away from a reference wall.
2. Unlock the transportation lock on the unit.
3. Press the horizontal laser line button (H) and the vertical laser line button (V1).
4. Point the cross line at the reference wall **(It is important to see the laser line very clearly. This test should be preformed indoors and in low light conditions).**
5. Mark the intersection of the cross line as point A.
6. 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.
7. Rotate the laser unit clockwise until the cross line is 8 feet to the right of point A.
8. Mark the laser line a point A as point C.
9. If the distance between point B & C is greater then 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. Locate the calibration port inside the battery compartment.
2. Remove the rubber plug.
3. Unlock the compensator.
4. Use a 3mm hex head wrench.
5. Turn the calibration screw counter clockwise to move the top of the side vertical lines to the back of the unit (towards the battery compartment). **Do not rotate the screw more than 4 rotations.**
6. If the side vertical lines can not be brought into plumb after 4 rotations of the screw, send the instrument to an authorized repair facility for repairs.

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 plastic screw.
3. Unlock the compensator.
4. Use a 3mm hex head wrench.
5. Rotate the screw counter clockwise to raise the left side of the horizontal line and to adjust the top of the front vertical line to the right. **Do not rotate the screw more than 4 rotations.**
6. If the laser lines can not be brought into calibration after 4 rotations, send the instrument to an authorized repair facility for repairs.

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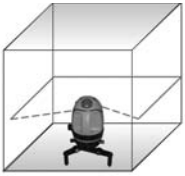
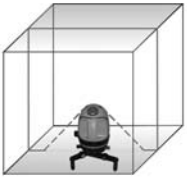
9. Technical Specifications

Laser Wavelength	635nm±10nm
Laser Classification	Class IIIa
Maximum Power Output	≤5mW
Accuracy	±1/8"/50 ft. (±1mm/5m)
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	Rechargeable battery pack (included) or 4 “AA” alkaline batteries (not included)
Battery Life	Approx. battery life 8 hours continuous use
Dimensions	4.73" x 4.96" x 7.09" (120 x 126 x 180mm)
Weight	4 lbs (1.8 Kg)
Working Temperature	14°F to 113°F (-10°C to +45°C)
Center Screw Thread	5/8" – 11

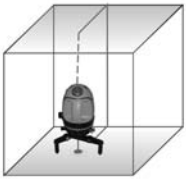
10. Application Demonstrations



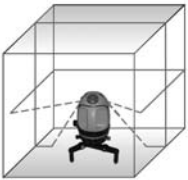
Horizontal line



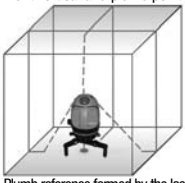
Vertical line



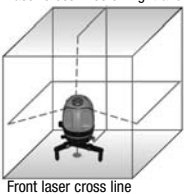
Front vertical and plumb point



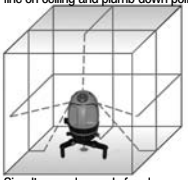
Laser cross lines on right and left sides



Plumb reference formed by the laser cross line on ceiling and plumb down point



Front laser cross line



Simultaneously supply four laser crosslines on the front, left, right, and top

Operate with detector to extend working distance

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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.**

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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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