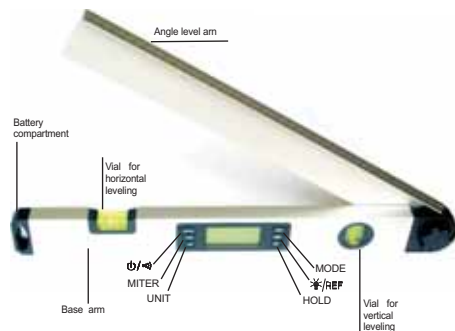


# DIGITAL LEVEL AND DIGITAL ANGLE FINDER (DL150) USER'S MANUAL



## Instruction Manual

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

## Features and Functions

- Level measuring range: 0 to 360°
- Angle measuring range: 0 to 230°
- Unit of level (°degrees / % / mm/m / IN/FT)
- Automatic shut-off
- Backlight LCD
- Buzz selectable
- Hold-function to freeze the measurement

## Safety Instructions

Please read and understand all of the following instructions, prior to using this tool.

Warning: Avoid sharp edges. Be careful in handling, may cause laceration.

Caution: This tool is a precision measuring instrument. Dropping or banging the device may result in impaired function or future inaccurate readings.

## Battery Installation

To open the battery cover, unscrew the end cap then pull out.

Insert the 9V battery paying attention to the polarity, put back the end cap and screws.

Power on the instrument.



Note:

Used (discharged) batteries are hazardous waste and should be disposed of properly. Take out the batteries if the instrument is not going to be used for a long time.

## Operation instructions

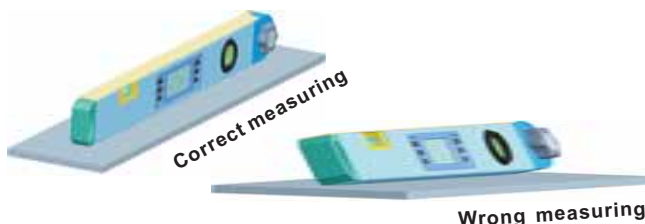
### 1. ON/OFF

Press the  $\phi/\bullet$  button to turn the LCD equipment on. Long press it to turn off the equipment.

After about 3 minutes not using the equipment, it will switch off automatically.

### 2. Level measure

Turn on the equipment and put it to the level position for measuring.



### 3. Angle measure

Position the angle level arm and the base arm plane against the edges to be measured. The displayed reading corresponds with the internal angle between the angle level arm and the base arm.

### 4. Select Level/Angle measure mode

When power on, the tool is working on level and angle measure mode, the up is angle display and the down is level status display. By pressing the MODE button you can convert display to different mode. Push to change the mode from level and angle measure to only level measure, to only angle measure

### 5. Unit of level measurement selection (°degrees / % / mm/m / IN/FT)

Press the UNIT button you can convert level to different units. Push to change the display units from °degrees to %, to mm/m, to in/ft. The  $\phi/\bullet$  icon indicates the current angle's position, either up or down away from the horizontal or vertical position.

### 6. Relative level angle measurement

If the equipment isn't in level, it will display a value on the screen. Press the  $\star/REF$  button for a short time to set current level angle to be zero, enter relative level angle measurement mode. Press the button again to cancel the function.

### 7. Buzz function

Press the  $\phi/\bullet$  button for a short time, the screen will show the  $\bullet/\phi$  icon, beeper sounds at horizontal position or vertical position. Press the button again the function will be cancelled.

### 8. Miter function

The MITER key switches the measured angle and converts it to the miter cut angle. This measurement is the angle that needs to be set in the miter saw to create the correct cut angle.

### 9. Backlight function

Long press the  $\star/REF$  button, backlight of the screen will be turned on and the light to be turned off if long press the button again.

### 10. Hold function

In positions where the display might not be readable, the actual measured value can.

then be saved by pressing the HOLD button, then a saved measured value is displayed and the  $\square$  icon will show on the screen. By pressing the HOLD button another time, the measuring mode will get reactivated.

### 11. Low battery indicator

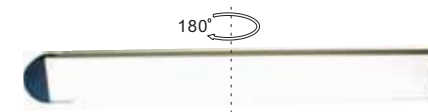
Recommend to replace a new 6F22 battery, when the low Battery indicator  $\square$  shows on the screen.

### 12. Level 0° calibration

a. Turn off the equipment. Put the equipment on a flat and smooth surface. (See the following figure).



- b. Press the  $\phi/\bullet$  and the MODE button at the same time, the calibration mode is activated.
- c. Keep it unmoved for seconds and press the MODE button, then "CAL1" will show on LCD.
- d. Rotate the equipment 180° in the same location (see the following figure), then press the MODE button, the "CAL2" show. After the "CAL2" disappear to tell calibrating completed, the LCD will show the current level angle in high-accuracy-display.



NOTE:

- The calibration must be performed on a flat and smooth surface with the gradient no more than 5°. If it exceeds 5°, "Err" will show on the LCD to tell the calibration failed, you must turn on the equipment again to complete calibration.
- In the calibration, the level also can not be beveled or moved.
- After calibration, the equipment automatically renovates original date with consumer's data, so please carefully use this function.

## Technical date:

Level measuring range	0 to 360°
Level measuring resolution	±0.01° at horizontal and vertical position ±0.05° at the rest
Level measuring accuracy	±0.1° at horizontal and vertical position ±0.2° at the rest
Angle measuring range	0° - 230°
Angle measuring accuracy	±0.5° (9mm/m)
Power Supply	1 x 9V battery
Working temperature	0°C - 40°C
Storage temperature	-10°C - 50°C
Leg to leg length	450mm
Automatic Shut-off	Approx 3 min