GemRed 82305

GemRed 82305 Digital Angle Finder Protractor User Manual

Model: 82305 | Material: Stainless Steel (12 inch / 300mm)

1. Introduction

Thank you for choosing the GemRed 82305 Digital Angle Finder Protractor. This precision tool is designed for accurate measurement of both inside and outside angles, as well as length, making it ideal for woodworking, crown molding, construction, and various DIY projects. This manual provides essential information for the safe and effective use, maintenance, and troubleshooting of your device. Please read it thoroughly before operation.

2. Product Overview

The GemRed 82305 combines a ruler and a digital protractor, offering a versatile solution for angle and length measurements. Its robust stainless steel construction ensures durability and precise readings.

2.1 Key Features

- **Digital Display:** Easy-to-read LCD for clear angle readings.
- **High Accuracy:** Provides measurements with an accuracy of ±0.3 degrees.
- **Locking Function:** Securely holds the angle at any position for easy transfer or recording.
- **Durable Construction:** Made from stainless steel for longevity and consistent performance.
- **Versatile Measurement:** Capable of measuring inside angles, outside angles, and lengths.

2.2 Components

Familiarize yourself with the main parts of your digital angle finder:

Product Diagram



Figure 1: Product Diagram. This image illustrates the main components of the GemRed 82305, including the ON/OFF button, ZERO button, Locking Knob, LCD Display, and the Millimetre and Inch Scale on the rulers.



Figure 2: LCD Display and Materials. This image highlights the clear LCD display for easy reading and the high-quality stainless steel material used for the rulers, ensuring durability and accurate scaling.

3. Setup

3.1 Battery Installation

The GemRed 82305 requires one CR2032 3V Lithium battery (included). Follow these steps to install or replace the battery:

1. Locate the battery tray on the side of the digital display unit.
2. Gently press and pull the battery tray out.
3. Insert the CR2032 battery with the negative pole facing upwards (positive side down).
4. Slide the battery tray back into the unit until it clicks securely into place.

Note: Ensure correct battery polarity for proper operation.



Figure 3: Battery Tray Access. This image demonstrates how to access the battery tray by pressing and pulling it out, and how to correctly insert the CR2032 battery with the negative pole facing upwards.

4. Operating Instructions

4.1 Power On/Off

- To power on the device, press the **ON/OFF** button.
- To power off the device, press and hold the **ON/OFF** button for a few seconds until the display turns off. The device also features an automatic shut-off to conserve battery life.

4.2 Zeroing Function (Relative Measurement)

The ZERO button allows you to set a relative zero point at any angle, which is useful for measuring subsequent angles relative to a specific reference. This is particularly helpful for compound angles or when comparing angles.

- Position the angle finder to your desired reference angle.
- Press the **ZERO** button. The display will show "0.0" or "0.00", indicating that this position is now your new zero

reference.

- Move the angle finder to measure the next angle. The display will show the angle relative to your set zero point.
- To return to absolute measurement, press the**ZERO** button again.

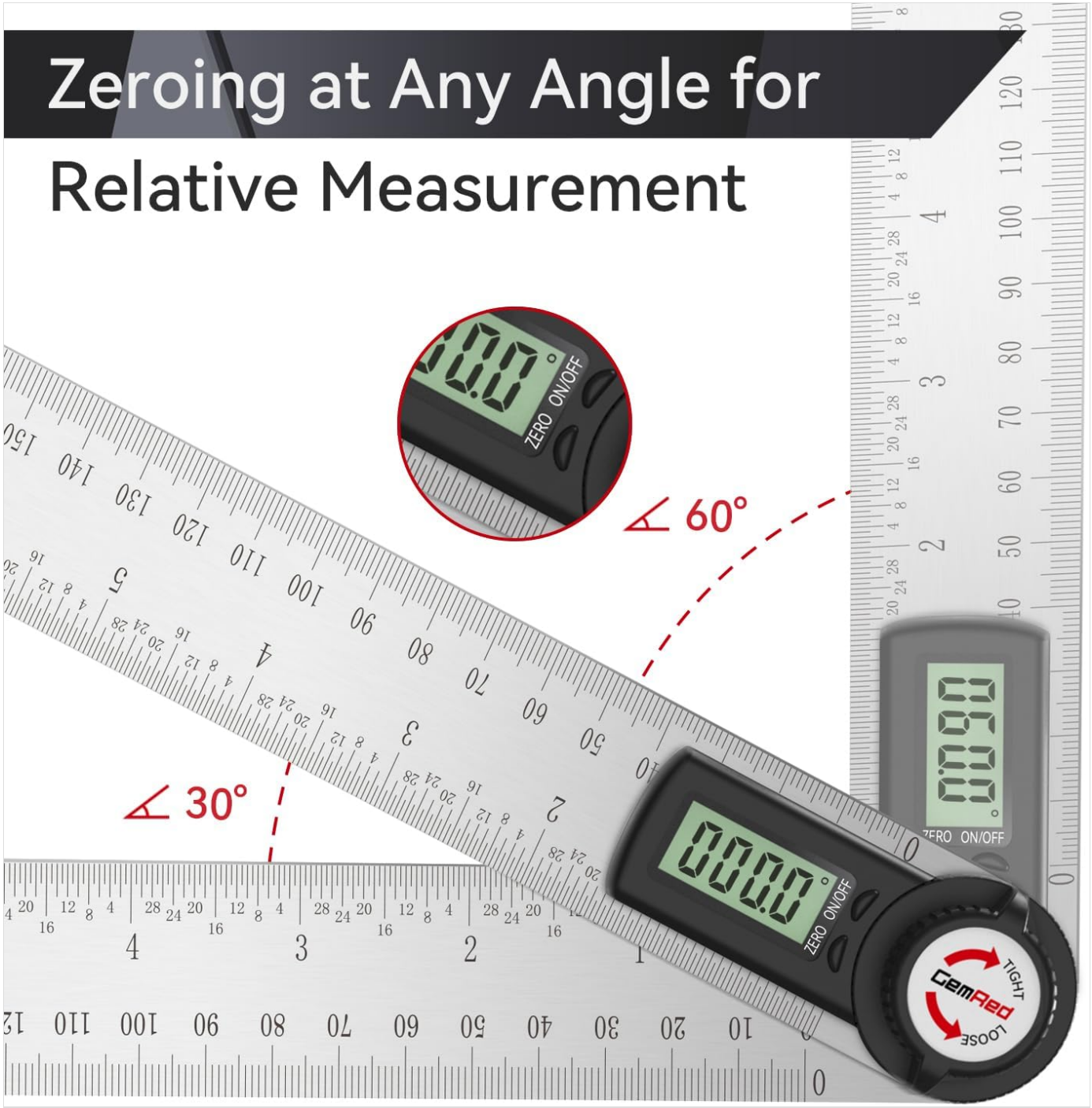


Figure 4: Zeroing at Any Angle. This image demonstrates how to use the ZERO button to set a relative zero point, allowing for measurements relative to a chosen angle, such as measuring a 30-degree angle relative to a 60-degree reference.

4.3 Locking Function

The locking knob allows you to secure the angle finder at a specific angle, preventing accidental movement and ensuring consistent measurements or transfers.

- To lock the angle, turn the locking knob clockwise (towards "TIGHT").
- To unlock the angle, turn the locking knob counter-clockwise (towards "LOOSE").

4.4 Measurement Applications

The GemRed 82305 can perform various measurements:

- **Inside Angle Measurement:** Position the two rulers along the inner edges of the angle you wish to measure. The display will show the precise inside angle.
- **Outside Angle Measurement:** Position the two rulers along the outer edges of the angle. The display will show the precise outside angle.
- **Length Measurement:** Use the integrated ruler scales (millimeter and inch) to measure lengths up to 300mm (12 inches) per blade, or 600mm (23.6 inches) total when fully extended.
- **Line Drawing:** The straight edges of the rulers can be used to draw precise lines at measured angles.



Figure 5: Measurement Applications. This image demonstrates the versatility of the tool for Inside Angle Measurement, Outside Angle Measurement, Length Measurement, and Line Drawing of Angle and Length.

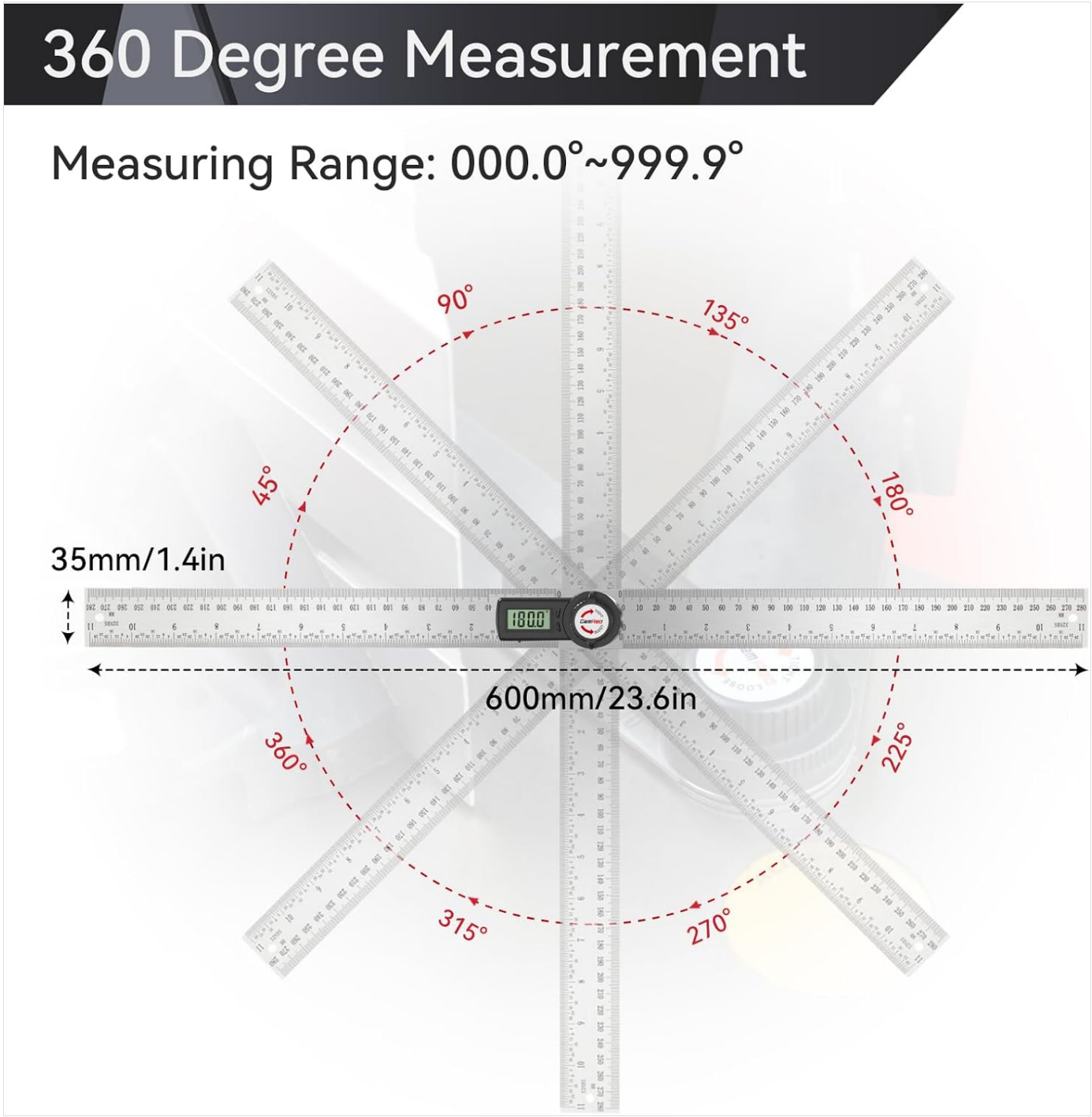


Figure 6: 360 Degree Measurement. This image illustrates the full 360-degree measurement capability of the protractor, showing various angles like 45°, 90°, 135°, 180°, 225°, 270°, and 315°.

5. Maintenance

- **Cleaning:** Wipe the device with a soft, dry cloth. Avoid using abrasive cleaners or solvents that could damage the display or finish.
- **Storage:** Store the angle finder in a dry place, away from direct sunlight and extreme temperatures. Keep the blades closed or locked to protect the measuring surfaces.
- **Battery Replacement:** Replace the CR2032 battery when the display becomes dim or unresponsive. Refer to Section 3.1 for battery installation instructions.
- **Calibration:** While the device is factory calibrated, regular checks against known accurate angles (e.g., a precision square for 90 degrees) are recommended for critical applications.

6. Troubleshooting

Problem	Possible Cause	Solution
Display is blank or dim.	Low or dead battery; incorrect battery installation.	Replace the CR2032 battery, ensuring correct polarity (negative pole upwards).
Inaccurate readings.	Debris on measuring surfaces; device not properly zeroed; physical damage.	Clean the rulers and pivot area. Re-zero the device on a flat, stable surface. If damage is suspected, contact support.
Display does not respond to movement.	Battery issue; internal malfunction.	Check and replace the battery. If the issue persists, contact customer support.
Locking knob is stiff or loose.	Accumulated dust/debris; worn mechanism.	Clean the locking mechanism. Avoid over-tightening.

7. Specifications

Technical specifications for the GemRed 82305 Digital Angle Finder Protractor:

Feature	Detail
Model Number	82305
Material	Stainless Steel
Measuring Range	000.0° to 999.9°
Accuracy	±0.3°
Resolution	0.1°
Folded Length	Approx. 12 inch / 300mm
Total Length (Extended)	Approx. 23.6 inch / 600mm
Power Supply	1 x CR2032 3V Lithium Battery (included)
Working Temperature	32°F to 122°F (0°C to 50°C)
Working Humidity	≤85%
Item Weight	9.9 ounces
Package Dimensions	13.23 x 2.44 x 1.26 inches



Figure 7: Specifications Table. This image provides a visual summary of the key technical specifications for the GemRed 82305 Digital Angle Finder Protractor.

8. Warranty and Support

For warranty information, technical support, or any inquiries regarding your GemRed 82305 Digital Angle Finder Protractor, please contact GemRed customer service through their official website or the retailer where the product was purchased. Please retain your proof of purchase for warranty claims.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

I am having trouble changing the battery on my GemRed 82305 Digital Angle Finder. I have pressed the button, but the battery compartment on the other side won't come out. What should I do to remove it without forcing it?

To remove the battery tray on the GemRed 82305 without damaging the unit, please follow these steps based on the manual's guidance:Locate and Press: The battery tray is located on the side of the...

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