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INSTRUCTION MANUAL

DEWALT®

DW0822
Self-Leveling Cross Line/Plumb Spot Combination Laser

DEWALT Industrial Tool Co., D-65510 Idstein, Germany
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Safety

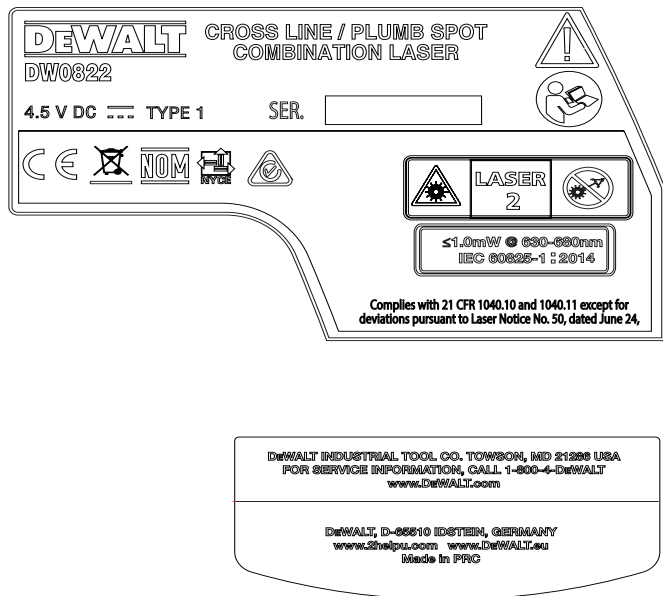


WARNING: To reduce the risk of injury, read the safety manual provided with your product or access it online at www.DeWALT.eu.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

WARNING LABELS

For your convenience and safety, the following label is on your laser.



CAUTION: LASER RADIATION - DO NOT STARE INTO BEAM. CLASS 2 LASER PRODUCT.

Laser Information

The DW0822 laser level is a class 2 laser product and complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser notice No. 50, dated June 24, 2007.

PRODUCT OVERVIEW

The DW0822 laser level is a self-leveling laser tool that can be used for horizontal (level) and vertical (plumb) alignment and square alignment. This tool comes fully assembled and has been designed with features that allow for quick and easy set-up. Please read and understand all instructions within this instruction manual in addition the Safety Manual prior to use.

Specifications

SPECIFICATIONS	
Light Source	Semiconductor laser diode
Laser Wavelength	630–680 nm visible
Laser Power	<1.0 mW (each beam) CLASS 2 LASER PRODUCT
Working Range	±30' (15 m) / (30 m with detector)
Accuracy* (Up)	± 1/8" @ 50' (±3 mm @ 15 m)
Accuracy* (Down)	± 1/8" @ 50' (±3 mm @ 15 m)
Accuracy* (Horizontal)	± 1/8" @ 50' (±3 mm @ 15 m)
Accuracy* (Vertical)	± 1/8" @ 50' (±3 mm @ 15 m)
Indicators	Flashing Indicator: battery low Flashing Laser: tilt range exceeded
Power Source	3 AA size batteries (4.5V DC)
Operating Temperature	20 °F to 120 °F (-10 °C to 50 °C)
Storage Temperature	-5 °F to 140 °F (-20 °C to 60 °C)
Environmental	IP54

Keypad, Modes and LED.

Power switch.

The Power ON/OFF switch is located on the front of the tool as shown in Figure 3. When the switch (C) is in the OFF/LOCKED position, the unit will remain off and the pendulum will be locked. When the on/off switch (A) is in the ON/UNLOCKED position, the unit will be powered ON and the pendulum will be released from the locked position and self level.

Keypad .

The keypad located on the side of the tool (FIG. 2 & 3) provides activation keys for selection of laser dots and / or line function.

Low Battery Indicator.

The DW0822 is equipped with a low battery indicator on the keypad as shown in Figure 2. The indicator light is located on the keypad. When the light flashes, the batteries are low and need to be replaced. The laser may continue to operate for a short time while the batteries continue to drain. After fresh batteries are installed and the laser is turned on again, the indicator light will remain green.

Out of level Range Indicator

The DW0822 is equipped with an Out of level indicator on the keypad as shown in Figure 2. When the tilt range (> 4° tilt) has been exceeded the LED will turn on and the laser beam will flash. The flashing beam indicates the tilt range has been exceeded and the tool IS NOT LEVEL (OR PLUMB) AND SHOULD NOT BE USED FOR DETERMINING OR MARKING LEVEL (OR PLUMB). Try repositioning the laser on a more level surface.

Batteries & Power

Your laser tool requires 3 x AA batteries. (Fig. 1-B)

Use only new, high-quality batteries for best results.

- Ensure batteries are in good working condition. If the low battery indicator light is flashing, the batteries need replacement.
- To extend battery life, turn laser off when not working with or marking the beam.

Set Up

LEVELING THE LASER

This tool is self-leveling. It is calibrated at the factory to find plumb as long as it is positioned on a flat surface within 4° of level. As long as the tool is properly calibrated, no manual adjustments must be made.

To ensure the accuracy of your work, check to make sure your laser is calibrated often. See **Field Calibration Check**.

- Before attempting to use the laser, make sure it is positioned securely, on a smooth, flat surface.
- Always mark the center of the dot or pattern created by the laser.
- Extreme temperature changes may cause movement of internal parts that can affect accuracy. Check your accuracy often while working. See **Field Calibration Check**.
- If the laser has been dropped, check to make sure your laser is calibrated. See **Field Calibration Check**.

OPERATION

Turning the Laser On and Off (Fig. 3)

- With the laser off, place it on a stable, flat surface. Turn the laser on by sliding the on/off switch (C) to the ON/UNLOCKED position.
- Activate or deactivate the desired function using the keypad located on the side of the tool. It can project four beams in total: a horizontal line (D), a vertical line (E) as well as one dot beam up (F) and one dot beam down (G). It will project a horizontal line when the horizontal "LINE" key is pressed and it will project a vertical line when the vertical "LINE" key is pressed. The up-dot beam and down-dot beam will be projected when the "DOT" key is pressed.
- To turn the laser off, slide the on/off switch (C) to the locked position.

The DW0822 is equipped with a locking pendulum mechanism. This feature is only activated when the laser is switched off using the OFF/Locked switch, (C)

Using the Laser

The beams are level or plumb as long as the calibration has been checked (see **Field Calibration Check**) and the laser beam is not flashing (see **Out of level Range Indicator**).

The tool can be used to transfer points using any combination of the five beams and/or horizontal line.

INTEGRATED MAGNETIC PIVOTING BRACKET (FIG. 1 & 3)

The DW0822 has a magnetic pivoting bracket (J) permanently attached to the unit. This bracket allows the unit to be mounted to any upright surface made of steel or iron using the magnets located on the back of the pivoting bracket. Common examples of suitable surfaces include steel framing studs, steel door frames and structural steel beams. Position the laser on a stable surface.

CAUTION: Do not stand underneath the laser when it is mounted with the magnetic pivoting bracket. Serious personal injury or damage to the laser may result if the laser falls.

The pivoting bracket also provides floor clearance of approximately 1-3/4" (44.5 mm) which aids in the installation of steel framing track.

USING THE LASER WITH ACCESSORIES

The laser is equipped with both 1/4" x 20 and 5/8" x 11 female threads on the bottom of the unit. These threads may be used to accommodate current or future DEWALT accessories. Only use DEWALT accessories specified for use with this product. Follow the directions included with the accessory.

⚠ WARNING: Since accessories, other than those offered by DEWALT, have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only DEWALT recommended accessories should be used with this product.

Recommended accessories for use with your tool are available at extra cost from your local dealer or authorized service center. If you need assistance in locating any accessory, please contact DEWALT Industrial Tool Co., D-65510 Idstein, Germany, call 1-800-4-DEWALT (1-800-433-9258) or visit our website: www.DeWALT.eu.

Field Calibration Check

CHECKING ACCURACY – HORIZONTAL BEAM, SCAN DIRECTION (FIG. 6)

Checking the horizontal scan calibration of the laser requires two walls 30' (9 m) apart. It is important to conduct a calibration check using a distance no shorter than the distance of the applications for which the tool will be used.

1. Attach the laser to a wall using its pivot bracket. Make sure the laser is facing straight ahead.
2. Turn on the laser's horizontal beam and pivot the laser approximately 45° so that the right-most end of the laser line is striking the opposing wall at a distance of at least 30' (9 m). Mark the center of the beam (a).
3. Pivot the laser approximately 90° to bring the left-most end of the laser line around to the mark made in Step 2. Mark the center of the beam (b).
4. Measure the vertical distance between the marks.
5. If the measurement is greater than the values shown below, the laser must be serviced at an authorized service center.

Distance Between Walls	Measurement Between Marks
15' (4.5 m)	1/16" (1.5 mm)
30' (9 m)	5/32" (4 mm)
50' (15 m)	1/4" (6 mm)

CHECKING ACCURACY – HORIZONTAL BEAM, PITCH DIRECTION (FIG. 7)

Checking the horizontal pitch calibration of the laser requires a single wall at least 30' (9 m) long. It is important to conduct a calibration check using a distance no shorter than the distance of the applications for which the tool will be used.

1. Attach the laser to one end of a wall using its pivot bracket.
2. Turn on the laser's horizontal beam and pivot the laser toward the opposite end of the wall and approximately parallel to the adjacent wall.
3. Mark the center of the beam at two locations (c, d) at least 30' (9 m) apart.
4. Reposition the laser to the opposite end of the wall.
5. Turn on the laser's horizontal beam and pivot the laser back toward the first end of the wall and approximately parallel to the adjacent wall.
6. Adjust the height of the laser so that the center of the beam is aligned with the nearest mark (d).
7. Mark the center of the beam (e) directly above or below the farthest mark (c).
8. Measure the distance between these two marks (c, e).
9. If the measurement is greater than the values shown below, the laser must be serviced at an authorized service center.

Distance Between Walls	Measurement Between Marks
15' (4.5 m)	1/16" (1.5 mm)
30' (9 m)	5/32" (4 mm)
50' (15 m)	1/4" (6 mm)

CHECKING ACCURACY – VERTICAL BEAM (FIG. 8)

Checking the vertical (plumb) calibration of the laser can be most accurately done when there is a substantial amount of vertical height available, ideally 30' (9 m), with one person on the floor positioning the laser and another person near a ceiling to mark the position of the beam. It is important to conduct a calibration check using a distance no shorter than the distance of the applications for which the tool will be used.

1. Start by marking a 5' (1.5 m) line on the floor.
2. Turn on the laser's vertical beam and position the unit at one end of the line, facing the line.
3. Adjust the unit so its beam is aligned and centered on the line on the floor.
4. Mark the position of the laser beam on the ceiling (f). Mark the center of the laser beam directly over the midpoint of the line on the floor.
5. Reposition the laser at the other end of the line on the floor. Adjust the unit once again so its beam is aligned and centered on the line on the floor.
6. Mark the position of the laser beam on the ceiling (g), directly beside the first mark (f).
7. Measure the distance between these two marks.
8. If the measurement is greater than the values shown below, the laser must be serviced at an authorized service center.

Distance Between Walls	Measurement Between Marks
15' (4.5 m)	1/16" (1.5 mm)
30' (9 m)	5/32" (4 mm)
50' (15 m)	1/4" (6 mm)

CHECKING ACCURACY – PLUMB (FIG. 5-6)

Checking the plumb calibration of the laser can be most accurately done when there is a substantial amount of vertical height available, ideally 25' (7.5 m), with one person on the floor positioning the laser and another person near a ceiling to mark the dot created by the beam on the ceiling (Fig. 5). It is important to conduct a calibration check using a distance no shorter than the distance of the applications for which the tool will be used.

1. Start by marking a point on the floor.
2. Place the laser so that the down dot beam is centered on the point marked on the floor.
3. Allow time for the laser to settle to plumb and mark the center of the dot created by the up beam.
4. Turn the laser 180° as shown (Fig. 6), making sure that the down dot beam is still centered on the point previously marked on the floor.
5. Allow time for the laser to settle to plumb and mark the center of the dot created by the up beam.

If the measurement between the two marks is greater than shown below, the laser is no longer in calibration.

Height	Measurement Between Marks
15' (4.5 m)	1/16" (1.5 mm)
30' (9 m)	5/32" (4 mm)
50' (15 m)	1/4" (6 mm)

Troubleshooting

THE LASER DOES NOT TURN ON

- Make sure batteries are installed according to (+), (-) markings on battery door.
- Make sure the batteries are in proper working condition. If in doubt, try installing new batteries.
- Make sure that the battery contacts are clean and free of rust or corrosion. Be sure to keep the laser level dry and use only new, high-quality batteries to reduce the chance of battery leakage.
- If the laser has been stored in extremely hot temperatures, allow it to cool.

THE LASER BEAMS FLASH (FIG. 4)

The DW0822 laser level has been designed to self-level up to 4° in all directions when positioned as shown in Figure 4. If the laser is tilted so much that internal mechanism cannot plumb itself, it will flash the laser—the tilt range has been exceeded. THE FLASHING BEAMS CREATED BY THE LASER ARE NOT LEVEL OR PLUMB AND SHOULD NOT BE USED FOR DETERMINING OR MARKING LEVEL OR PLUMB. Try repositioning the laser on a more level surface.

THE LASER BEAMS WILL NOT STOP MOVING

The DW0822 is a precision instrument. Therefore, if it is not positioned on a stable (and motionless) surface, the tool will continue to try to find plumb. If the beam will not stop moving, try placing the tool on a more stable surface. Also, try to make sure that the surface is relatively flat, so that the laser is stable.

*Accuracy spec assumes laser is positioned on a surface within 4° of level.

FIG. 1

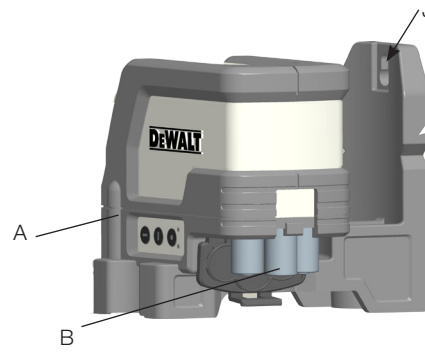


FIG. 2



FIG. 3

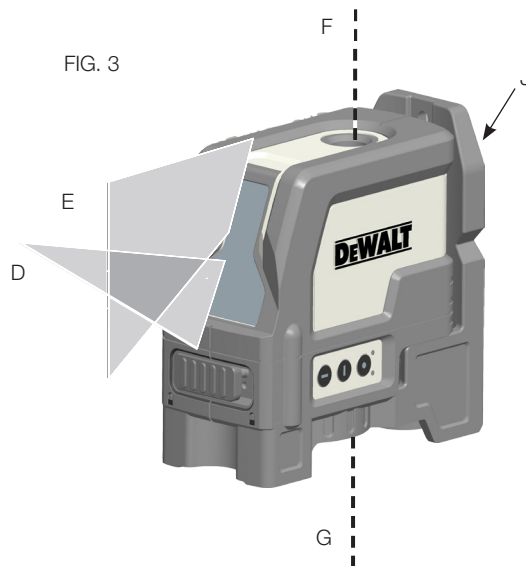


FIG. 4

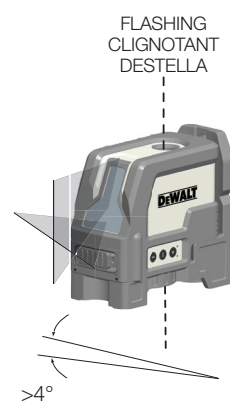


FIG. 5

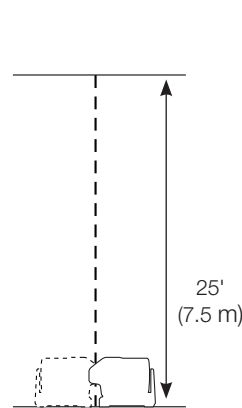


FIG. 6

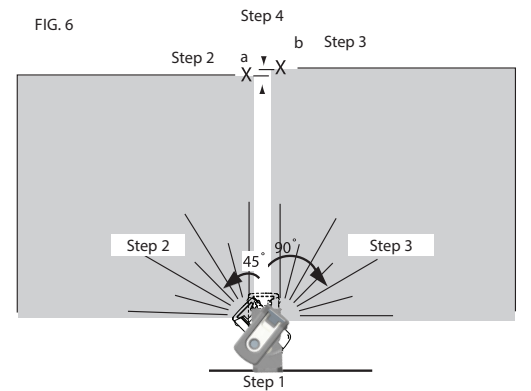


FIG. 7 Step 1,2

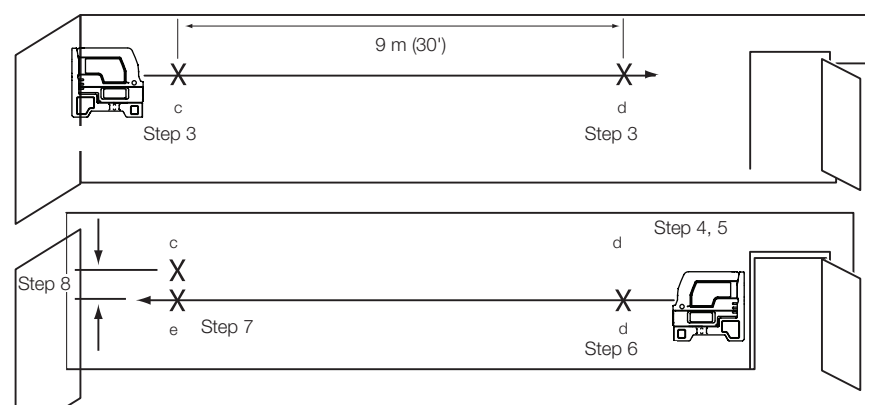


FIG. 8

