

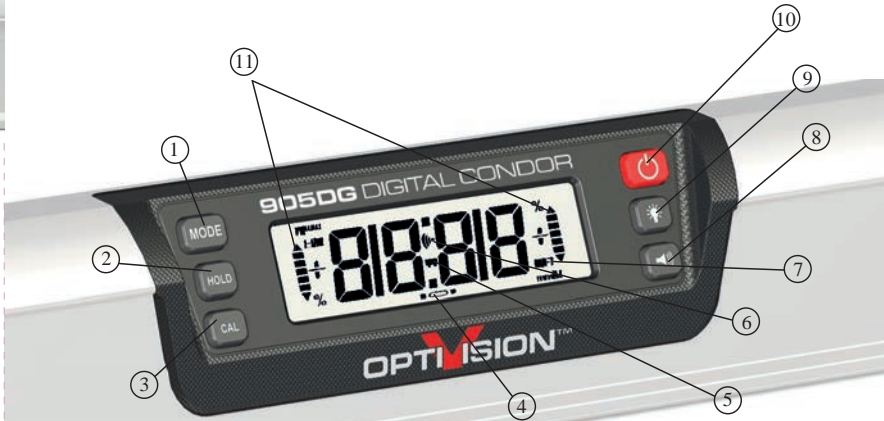
# User Manual



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## Overview:

1. MODE button
2. HOLD button
3. CAL button
4. Bubble icon
5. Low battery indicator
6. Buzzer icon
7. Measurement unit icon
8. Buzzer button
9. Backlight button
10. Power button
11. Direction arrows



## Low battery indicator

- Nominal power supply is 3V – two standard AA batteries.
- When the voltage of the batteries is less than 2.2V the Low battery indicator will appear on the LCD display to remind you to change the batteries.

## Battery change

- The battery compartment lid is on the back of the device.
- Unscrew the bolt and open the lid.
- Replace the batteries according to polarity marks inside the compartment.
- Close the lid and screw the bolt.



## Buzzer ON / OFF

- By default the buzzer is OFF.
- Press the buzzer button to activate / deactivate the audible signal. The Buzzer icon will appear on the screen while the signal is ON.
- The audible signal is continuous at 0°, 45° & 90°
- The intermittent signal appears at ±0.4° near 0°, 45° & 90°. The frequency of the beeping increases as approaching the 0°, 45° & 90°.
- The tone of the beeping is different when reaching the 0°, 45° or 90° angle from different side.

## Automatic Shutdown

- The level will automatically shut-off after being idle for 10 min.
- To change the time to automatic shutdown, press and hold Power button and MODE button simultaneously until "t10" will appear on screen representing the automatic shutdown time of 10 min.
- By pushing the MODE button chose the automatic shutdown time from the options: t15 → t30 → t60 → t120 → t10.
- After choosing the required shutdown time, press Power button to confirm and return to the measurement mode.

## Vertical axis out-of-tolerance indication

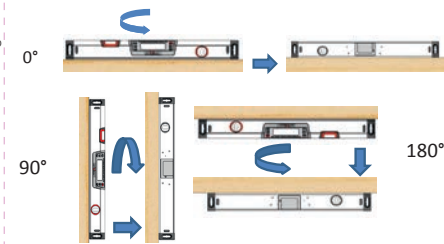
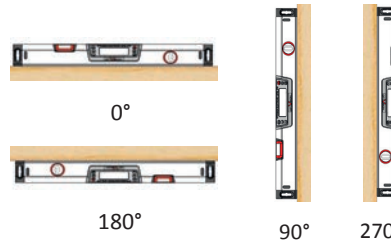
- When measuring near 0° and 90°, if level's vertical axis is tilted by more than 30° forward or backward, "OUT" reading will show on screen - in this position the measurement deviation is too big, straighten the level to return to measurement mode. (see illustration below)

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## Calibration

- Turn the level on and place it on an approximately leveled, stable surface (either horizontal or vertical).
- Press and hold the CAL button to enter the calibration mode, blinking "CAL1" will appear on the display.
- Rotate the level 180° parallel to the surface and place it on the same site, wait until the reading is stable.
- Press and hold the CAL button, blinking "CAL2" will appear on the display for a few seconds and after the beep, the LCD will return to angle measurement reading - the calibration is complete.
- Perform this calibration in 3 positions in the same manner: on horizontal surface (0°), on vertical surface (90°) and in reversed horizontal position (180°).
- Perform this calibration in 4 positions in the same manner: on horizontal surface (0°), on vertical surface (90°), in reversed horizontal position (180°) and in reverse vertical position (270°).



## Power ON / OFF

- Press the Power button to turn on level.
- Press and hold to turn off.
- The level will turn off automatically after 10 min when idle.

## HOLD function

- Press the HOLD button to freeze display readings. Direction arrows will flash.
- Press again to return to active display.

## Measurement units

- Press the MODE button to switch between the measurement units by the cycle: (0.05° resolution) → (0.1° resolution) → (1° resolution), →% → mm/m → in/ft (decimal) → in/ft (fraction).
- Respective unit icon will show on LCD. The buzzer will sound at the switching.

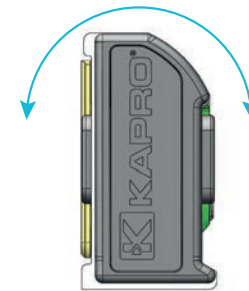
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## False Zero mode

- Hold the level steady at the desired angle
- Press CAL button to set the chosen angle as the reference, the display will show a zero reading and the bubble icon will disappear – now the level is in False Zero/reference mode and the measurements made relative to the reference angle.
- Press CAL button to exit the False Zero mode – the bubble icon will appear on the display, the level is now in absolute mode.

## Direction arrows

- There are two direction arrows on each side of the LCD.
- At angles of less than ±45°, the arrows indicate which direction to rotate the device to reach the level position (0°).
- At angles of more than ±45°, the arrows indicate which direction to rotate the device to reach the plumb position (90°).



## Specification

- 360° (4 x 90°) digital angle measurement
- Digital accuracy: ±0.05° at 0° & 90°, ±0.2° at other angles
- Digital resolution 0.05°
- Vial accuracy: ±0.5 mm/m (0.0005"/")
- Operating Temperature: -5°C (23°F) to 50°C (122°F)
- Transportation / storage temperature: -20°C (-4°F) to 70°C (158°F)
- Operating Humidity: ≤90%
- Electromagnetic compatibility (EMC): Class II
- Dust / Moisture Protection: IP65
- Power supply: DC 3V (2 x 1.5V AA included)
- Battery life: up to 150 hours with backlight and sound off

## Warranty

This product is covered by a two-year limited warranty against defects in materials and workmanship. The warranty does not cover products that are used improperly, altered or repaired without Kapro Tool's approval. In the event of a problem with the Digital level, please return the product to the place of purchase with proof of purchase.

E-mail: [quality@kapro.com](mailto:quality@kapro.com)  
Website: [www.kapro.com](http://www.kapro.com)

Model no. 905DG

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Thank you for purchasing the 905DG Professional Digital Level. You are now the owner of one of our innovative state-of-the-art tools. This tool incorporates new Micro-Electrical mechanical Systems (MEMS) technology to achieve accurate results and reduce work time in horizontal/vertical leveling and angle measurement.

## Applications:

- Drywall
- Framing and roof layout
- Stairs and banister installation
- Drainage slopes and pipe layout

## Features:

- 905DG Professional digital box level with Optivision® vials.
- MEMS (Micro-Electrical Mechanical System) digital module.
- Backlit LCD screen.
- Dust and moisture protection per IP65.
- Strong magnets.
- 360° readout display – automatically flips in invert position.
- "HOLD" function.
- Choice of measurement units – degree, percent, pitch mm/m, in/ft., in/ft fractions.
- Recalibration function.
- Reference angle ("False Zero") for transferring angle measurements.
- Mutable buzzer at 0°, 45° & 90°, gradual alarm for auditory assisted measurement.
- Digital resolution 0.05°.
- Digital accuracy ±0.05° at 0° & 90°, ±0.2° at other angles.
- Automatic shut off.