



Laser Distance Measure
Model No. 40-6006



Instruction Manual

Congratulations on your choice of this Laser Distance Measure. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.

This is a Class II laser tool and is manufactured to comply with CRF 21, parts 1040.10 and 1040.11 as well as international safety rule IEC 285. The laser also complies with EMC Test according to EN61000-6-3; 2001+A11:2004, EN 6100-6-1:2011, EN 6100-4-2, EN 61000-4-3, EN 60825, FCC Test according to PART 15.

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1. Kit Contents

Description for Model 40-6006

	Qty.
Laser Distance Measure	1
“AAA” Alkaline Batteries	2
Instruction Manual with Warranty Card	1
Strap	1
Soft-Sided Pouch	1

2. Safety Instructions

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

CAUTION!

Class II Laser Product
Max. Power Output: $\leq 1\text{mW}$
Wavelength: 640-660nm

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





ATTENTION



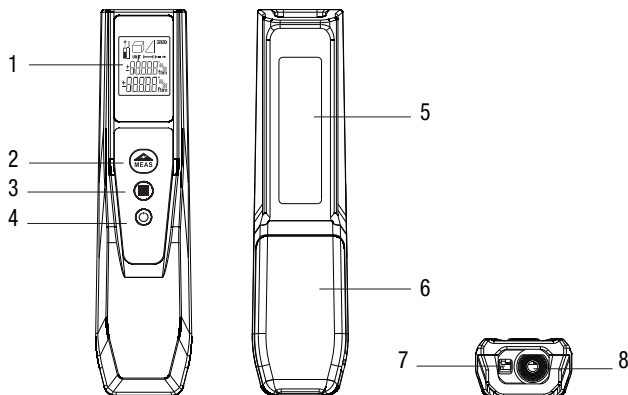
IMPORTANT

- 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 stare 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 battery 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.

3. Location/Content of Warning Labels



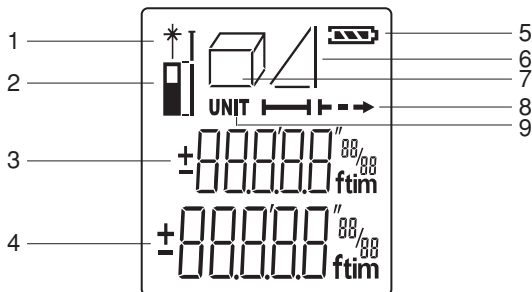
4. Location of Part/Components



1. LCD Display
2. Power On/Measure/
Continuous Measure Button
3. Function Button
Add
Subtract
Area
Volume
Indirect/Pythagoras

4. Clear/Power Off Button
5. Warning Label
6. Battery Cover
7. Laser Emitting Window
8. Receiver Window

LCD Display



- | | |
|-----------------------------------|----------------------------------|
| 1. Active Laser Indicator | 6. Indirect/Pythagoras Measuring |
| 2. Measurement Reference Position | 7. Area/Volume Measuring |
| 3. Sub-Screen | 8. Single/Continuous Measuring |
| 4. Main Screen | 9. Unit of Measure |
| 5. Battery Status | |



Measuring Reference

Range

Range is specified between a minimum 2-inches to a maximum of 100-feet with an accuracy of 1/16".

Target Surfaces

Measuring errors may occur when aiming at surfaces composed of colorless liquids (e.g. water), glass, Styrofoam or similar semi-permeable surfaces. Aiming at high gloss surfaces may deflect the laser beam and lead to measurement errors.

Hazards of Use

Be aware that errors in distance measurements may occur if the instrument is defective or has been dropped, been misused or modified.

Note

Conduct periodic test measurements to ensure the instrument is measuring accurately and consistently. This is most important if the instrument has been exposed to abnormal use. Always confirm accuracy before and during important measurements. Keep the laser distance measure optic clean and inspect for damage.





5. Start Up - Battery Installation

1. Remove battery compartment cover.
2. Insert 2-“AAA” batteries observing correct polarity.
3. Close battery compartment cover.
4. Battery status will be shown in start up screen.



Battery has 100% power



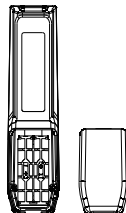
Battery has about 60% power



Battery has about 25% power




Battery has 5% power and a new battery is required.



Note


Use only alkaline batteries. If the instrument will not be used for an extended time, remove the batteries to protect against corrosion.


To Power On the Unit

Press the  power on/measure/continuous measure button to turn on the unit.

The LCD and laser beam will turn on, the unit will beep once.

To Power Off the Unit

Press the  clear/power off button once to clear the previous mode. The unit will beep once.

Hold the  button for 3 seconds to power off the unit. The unit will give a long beep.

Automatic Shutoff

Laser will turn off after approximately 30 seconds

Unit will turn off after 3 minutes of inactivity







6. Using the Product

Settings

The 40-6006 has two menu settings:




1. Units of Measure
2. Measurement Reference Position

To enter menu settings:

With the unit turned OFF, press and release the  +  buttons simultaneously.

Units of Measure

LCD will display UNIT – there are seven units of measure


1. Press the  button to change the units of measure from:
 - Feet only in decimal (ft)
 - Inches only in decimal (in)
 - Feet and inches in fractions of 1/16" (in)
 - Feet and inches in fractions of 1/8" (in)
 - Feet and inches in fractions of 1/4" (in)
 - Feet and inches in fractions of 1/2" (in)
 - Meters (m)
2. To exit units of measure and enter the reference position, press the  button once to enter the reference setting or the  button to begin operations.

Measurement Reference Position



There are two reference positions for the 40-6006

1. Front
2. Rear







To enter the reference position settings:

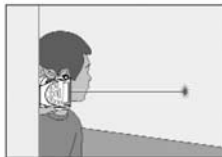
1. Enter menu settings as described above.
2. Press the  button to move from units to reference.



3. Press the  button to switch from the front of the unit to the rear of the unit.
4. To exit, press the  button to begin operations





Single Distance Measuring

1. Press the  measure button to turn on the unit.
2. Point the laser beam to the target.
3. While holding the unit steady, press the  measure button again to make the measurement.
4. Unit will beep once, measurement will be displayed on the main screen and the laser beam will turn off.
5. Press the  button again, the laser beam will turn on and the first measurement will go to the sub-screen.
6. Point the laser beam to the next target and press the  button again. The new measurement will be displayed on the main screen and the prior measurement on the sub-screen.
7. This can be repeated over and over again.
8. To clear, push the  button once and the unit will beep once.
9. To power off, press the  button for 3 seconds. The unit will give a long beep.









Continuous Measuring

1. After the unit is powered on, hold the  button in for 2 seconds, the LCD display will change from single (|—|) to continuous (|—→) display.
2. This mode will take continuous measurements as you move closer or farther away from the target.
3. Minimum working range is 2", maximum working range is 100'.
4. Press the  button once to hold the continuous measuring mode. Press  to resume continuous measuring mode.
5. Press the  button to clear this mode.





Adding Measurements

1. To add additional measurements after taking the first measurement, press the  function button once.
2. The first measurement will move to the sub-screen and the laser beam will be on. The add sign (+) by the main screen will be flashing.
3. Point the laser beam to the next target and press the  button.
4. The first measurement will be displayed on the sub-screen and the combined measurements will be displayed on the main screen.
5. To add additional measurements, press the  button again. The (+) sign will be on and the combined measurements will move to the sub-screen.
6. Press the  button and the new measurement will be displayed on the sub-screen and total measurement on the main screen.
7. Repeat as often as desired.







Subtracting Measurements

1. To subtract additional measurements after taking the first measurement, press the  function button twice.
2. The first measurement will move to the sub-screen and the laser beam will be on. The subtract sign (-) by the main screen will be flashing.
3. Point the laser beam to the next target and press the  button.
4. The first measurement will be displayed on the sub-screen and the combined measurements will be displayed on the main screen.
5. To subtract additional measurements, press the  button twice again. The (-) sign will be on and the combined measurements will move to the sub-screen.
6. Press the  button and the new measurement will be displayed on the sub-screen and total measurement on the main screen.
7. Repeat as often as desired.





Area, Volume & Indirect (Pythagoras) Measurements

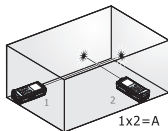
1. To move from line, to area, to volume, to indirect measurements in a continuous loop, hold in the  function button. Releasing the button will select the desired measurement.
2. To move from one measurement to the next, hold the  button in for 2 seconds.










Area Measurement (Square²)

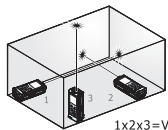
1. With unit turned on, hold down the  button until the area symbol () is displayed.
2. Press the  button once to measure the width. The bottom area symbol line will be flashing.
3. Press the  button a second time to measure the length. The right side area symbol line will be flashing.



4. The area will be displayed on the main screen in square feet. Area symbol will be flashing.


Volume Measurement (Cube³)

1. With the unit turned on, hold the  button until the volume symbol, 3 dimensional icon () is displayed.
2. Press the  button once to measure the width. The bottom volume symbol line will be flashing.
3. Press the  button a second time to measure the length. Right side volume symbol line will be flashing.
4. Press the  button a third time to measure the height. Side volume symbol line will be flashing.
5. The volume will be displayed on the main screen in cubic feet.

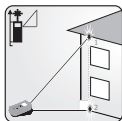




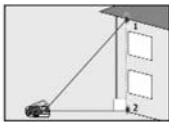
Indirect (Pythagorean Theorem)



- 1 With the unit turned on, hold the  button until the indirect symbol, triangle icon (\triangle) is displayed.
2. The calculation is based on Pythagorean Theorem $a^2 + b^2 = c^2$.
3. Follow the order of the flashing lines.

Note: For accurate measurements the instrument's position must be held constant. For example, note the position of your hand when taking first measurement. Do not move your hand when preparing to take the second measurement. Simply pivot your wrist (keeping instrument in same position) to align the next target. Then record next measurement.



Calculates distance between
Point 1 and Point 2



4. Press the  button once to record the first measurement.
5. Press the  button a second time to record the second measurement.
6. The sum of both indirect measurement calculations will be displayed on the main screen.





Indoor & Outdoor Measurements

This model is designed to take measurements indoors and outdoors under normal settings. The measuring surfaces and ambient light are critical factors to the quality of measurement (indoors and outdoors). Outdoor measurement capability may be limited due to sunlight/UV ray interference. Please note that in some situations the unit may have difficulty reading the surface you try to measure if lighting or sunlight is intense and/or the surface being measured does not reflect the laser beam appropriately.





Measurement Errors

Error messages will appear if the unit's receiver is not getting a sufficient laser return signal.

Common surfaces that could cause an error reading:

- Water or other fluids
- Translucent to clear surfaces like glass or acrylic
- Porous or dark surfaces may require longer reading times or cause an error reading
- Moving surfaces or objects such as curtains
- Highly reflective or angled surfaces may deflect the laser beam signal

Error Codes

Code Description

Err01 Distance is outside of measuring range

Err02 Reflected signal is too weak

Err03 Out of display range

Err04 Pythagorean theorem calculation error

Err05 Low Battery

Err06 Temperature is outside of working range

Err07 Ambient light is too strong

Solution

Measure in a shorter distance or longer distance

Measure a better surface

Maximum Value: 99,999
Split up measurement area into smaller segments.

Check and verify value or the sequence of measurements is correct

Install a new battery

Measure in an environment within specified working temperature range

Measure in a darker place (shadow target)





Tips from the Pro's

Take more than one measurement in critical situations where accuracy needs to be greater than an estimation measurement. Take three to four measurements from the same position to compare consistency of each reading. Prior to important measurements verify that the instrument is in proper working order and take sample measurements to a known distance to verify accuracy.

To accurately measure from the rear of the instrument, use a scrap piece of drywall or other flat material. Extend the material off the corner and butt the LDM up to the material. Then take measurement.

Place a white sheet of paper over the targeted measuring surface if error message Err02 occurs to improve the return signal.





7. Technical Specifications

Measure Range*	2" - 100'
Accuracy*	± 1/16"
Measure Speed*	0.5 seconds
Laser Type	660nm, ± 10nm, Class II, ≤ 1mW
Power Supply	2 - "AAA" Alkaline Batteries (included)
Battery Life	Up to 10,000 measurements
Dimensions	4.33" x 1.77" x 1.18" (145 x 32 x 22 mm)
Working Temperature	23°F to 104°F (-5°C to +40°C)
Storage Temperature	-4°F to 140°F (-20°C to +60°C)
Auto Shut-off Laser	Approximately 30 seconds
Auto Shut-off Main Power	Approximately 3 minutes
IP Protection Class	54

*The working range and accuracy is dependent on how well laser light is reflected from the surface for the target and with increased brightness of the ambient light intensity measuring accuracy may deteriorate.





8. Product Warranty

Johnson Level & Tool offers a two year limited warranty on our laser distance measure 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.

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.





9. Product 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 inside the battery compartment door. **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 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.**



