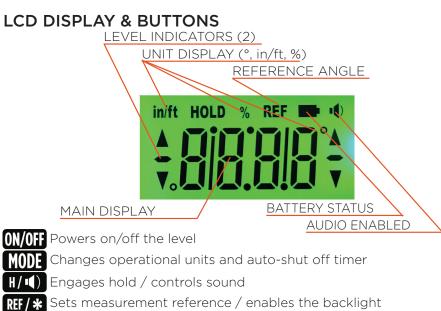
# **JOHNSON** 1457-1000 Digital Torpedo Level Operator's Manual

Thank you for purchasing this Johnson digital torpedo level. This digital level will help you locate precise angles for drainage piping, HVAC, ramps, railings and more.



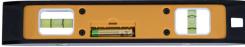
#### This digital torpedo level features:

- Large backlit LCD display for easy viewing
- Adjustable units: degrees, inches per foot and percent
- Plumb and level vials with SurroundView®
- Strong rare-earth magnets
- Audio alerts for plumb and level
- Reference setting (temporary zero-point adjustment)
- Digit Inversion LCD display flips while working with the level in the inverted position



## INSTALLING THE BATTERY

- 1. Remove the battery cover on the rear of the unit. Press in the top edge of the cover with your fingernail, and lift to remove the cover.
- 2. Insert a fresh AAA battery according to the polarity indicated.
- 3. Replace the cover. Insert the bottom edge first, then snap the top edge into place.



#### **GETTING STARTED**

- 1. Insert a fresh "AAA" battery. See "INSTALLING THE BATTERY".
- 2. For best results, calibrate your level prior to each use. See the "CALIBRATION PROCEDURE" section for details.
- 3. Power on the digital level by pressing **ON/OFF**
- 4. Enable/disable sound by pressing  $\mathbb{H}/\mathbb{I}$  for three seconds.
- 5. Set your operating units (°, in/ft, or % grade) by pressing MODE.
- 6. Press and hold **MODE** for three seconds to toggle the automatic shut-off timer. A blinking "5" indicates 5-minute auto shut-off, while a blinking "2H" indicates 2-hour auto shut-off.

**NOTE:** If the battery is low, the level will force a 5-minute shutdown timer to help conserve battery life.

- Enable the backlight by holding REF/\* for three seconds. The backlight will automatically turn off after 30 seconds of inactivity. Press any button or move the level to re-enable the backlight.
- 8. Set your reference by pressing **REF/\***. See "SETTING A ZERO REFERENCE". To exit reference mode, press **ON/OFF**.
- 9. To hold a measurement, press H/1). To return to normal operation, press H/1) again.
- 10. During operation, the level indicators will show which direction the digital level must be tilted to achieve a reading of zero.
- 11. The audio alert will increase in speed as you approach closer to zero, and turn into a solid tone when you have achieved zero.
- 12. To power off the level, hold **ON/OFF** for three seconds.



# **DHN501** 1457-1000 Digital Torpedo Level Operator's Manual

### SETTING A ZERO REFERENCE

Reference mode temporarily sets the digital level's current reading to zero without changing the calibration of the digital level.

Reference mode is ideal to speed up your work in a variety of scenarios:

1. When taking repeat measurements, such as checking multiple ramps for ADA compliance, setting a consistent drainage slope, or adjusting concrete formwork at multiple points, reference mode can be used to make the desired target "zero". Then, a reading of "zero" in reference mode means you have achieved your desired slope.

2. When trying to find the difference between two slopes, reference mode can eliminate the mathematics and simplify the task. Set the level on the first slope, enable reference mode, and read your second slope. The displayed value is the difference between the angles.

3. When trying to find a relative angle on an unlevel surface, such as setting a blade angle on a saw that is setting on non-level ground, reference mode can compensate for the angle of the ground. In this example, you can set blade angle directly without the need to compensate for the non-level ground.

To enter reference mode, press **REF/\***. The digital level will set the current measurement to "0.0" or "0 in/ft", and all measured angles will be relative to this setpoint.

To set a new reference angle, press **REF/\*** again.

To exit reference mode and return to normal operation, press ()N/OFF

## CALIBRATION PROCEDURE

Calibration is quick and easy, and is the best way to ensure your level is reading consistently every time you use it. We recommend calibrating at the start of each critical job, or when the level is subjected to drastic changes in temperature (such as when going from a cold car to a warm jobsite).

To calibrate your digital level:

- 1. Place the level on a fairly level surface, such as a countertop, floor or table, with the LCD facing you and magnets down. The surface need not be perfectly level the digital level calibration procedure will compensate for small errors in your work surface.
- 2. With the level powered ON, press **ON/OFF** and **MODE** at the same time, then release both.
- 3. The digital level will show "-1-".
- 4. Press **ON/OFF** to set your first calibration point. "-1-" will flash for about three seconds, then the display will show "-2-".
- 5. Rotate the level 180° so the LCD faces away from you and the magnets still face down.
- 6. Press **ON/OFF** to set your second calibration point. "-2-" will flash for approximately three seconds, and the level will then return to normal operating mode.
- 7. Your level is now calibrated.



**CALIBRATION POSITION 1** 

**CALIBRATION POSITION 2** 

### TROUBLESHOOTING: "Erro" MESSAGE

If this digital level is tilted past approximately 30° forward or backward (in the non-operational direction), "Erro" will be displayed on the screen. To return to normal operation, bring the level back to within 30° from its standard operating position.



