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> [GemRed Digital Angle Finder Goniometer 82311-00 Instruction Manual](#)

GemRed 82311-00

GemRed Digital Angle Finder Goniometer 82311-00

Instruction Manual

1. INTRODUCTION

The GemRed Digital Angle Finder Goniometer 82311-00 is a precision instrument designed for accurate measurement of angles. It is particularly useful in fields such as physical therapy, occupational therapy, sports therapy, and rehabilitation programs for determining joint range of motion. This manual provides detailed instructions for the proper setup, operation, maintenance, and troubleshooting of your device.

2. SAFETY INFORMATION

- Keep the device away from water and excessive moisture to prevent damage to electronic components.
- Avoid dropping the device or subjecting it to strong impacts, which can affect its accuracy and functionality.
- Do not attempt to disassemble or repair the device yourself. Refer to qualified service personnel for any repairs.
- Store the device in a clean, dry place when not in use.
- The plastic arms are designed with rounded edges for safe contact with skin during measurements.

3. PRODUCT OVERVIEW

The GemRed Digital Angle Finder Goniometer 82311-00 features a clear plastic body with two movable arms, a central pivot point, and an integrated digital display for precise angle readings.



Figure 3.1: Front view of the GemRed Digital Angle Finder Goniometer 82311-00.

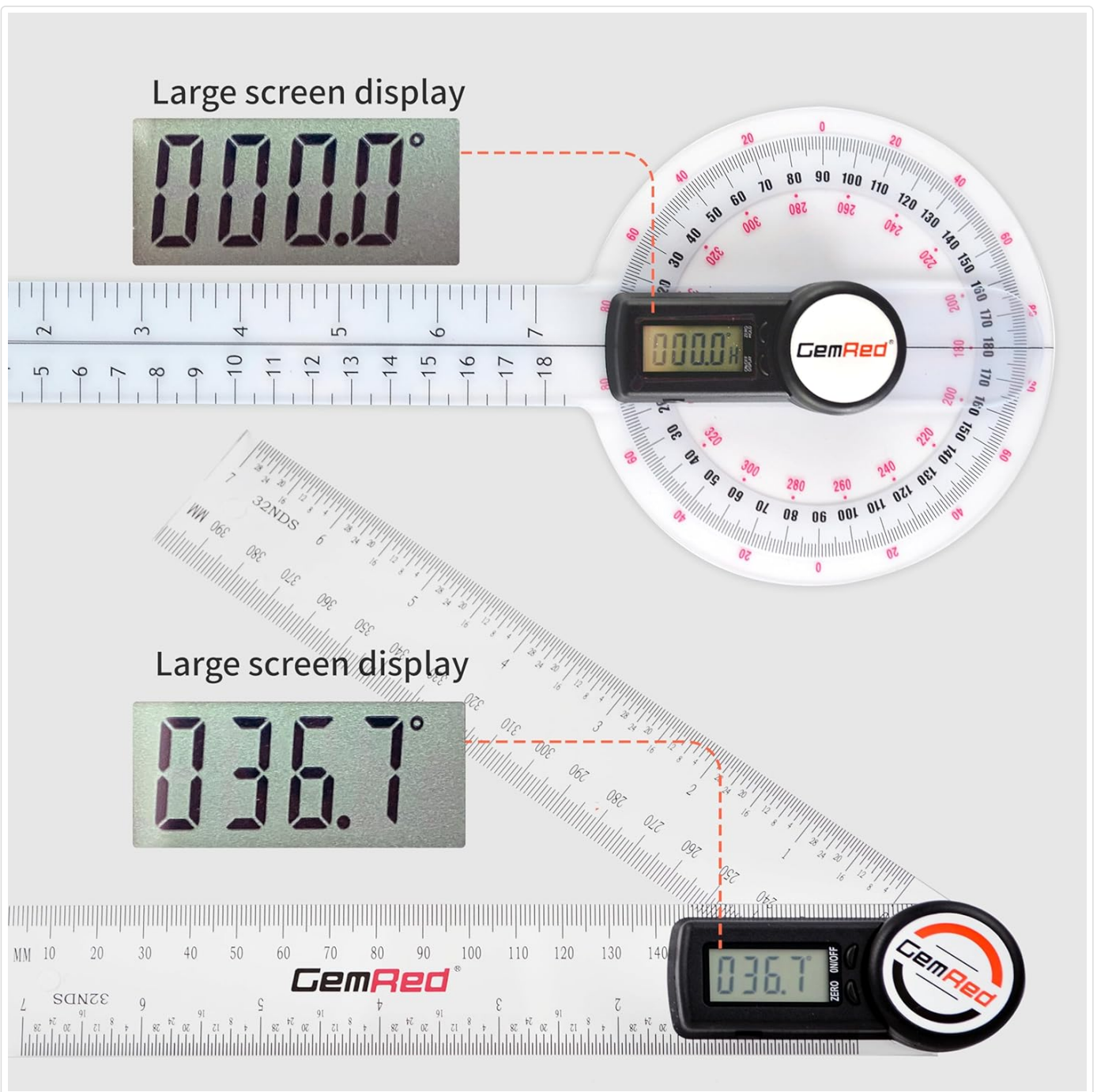


Figure 3.2: The large digital display provides clear and easy-to-read angle measurements.

Components:

- **Digital Display:** Shows angle measurements with 0.1 degree resolution.
- **Movable Arms:** Two transparent plastic arms for aligning with the joint or object being measured.
- **Pivot Point:** The central axis around which the arms rotate.
- **ON/OFF DISPLAY Button:** Powers the device on/off and inverts the display reading.
- **ZERO HOLD Button:** Sets the current position as zero and holds the displayed value.

4. SETUP

Battery Installation:

The device operates on one CR2032 lithium metal battery, which is included. To install or replace the battery:

1. Locate the battery compartment cover on the back of the digital display unit.
2. Use a small screwdriver or coin to gently open the cover.
3. Insert the CR2032 battery with the positive (+) side facing up.
4. Replace the battery compartment cover, ensuring it is securely closed.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Press the **ON/OFF DISPLAY** button to turn the device on. To turn it off, press and hold the **ON/OFF DISPLAY** button for a few seconds until the display turns off.

5.2 Zeroing the Measurement

To set a reference point or zero the measurement:

1. Position the goniometer arms to the desired starting angle.
2. Press the **ZERO HOLD** button. The display will show '0.0' or '0.00', indicating that this position is now the zero reference.
3. Subsequent movements will be measured relative to this zero point.



Figure 5.1: The **ZERO HOLD** button allows you to set a zero reference point and freeze the display value.

5.3 Taking a Measurement

To measure an angle:

1. Ensure the device is powered on.
2. Align the fixed arm with one side of the angle you wish to measure.
3. Move the adjustable arm to align with the other side of the angle.
4. Read the angle directly from the digital display.

5.4 Display Inversion

If the display reading is in an awkward position, you can invert it for easier viewing:

- Briefly press the **ON/OFF DISPLAY** button. The display will rotate 180 degrees, allowing for comfortable reading from any orientation.

**DISPLAY button
reverses awkward display to
easy-reading position.**



Figure 5.2: Pressing the **ON/OFF DISPLAY** button inverts the screen for optimal viewing.

5.5 Application Examples

The goniometer can be used to measure the range of motion for various joints:

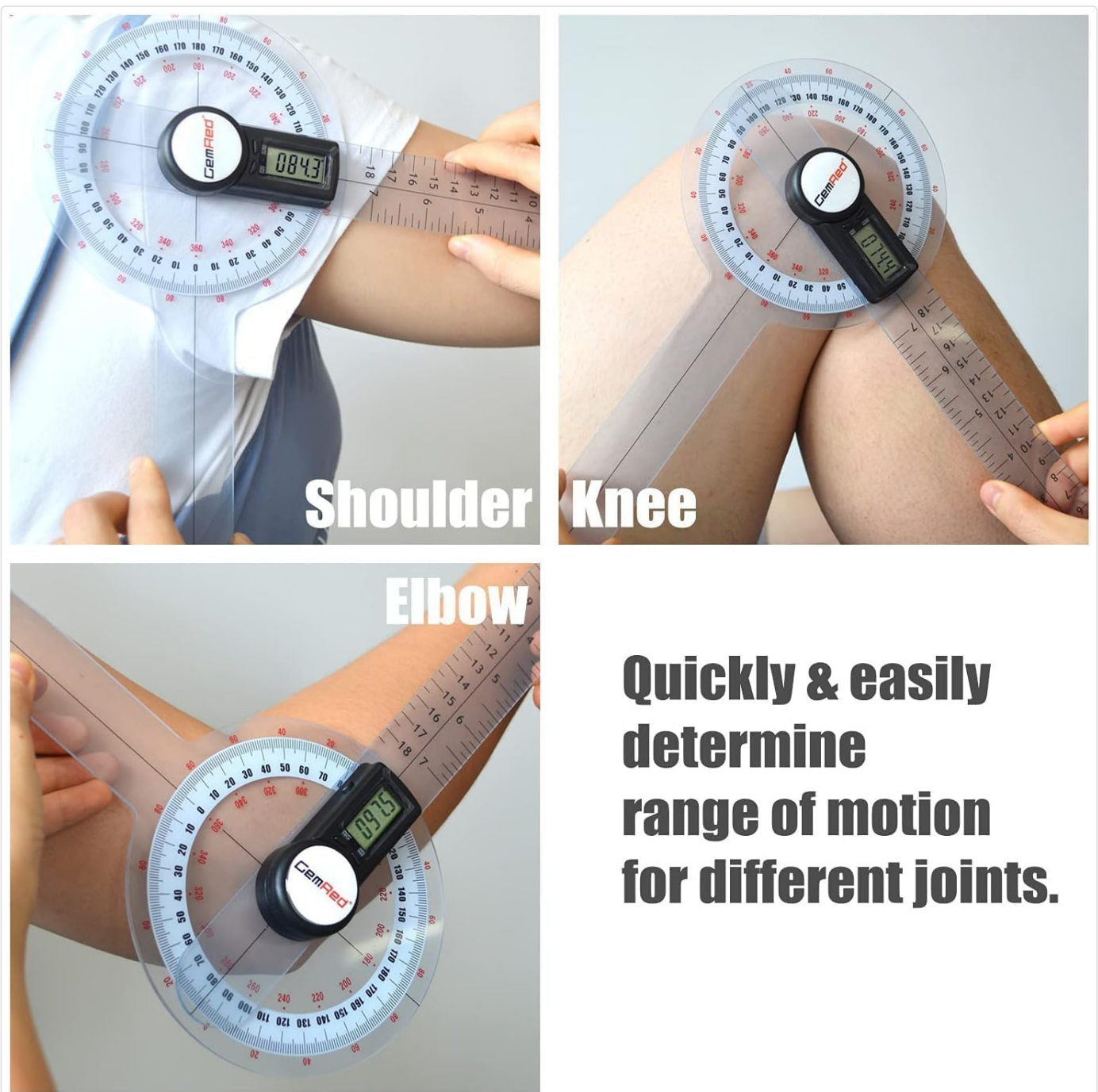


Figure 5.3: Examples of measuring angles on the shoulder, knee, and elbow joints.

**Quickly & easily
determine
range of motion
for different joints.**

6. MAINTENANCE

6.1 Cleaning

- Wipe the device with a soft, dry cloth.
- For stubborn dirt, use a slightly damp cloth with mild soap, then dry thoroughly.
- Do not use abrasive cleaners or solvents, as these can damage the plastic and electronic components.

6.2 Storage

- Store the goniometer in its original packaging or a protective case to prevent scratches and damage.
- Keep the device in a cool, dry environment, away from direct sunlight and extreme temperatures.
- If storing for an extended period, it is recommended to remove the battery to prevent leakage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display does not turn on.	Battery is dead or incorrectly installed.	Check battery orientation. Replace with a new CR2032 battery.
Inaccurate readings.	Device not properly zeroed. Damage to arms or pivot.	Ensure the device is zeroed before measurement. Inspect for physical damage.
Display is dim or flickering.	Low battery power.	Replace the CR2032 battery.

8. SPECIFICATIONS

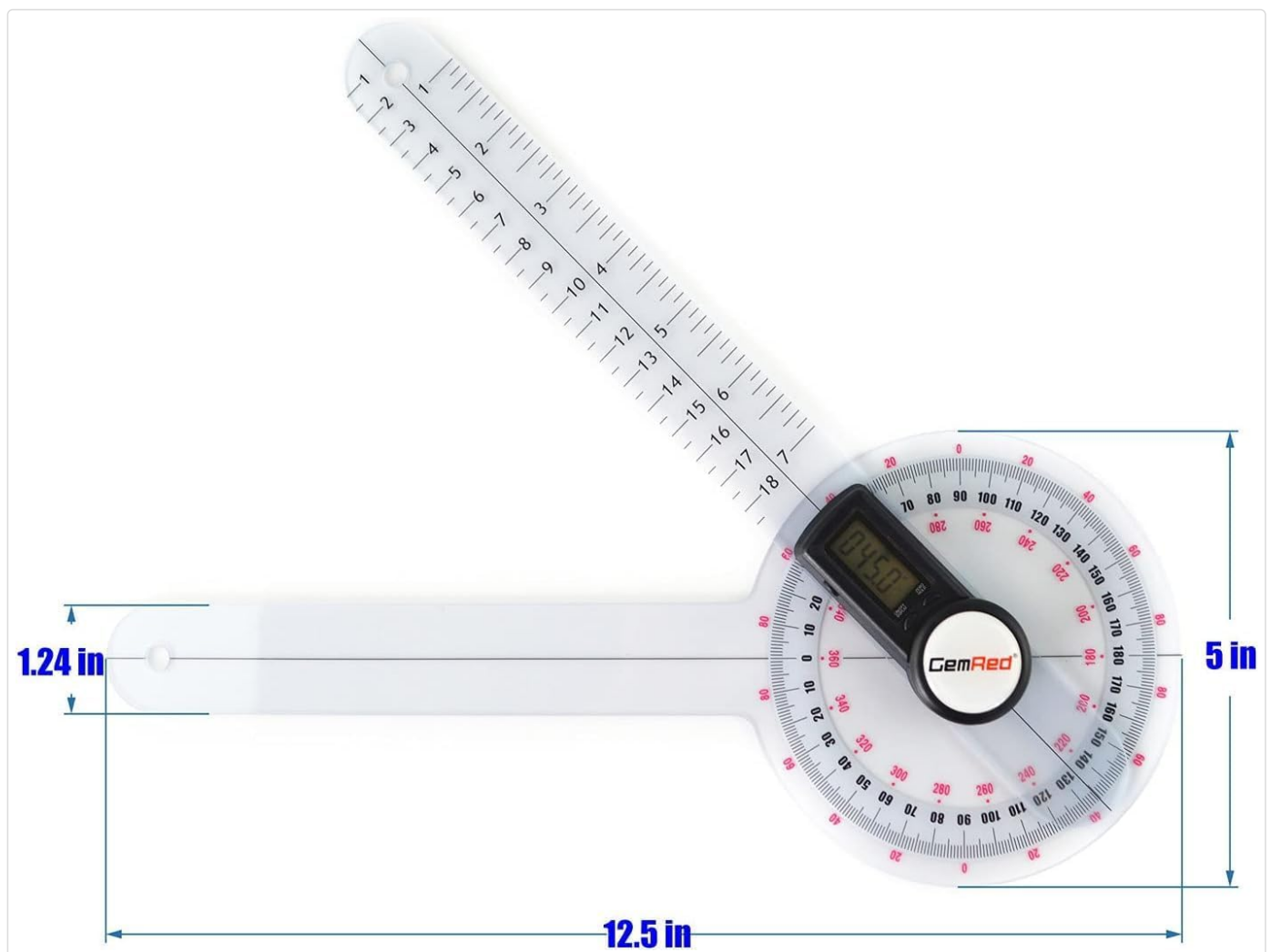


Figure 8.1: Product dimensions for the GemRed Digital Angle Finder.

Feature	Detail
Model Number	82311-00
Measurement Range	0-360 degrees
Accuracy	±0.5 degrees

Feature	Detail
Resolution	0.1 degrees
Material	Plastic
Power Source	1 x CR2032 Lithium Metal Battery (included)
Product Dimensions (L x W x H)	33 x 14 x 3 cm (12.5 x 5 x 1.24 inches)
Item Weight	105 Grams

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official GemRed website. Keep your purchase receipt as proof of purchase for any warranty claims.