Magnetic Digital Laser Level
Model No. 40-6080

Instruction Manual

Congratulations on your choice of this Magnetic Digital Laser Level with Rotating Display. 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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1. Kit Contents

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>“AAA” Alkaline Batteries</td>
<td>3</td>
</tr>
<tr>
<td>Soft-Sided Pouch</td>
<td>1</td>
</tr>
</tbody>
</table>

2. Features and Functions

- LCD can rotate 180º
- 5 construction languages - units of measure (degrees, percent, mm/m, in/ft in decimal, in/ft in fractional)
- Self-calibrated
- 0º and 90º-position of inclination is confirmed by a signal tone
- Numbers invert for working overhead
- Automatic Shut-off
- Magnetic Base
- 1/4” - 20 thread for connection to tripod
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.

**ATTENTION**

- 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.

**DANGER!**

Class IIIa Laser Product
Max. Power Output: ≤ 5mW
Wavelength: 640-660nm

**THIS TOOL EMITS LASER RADIATION.**
**DO NOT STARE INTO BEAM.**
**AVOID DIRECT EYE EXPOSURE.**
4. Location/Content of Warning Labels

![Warning Labels Example]

**AVOID EXPOSURE**

**DANGER**

Laser radiation is emitted from this aperture. Avoid exposure.

Maximum output power: < 5mW @ 640-660nm

Class IIa laser product. This product complies with the applicable requirements of 21CFR Parts 1040.10 & 1040.11.

Mfg. for Johnson Level & Tool Mfg. Co., Inc.
6333 W. Dorges Bay Rd., Mequon, WI 53097

Manufactured in China by JLTO5

Date (m/y): ________
5. Location of Part/Components

- Laser Output Window
- LCD Display
- Keypad
- 1 1/8” Offset
- Battery Cover Screw
- Battery Cover
6. Operating Instructions

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

**Battery Installation**
1. Open the battery cover by turning the screw counter-clockwise, and then put the 3 “AAA” batteries into the battery case according to the polarity shown in the battery slot.
2. Snap the battery cover back, and then tighten the screw clockwise.

**Note:**
1. Take out the batteries if the instrument is not going to be used for a long time.
2. Replace the batteries when the voltage gets low.
3. Turn the instrument off while taking out the old batteries from the battery case.

**Display After Installing the Batteries**
1. After installing the new batteries the LCD will display “good”.
2. Then the LCD will display “-0-”.
3. Calibrate the instrument following the calibration procedure in Section 8.
7. Using the Product

Key Guide

Power Key
Turn on/off the instrument. The instrument will beep twice when turned on and beep once when turned off.

Hold Key
Pressing this key will lock the current angle reading displayed on the LCD.

Sound/LCD Backlight Key
Press this key once and hold for 2 seconds to turn on/off the LCD back light. The instrument will beep once. Press button once to turn on/off the sound function. When sound function is on you will see the horn symbol on the LCD. There will be no beeps if the instrument is between 10° to 80°. A faster beep will start as you move closer to level or plumb. A steady tone will beep when level is at 0.0° or 90°.
Mode Key
Push the MODE button to switch from one construction language to another. This controls which construction language your electronic module will measure in. Your level has the capability to measure in Degrees, Percentage of slope, Millimeters per Meter, Inches per Foot (Slope, Pitch) in decimal form and Inches per Foot in fractions of an inch. A symbol on the upper right of the screen will explain which MODE you are currently in.

Laser Key
Turn on/off the laser. The instrument will beep once.

Calibration Key
Please refer to Section 8 “Self-Check and Fine Calibration”.

Auto Shut-off
The electronic module will automatically shut-off in 20 minutes if no key is pressed.

Low Voltage Indication
If the battery symbol on the display is low, change the batteries as soon as possible. Non-display of battery symbol means the battery is full.
Sound Function

The SOUND symbol displayed on the LCD means that the sound function is activated. The level will beep faster when the instrument gets closer to the position of 0° and 90°. When the LCD displays 0° or 90°, there will be a continuous tone sound.

Hold Function

Press the hold key once (unit will beep once) to activate this function and to display the HOLD symbol on the LCD. Now the instrument will hold the current angle reading and the display will flash.

Laser Indication Function

The Laser symbol displayed on the LCD means that the laser beam is activated. The laser output window will emit a bright red laser dot.

Inclination Indication

The triangle arrows displayed on the two ends of the LCD indicate the inclination direction of the laser digital level.
When the laser digital level is at the position of 0 degree, the two arrows will show as follows:

![Display Image]

**Rotating Display**
The LCD of the instrument can rotate 180 degrees.
8. Self-Check and Fine Calibration

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

Checking the Horizontal Calibration
Select a flat and horizontal platform as a reference surface, like a table-surface.

1. Place the laser digital level on this reference surface, as shown in figure 1, and then record the measured angle reading. Record this as A1.
2. Turn the laser digital level 180 degrees, as shown in figure 2, and then record the measured angle reading. Record this as A2.
3. If A1-A2 is greater than 0.2º, it is necessary to calibrate the horizontal accuracy.

Checking the Vertical Calibration
Select a flat and vertical platform as a reference surface.

1. Place the laser digital level on this reference surface, as shown in figure 3, and then record the measured angle reading. Record this as A1.
2. Turn the laser digital level 180 degrees, as shown in figure 4, and then record the measured angle reading. Record this as A2.
3. If A1-A2 is greater than 0.2º, it is necessary to calibrate the vertical accuracy.
Horizontal Calibration
1. Press and hold the ZERO key for 3-plus seconds, unit will beep once. When the LCD shows -0-, it means the instrument has already entered the calibration status.
2. Place the laser digital level on the horizontal reference surface, as shown in figure 5, after 10 seconds, press the ZERO again, and the LCD shows -1-. 
3. Turn the laser digital level 180 degrees, as shown in figure 6, and after 10 seconds, press the ZERO key again, and the LCD shows -2-. Wait for 2 seconds, and the laser digital level will show the angle reading. The horizontal calibration is now completed.

![Fig. 5](image1) ![Fig. 6](image2)

Vertical Calibration
1. Press and hold the ZERO key for 3-plus seconds, unit will beep once. When the LCD shows -0-, it means the instrument has already entered the calibration status.
2. Place the laser digital level on the vertical reference surface, as shown in figure 7, after 10 seconds, press the ZERO again, and the LCD shows -1-. 
3. Turn the laser digital level 180 degrees, as shown in figure 8, and after 10 seconds, press the ZERO key again, and the LCD shows -2-. Wait for 2 seconds, and the laser digital level will show the angle reading. The vertical calibration is now completed.

![Fig. 7](image3) ![Fig. 8](image4)
# 9. Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Wavelength</td>
<td>650nm ± 10</td>
</tr>
<tr>
<td>Laser Classification</td>
<td>Class IIIa</td>
</tr>
<tr>
<td>Maximum Power Output</td>
<td>≤5mW</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 0.1° for 0° and 90°, and</td>
</tr>
<tr>
<td></td>
<td>± 0.2° for 1° to 89°</td>
</tr>
<tr>
<td>Laser Accuracy</td>
<td>±1/8”/50 ft. (±0.2mm/m)</td>
</tr>
<tr>
<td>Range</td>
<td>0° to 90°</td>
</tr>
<tr>
<td>Power Supply</td>
<td>3 “AAA” alkaline batteries</td>
</tr>
<tr>
<td>Battery Life</td>
<td>Approx. battery life 70 hours</td>
</tr>
<tr>
<td></td>
<td>continuous use</td>
</tr>
<tr>
<td>Dimensions</td>
<td>12” x 2.36” x 1.25” (305 x 60 x 32mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.48 lbs (0.67 Kg)</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>14°F to 113°F (-10°C to +45°C)</td>
</tr>
</tbody>
</table>
10. 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.
11. Product Warranty

Johnson Level & Tool offers a one year limited warranty on each 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 us online at www.johnsonlevel.com. The limited warranty for each product contains various limitations and exclusions.

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 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.