



**24" and 48" Waterproof Electronic  
Digital Level**  
**Model Nos. 1880-2400 & 1880-4800**



# Instruction Manual

*Congratulations on your choice of this Digital Level. We suggest you read this instruction manual thoroughly before using the instrument. Save this instruction manual for future use.*



## Table of Contents

- |                                 |                             |
|---------------------------------|-----------------------------|
| 1. Kit Contents                 | 5. Using the Product        |
| 2. Features and Functions       | 6. Self-Calibration         |
| 3. Location of Parts/Components | 7. Technical Specifications |
| 4. Operating Instructions       | 8. Care and Handling        |
|                                 | 9. Product Warranty         |

### 1. Kit Contents

<b>Description</b>	<b>Model Nos. 1880-2400 &amp; 1880-4800</b>	<b>Qty.</b>
Electronic Digital Level		1
Instruction Manual		1
Carrying Case		1

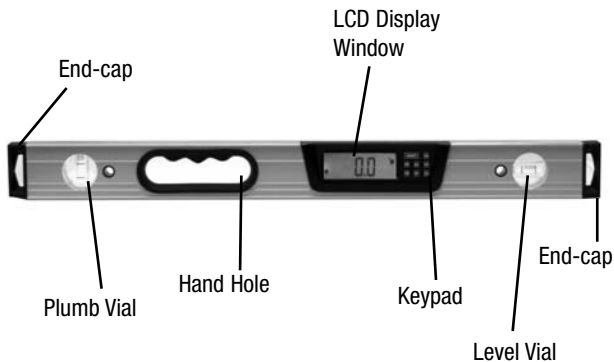
### 2. Features and Functions

- IP 65 dust and waterproof
- Extremely accurate with 0.05° at 0° and 90°
- Angle inclination in 5 construction languages - units of measure (degrees, percent, in/ft (fractional), in/ft(decimal), mm/m)
- Self-calibrate
- Automatic digit inversion for overhead measurements
- Reference function making any slope “0.0”
- Hold function locks measurement on the LCD
- Working range on angle measurement 4 x 90°
- SurroundView® vials reflect ambient light for easy-read



- Two vials read plumb and level
- Bright LCD backlight
- Audible and visual plumb and level indicators
- Shock absorbing end-caps
- Large hand grips fastened with screws
- Rigid aluminum box frame profile

### 3. Location of Part/Components



## 4. Operating Instructions

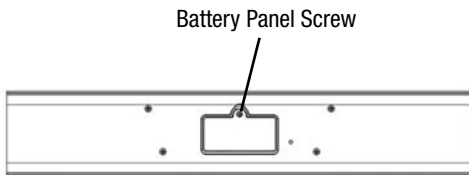
**IMPORTANT:** It is the responsibility of the user to verify the calibration of the instrument before each use.

### Battery Installation

1. Turn the digital level off.
2. Open the battery panel by removing the battery panel screw.
3. Remove the old batteries and put in new ones.
4. Turn on the unit to see if all functions are correct.

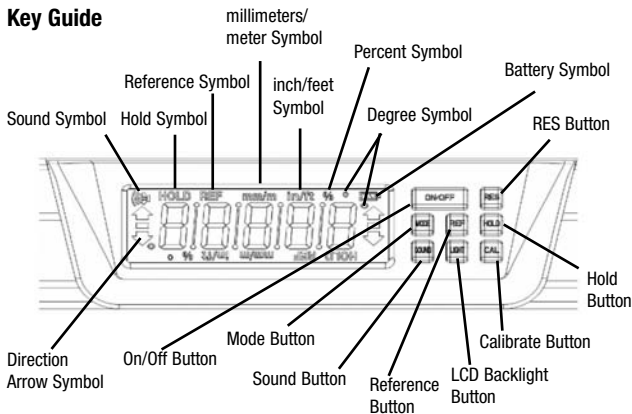
#### Note:

1. Be careful to follow the polarity symbol when replacing the batteries.
2. Take out the batteries if the digital level is not going to be used for a long time.



## 5. Using the Product

### Key Guide



### ON/OFF Button

Push this button once to turn on the digital level. Push this button again to turn the digital level off.

### RES Button

Push this button once to switch the resolution of the digital level from  $0.05^\circ$  to  $0.1^\circ$ .

### Mode Button

Push this button once to switch from one unit of measure to another. This controls which unit of measure your digital level will measure in. Your level has the capability to measure in degrees, percentage of



slope, inches/feet in fractions, inches/feet in decimal and millimeters/meters. A symbol at the top of the LCD will show which unit of measure you are currently in.

Push and hold this button in for 3 seconds and then release to enter the automatic shut off mode (5 minutes or 2 hours). When the button is held in for 3 seconds and released the LCD will show a “5” blinking 3 times and then return to the regular display, the automatic shut off is now set to 5 minutes. When the button is held in for another 3 seconds and released the LCD will show a “2H” blinking 3 times and then return to the regular display, the battery symbol will be displayed as a reminder that the digital level is now set for 2 hours. The default setting is for automatic shut off in 5 minutes. NOTE: When the battery is low (less than 5%) the digital level will default to 5 minute automatic shut off, the battery symbol will begin to flash and there will be no response to pushing this button in for 3 seconds.

### **Reference Button**

Push this button once to enter Reference Mode. The reference function allows for setting any angle or slope to “0.0”. This is very useful for measuring the same slope continuously during a project or finding the difference between two slopes. To set the reference function, position the level at the desired angle you wish to measure. Press and release the reference button. REF will appear on the screen while in the reference mode and the numbers will go to 0.0. Set the level on the second surface to measure the difference between the first and second surface. To exit this reference mode, press the reference button again.





### **Hold Button**

Push this button once to enter hold mode. Pressing this button once will lock the current angle reading displayed on the LCD. The word HOLD will appear at the top of the display to remind you that you are in the HOLD function. Press this button once again to exit the hold mode.

### **Sound Button**

Push this button once to enter the sound function mode. The sound symbol will appear on the LCD and there will be 4 different types of sound.

1. Between  $10^{\circ}$  -  $5^{\circ}$  or  $80^{\circ}$  -  $85^{\circ}$  there is a slow beep
2. Between  $4.9^{\circ}$  -  $1^{\circ}$  or  $85.1^{\circ}$  -  $89^{\circ}$  there is a faster beep
3. Between  $0.9^{\circ}$  -  $0.1^{\circ}$  or  $89.1^{\circ}$  -  $89.9^{\circ}$  there is a rapid beep
4.  $0^{\circ}$  and  $90^{\circ}$  there is a continuous sound

Press this button again to exit the sound mode.

The sound will turn off after 20 seconds of non-movement of the digital level. The sound will return when the digital level is moved.

### **Backlight Button**

Push this button once to turn on the backlight function. The LCD backlight will stay on for approximately 30 seconds with no movement of the level. Any push of a button or movement of the level will turn the backlight back on. To exit the backlight function, push this button again.

### **Calibrate Button**

Push this button to enter calibration mode. See Calibration section for more information on how to calibrate this digital level.





### Auto Shut-Off

The digital level will automatically shut-off in 5 minutes if no key is pressed.

**NOTE:** This can be changed to a 2 hour automatic shut-off, please see MODE function.

### “Erro” Reading

An error reading on the LCD indicates the level is tipped too far forward or backward to display an accurate reading.

### Inclination Indication

The left and right arrows are displayed to indicate the inclination direction of the digital level.



When the digital level is at the position of 0 degree, the horizontal reference line will show as follows:







## 6. Self-Calibration

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

### To Calibrate this unit:

#### Quick Level Calibration

1. Turn the digital level on.
2. Hold the digital level against a wall making sure the level bubble is centered in the vial.
3. While keeping the digital level in the level position push and hold the CAL button in for 3 seconds.
4. "CAL" will flash on the LCD indicating the digital level is in the calibration process.
5. If the digital level is not kept stable or if the digital level is tipped to far forward or backward, "ERRO" will appear on the LCD. Push the Calibration Button one time to exit calibration mode and repeat the procedure.
6. If the calibration procedure is successful, the LCD will display "rdy". The calibration procedure is completed and the digital level will exit the calibration procedure automatically.

#### Quick Plumb Calibration

1. Turn the digital level on.
2. Hold the digital level against a wall making sure the plumb bubble is centered in the vial.
3. While keeping the digital level in the plumb position push and hold the CAL button in for 3 seconds.





4. “CAL” will flash on the LCD indicating the digital level is in the calibration process.
5. If the digital level is not kept stable or if the digital level is tipped to far forward or backward, “ERRO” will appear on the LCD. Push the Calibration Button one time to exit calibration mode and repeat the procedure.
6. If the calibration procedure is successful, the LCD will display “rdy”. The calibration procedure is completed and the digital level will exit the calibration procedure automatically.

### Calibration

1. Select a flat horizontal platform as a reference surface, like a table surface.
2. With the digital level turned on, push the MODE button and CAL button at the same time for 3 seconds the release.
3. The LCD will show “CAL1” indicating the digital level has entered the calibration process.
4. Push the CAL button one time and the LCD will show a flashing “CAL1”.
5. The LCD will then show a solid “CAL2”.
6. Rotate the level 180° putting it in the same position as it was before.
7. Push the CAL button one time. The LCD will display a flashing “CAL2”.
8. When the digital level is calibrated it will exit calibration mode automatically.





## 7. Technical Specifications

Display Range	4 x 90°
Resolution	0.05° or 0.1°, 0.09% or 0.2%, 1/8", 0.125", 0.9mm/m or 2mm/m
Accuracy	± 0.05° for 0° and 90° ± 0.1° for other angles
Power Supply	2 "AAA" alkaline batteries (not included)
Battery Life	Approx. battery life 100 hours continuous use
Working Temperature	32°F to 122°F (-10°C to +50°C)
Dimensions	24" x 1" x 2.4" (610x25x61mm) (1880-2400) 48" x 1" x 2.4" (1220x25x61mm) (1880-4800)
Weight	1.19 lbs (0.54kg) (1880-2400) 2.30 lbs (1.04kg) (1880-4800)
IP Class	65

## 8. Care and Handling

- This 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 unit dry and clean. Remove any moisture or dirt with a soft, dry cloth.
- Do not use harsh chemicals, strong detergents or cleaning solvents to clean the unit.





## 9. Product Warranty

Johnson Level & Tool offers a limited lifetime 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 us online at [www.johnsonlevel.com](http://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.

