ANENG SZ301,VD807

ANENG Digital Multimeter (SZ301) & Non-Contact Voltage Tester (VD807) User Manual

Your comprehensive guide to safe and effective operation.

Product Overview

The ANENG Digital Multimeter (SZ301) and Non-Contact Voltage Tester (VD807) are versatile and user-friendly electric circuit testing devices. The SZ301 multimeter is designed to measure a wide range of electrical properties, including AC/DC voltage, current, resistance, continuity, and diodes. The VD807 non-contact voltage tester enhances safety by accurately detecting AC signals with sound and light alarms, emitting beeping sounds with varying frequencies.

Both devices feature clear and easy-to-read display screens, showing measurement values and various settings. Their compact and lightweight design ensures portability, making them ideal tools for various electrical applications, suitable for both professionals and DIY enthusiasts.

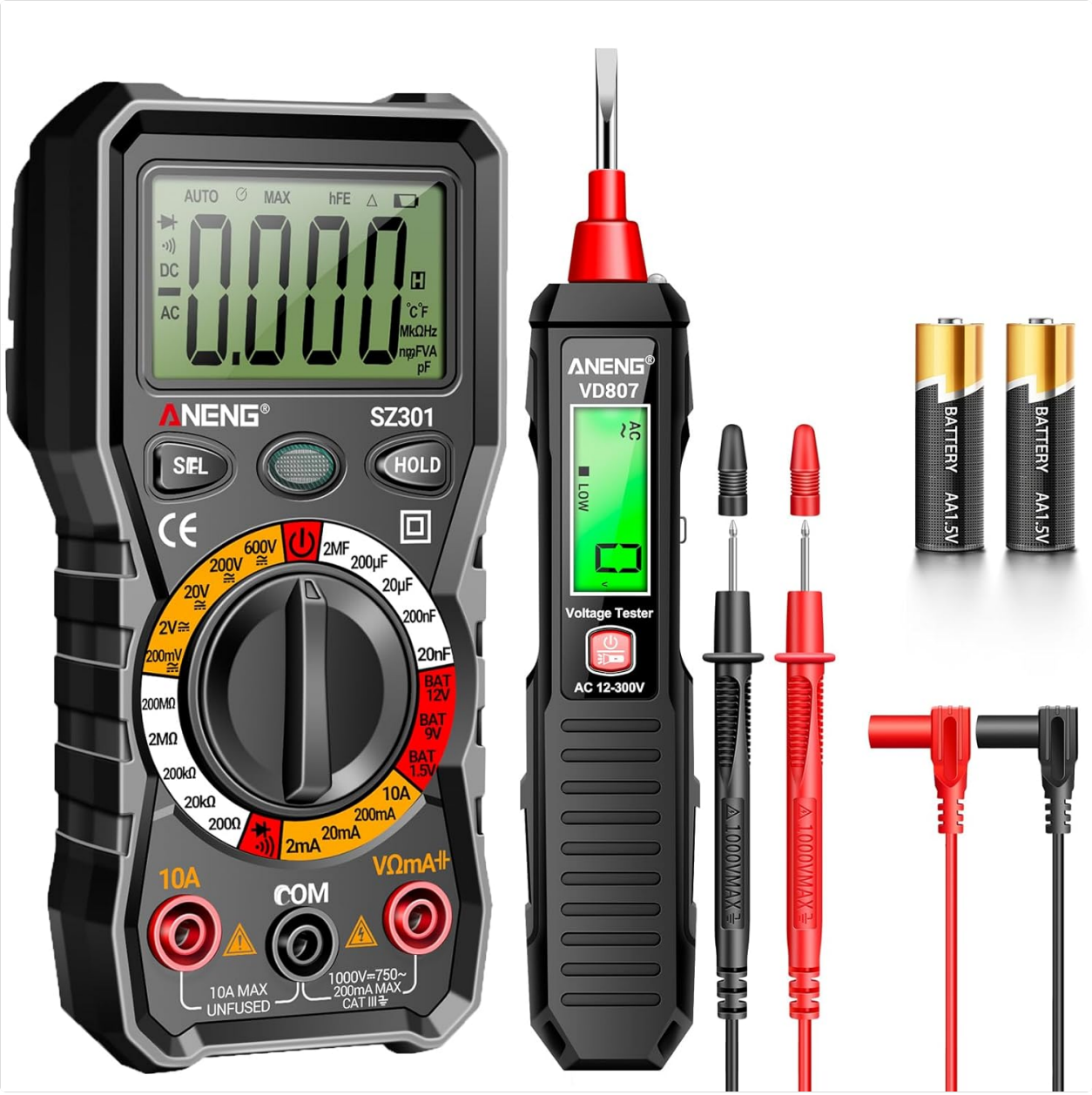

Image: The ANENG SZ301 Digital Multimeter and VD807 Non-Contact Voltage Tester, shown with test leads and batteries. This image illustrates the complete package contents.

Package Contents

Upon opening the package, please verify that all the following items are included:

- 1 x ANENG SZ301 Digital Multimeter
- 1 x ANENG VD807 Non-Contact Voltage Tester
- 2 x AA Batteries (for SZ301 Multimeter)
- 2 x AAA Batteries (for VD807 Voltage Tester)
- 1 x Pair of Test Leads (for SZ301 Multimeter)
- 1 x User Manual

Safety Precautions

Always adhere to the following safety guidelines to prevent personal injury or damage to the device:

- Ensure the device is off before connecting or disconnecting test leads.
- Do not exceed the maximum input values for any measurement range.
- Always use insulated test leads provided with the device.
- Verify the correct function and range selection before making a measurement.
- Be cautious when working with live circuits. Always assume circuits are live until proven otherwise.
- The SZ301 Multimeter features anti-burn with fuses and overload protection for enhanced safety.
- The VD807 Voltage Tester provides non-contact detection for increased safety when checking for AC voltage.
- Do not operate the device if it appears damaged or if the battery cover is not securely closed.

Setup Guide

1. Battery Installation

For SZ301 Digital Multimeter:

1. Locate the battery compartment on the back of the multimeter.
2. Use a screwdriver to open the battery cover.
3. Insert 2 x AA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
4. Replace the battery cover and secure it with the screw.

For VD807 Non-Contact Voltage Tester:

1. Locate the battery compartment on the back of the voltage tester.
2. Slide open the battery cover.
3. Insert 2 x AAA batteries, observing the correct polarity (+/-).
4. Slide the battery cover back into place until it clicks securely.

2. Connecting Test Leads (SZ301 Multimeter)

The SZ301 Multimeter uses two test leads: a red positive lead and a black common (negative) lead.

- Insert the black test lead into the "COM" (Common) jack.
- For most voltage, resistance, continuity, and diode measurements, insert the red test lead into the "VΩmA" jack.
- For high current measurements (up to 10A), insert the red test lead into the "10A MAX" jack. Ensure the rotary dial is set to the appropriate current range.

Operating Instructions

Operating the ANENG SZ301 Digital Multimeter

The SZ301 features a rotary dial for function selection and a clear LCD display for readings.

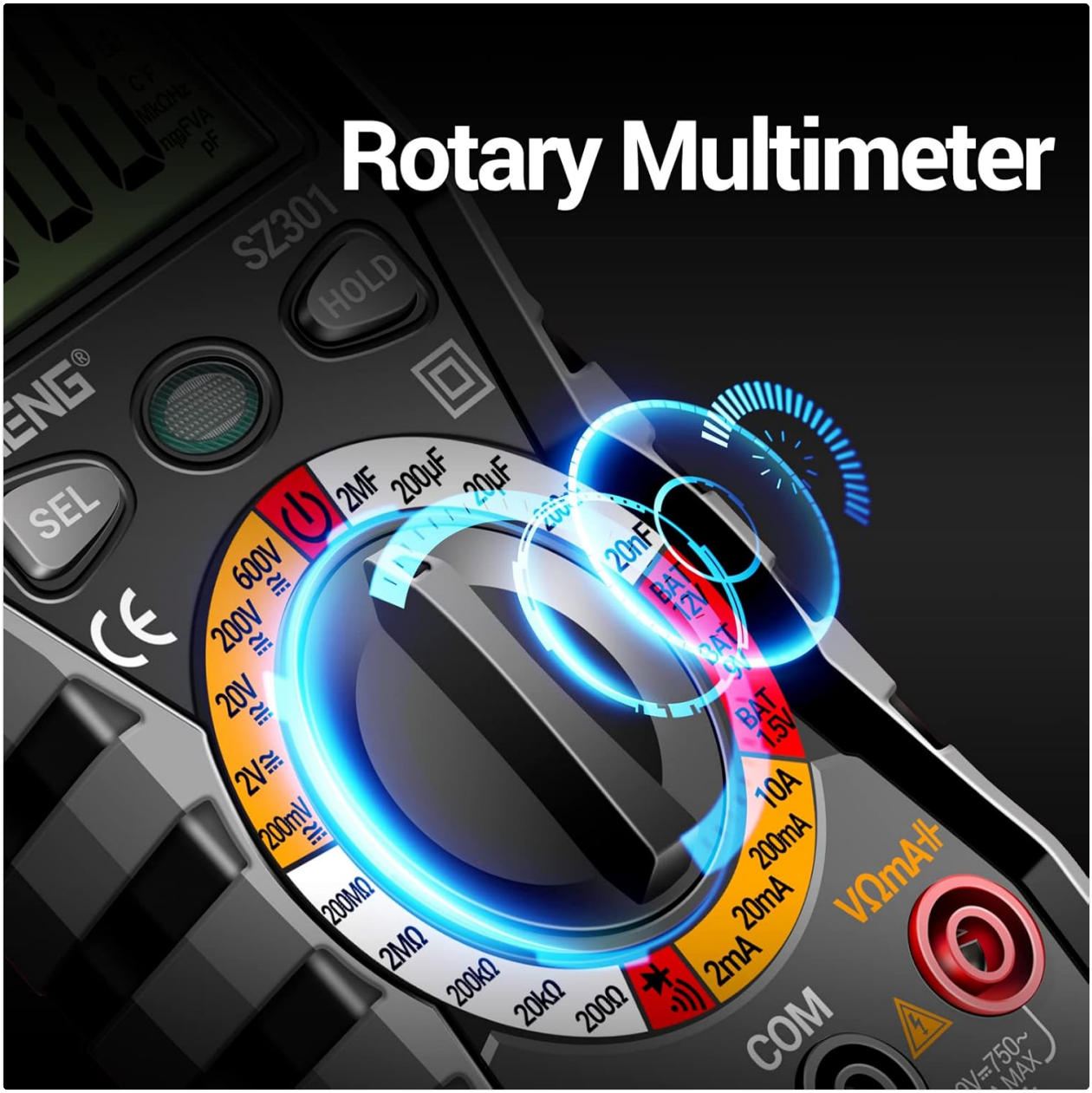

Image: A close-up view of the ANENG SZ301 Digital Multimeter's rotary dial, highlighting the various measurement functions and ranges available for selection.

1. Measuring AC/DC Voltage

1. Turn the rotary dial to the desired ACV (V~) or DCV (V-) range. If unsure, start with the highest range and decrease as needed.
2. Connect the red test lead to the positive side of the circuit and the black test lead to the negative side (for DC) or across the points to be measured (for AC).
3. Read the voltage value on the LCD display.

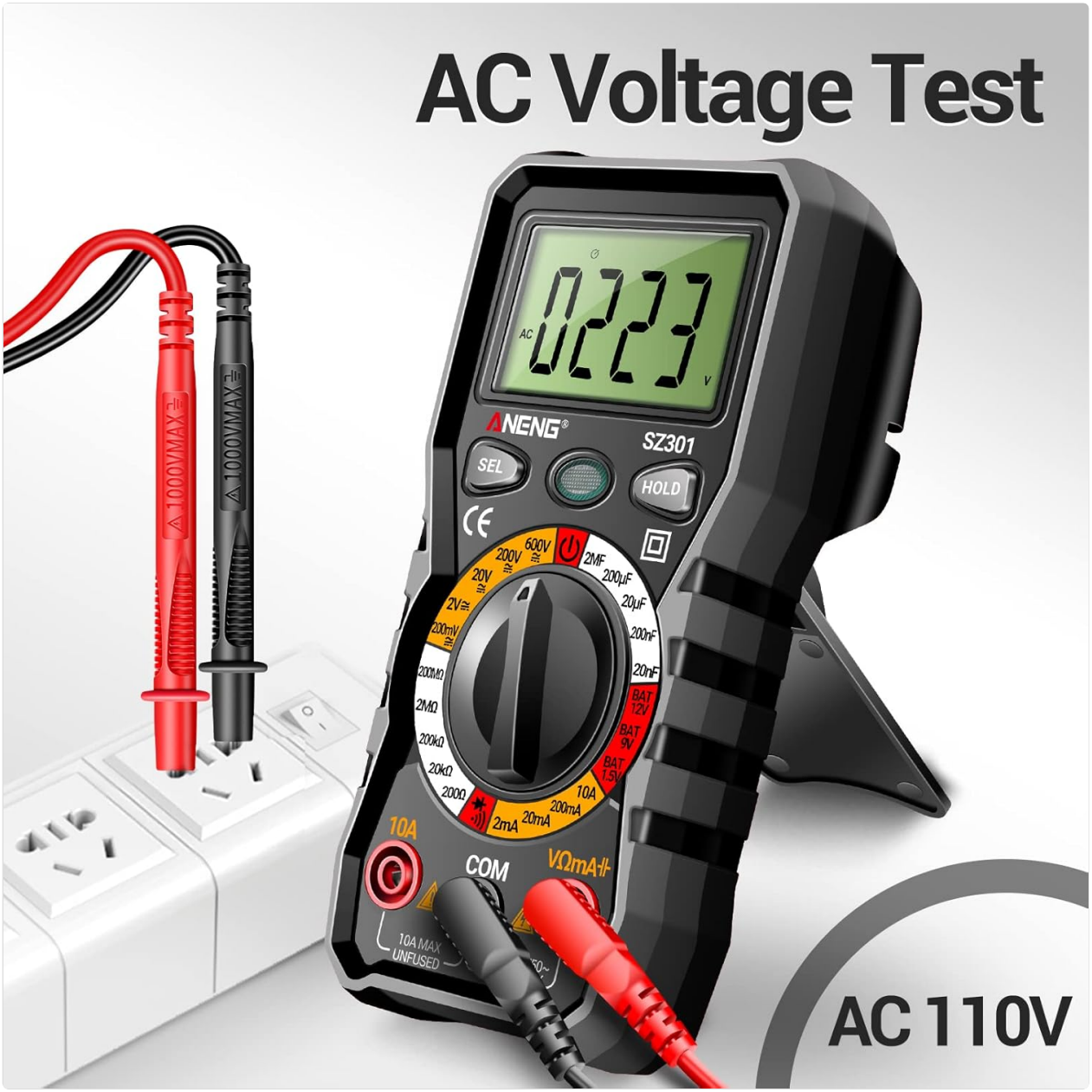

Image: The ANENG SZ301 Multimeter is shown measuring AC 110V from a standard wall outlet, demonstrating its capability for AC voltage testing in a household setting.

2. Measuring AC/DC Current

1. **Important:** Current measurements require the multimeter to be connected in series with the circuit.
2. Turn the rotary dial to the desired ACA (A~) or DCA (A-) range.
3. Connect the red test lead to the appropriate current jack (mA or 10A) and the black test lead to the "COM" jack.
4. Break the circuit and insert the multimeter in series.
5. Read the current value on the LCD display.

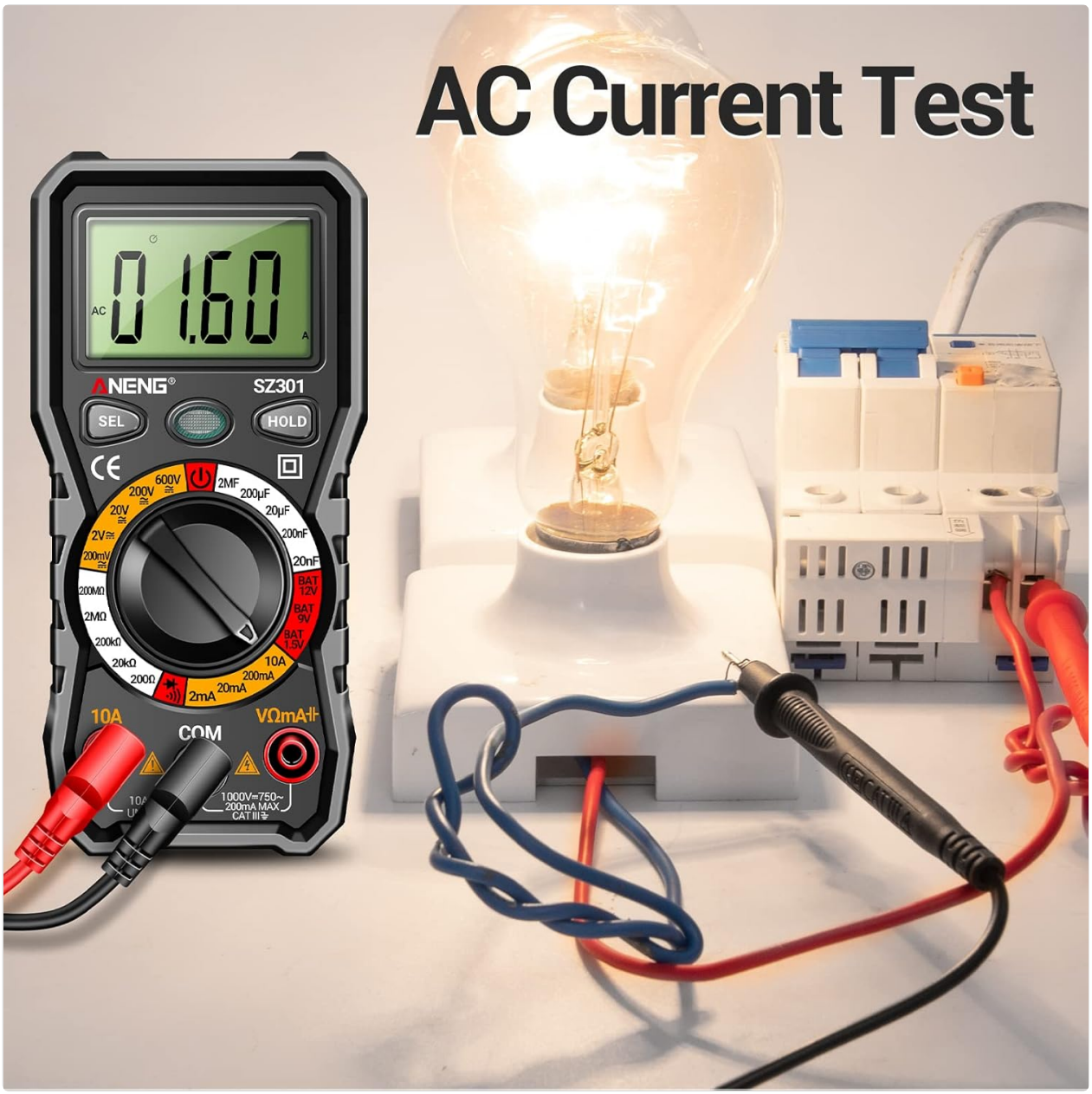

Image: The ANENG SZ301 Multimeter is depicted measuring AC current in a circuit that includes a light bulb, illustrating how to connect the device in series for current measurement.

3. Measuring Resistance (Ω)

1. Ensure the circuit is de-energized before measuring resistance.
2. Turn the rotary dial to the "Ω" (Ohms) range.
3. Connect the test leads across the component or circuit to be measured.
4. Read the resistance value on the LCD display.

4. Continuity Test

1. Turn the rotary dial to the continuity symbol (speaker icon).
2. Connect the test leads across the circuit or component.
3. If there is continuity (a complete circuit), the multimeter will emit an audible beep. The display will show a low resistance value.

5. Diode Test

1. Turn the rotary dial to the diode symbol.
2. Connect the red test lead to the anode and the black test lead to the cathode of the diode.

3. The display will show the forward voltage drop. Reverse the leads to check for open circuit (OL) in the reverse direction.

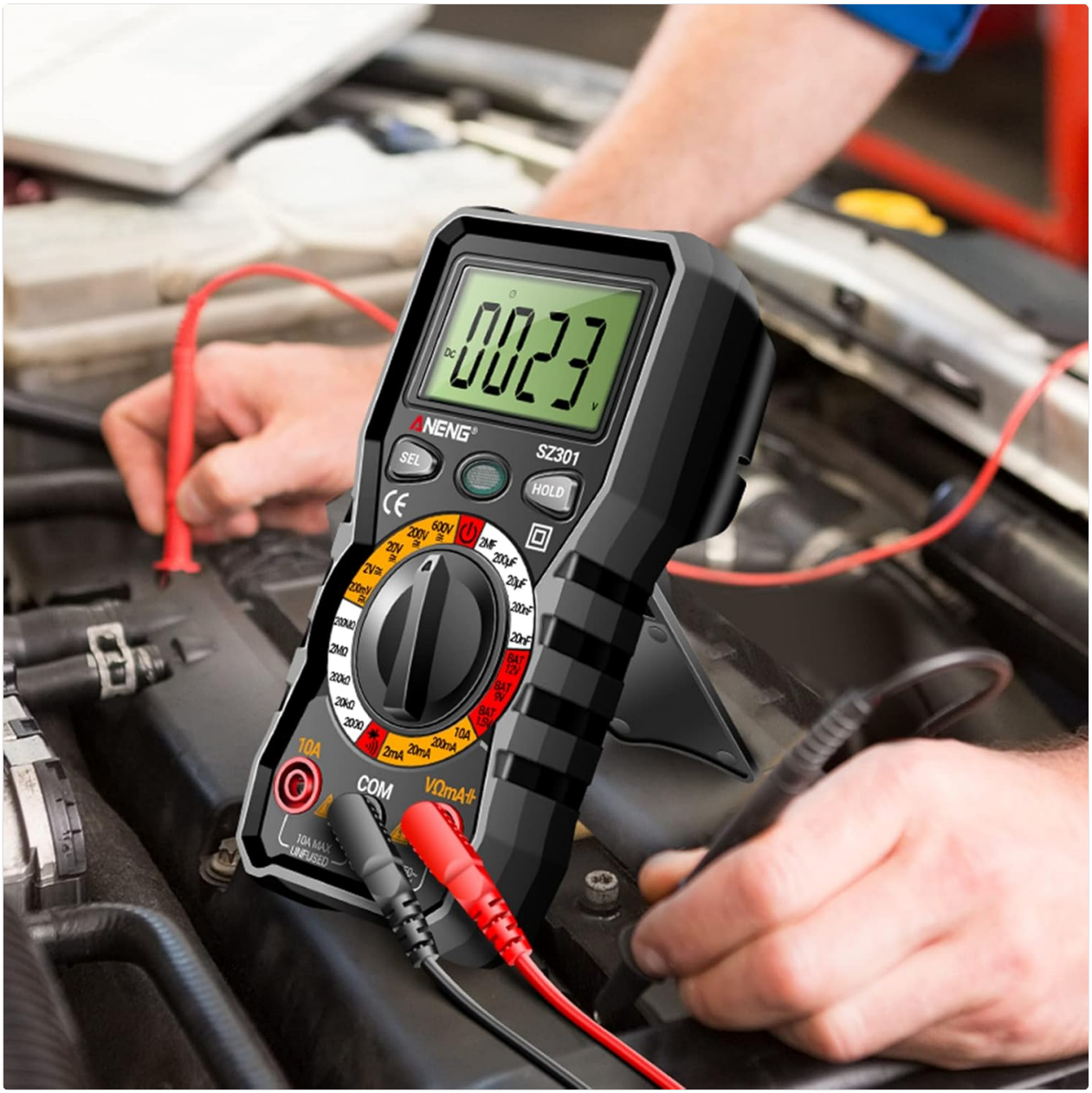

Image: The ANENG SZ301 Multimeter is being used in an automotive setting, demonstrating its versatility for diagnosing electrical issues in vehicles.

Using the ANENG VD807 Non-Contact Voltage Tester

The VD807 is designed for quick and safe detection of AC voltage without direct contact.

1. Non-Contact Voltage (NCV) Detection

1. Press the power button to turn on the VD807.
2. Bring the tip of the tester close to the wire, outlet, or electrical component you suspect has AC voltage.
3. The tester will emit beeping sounds and the LED indicator will flash with increasing frequency as it detects stronger AC signals. The LCD display will also show a bar graph indicating signal strength.

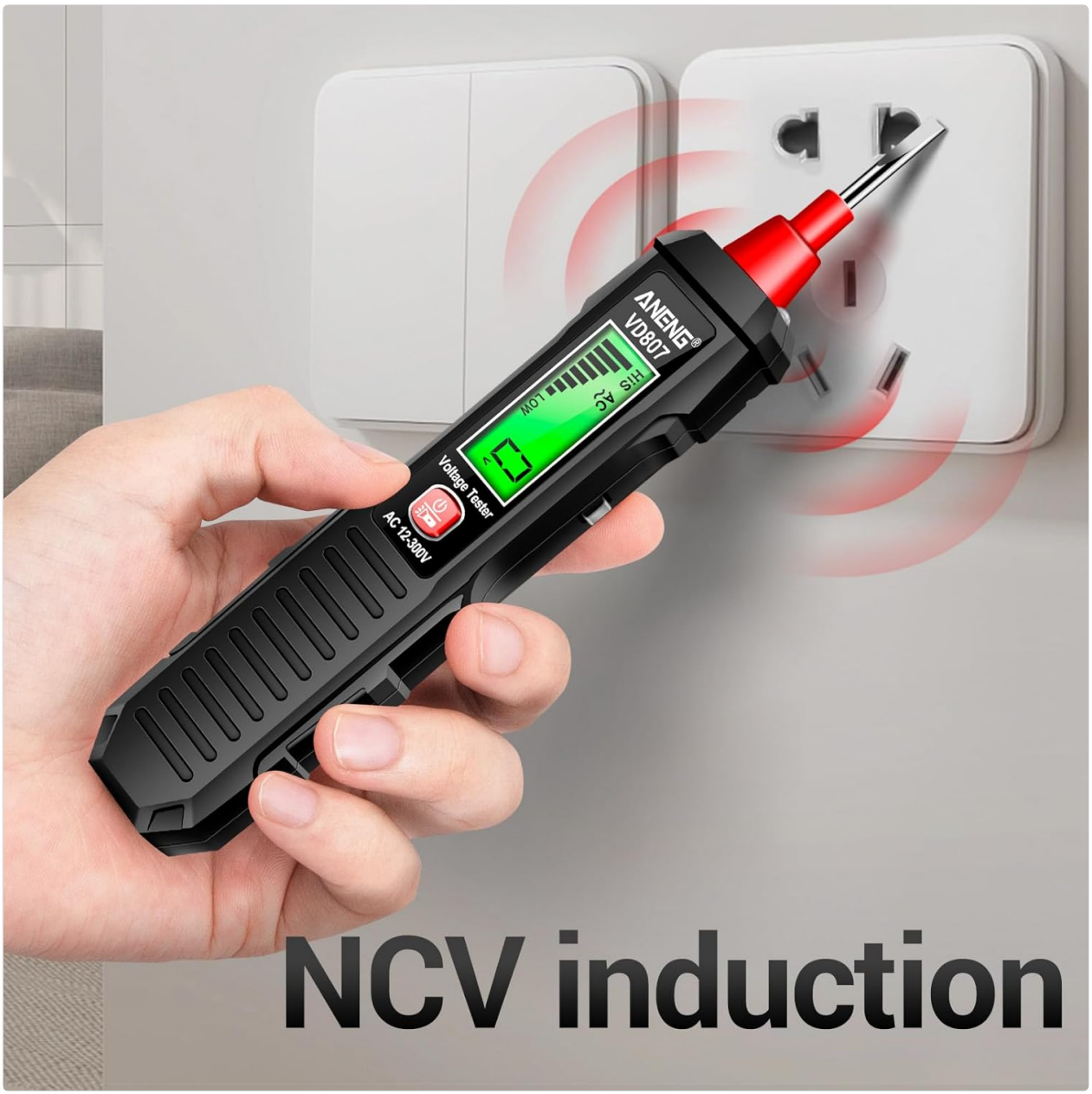

Image: The ANENG VD807 Non-Contact Voltage Tester is shown in action, detecting the presence of AC voltage near a wall outlet, illustrating its NCV induction capability.

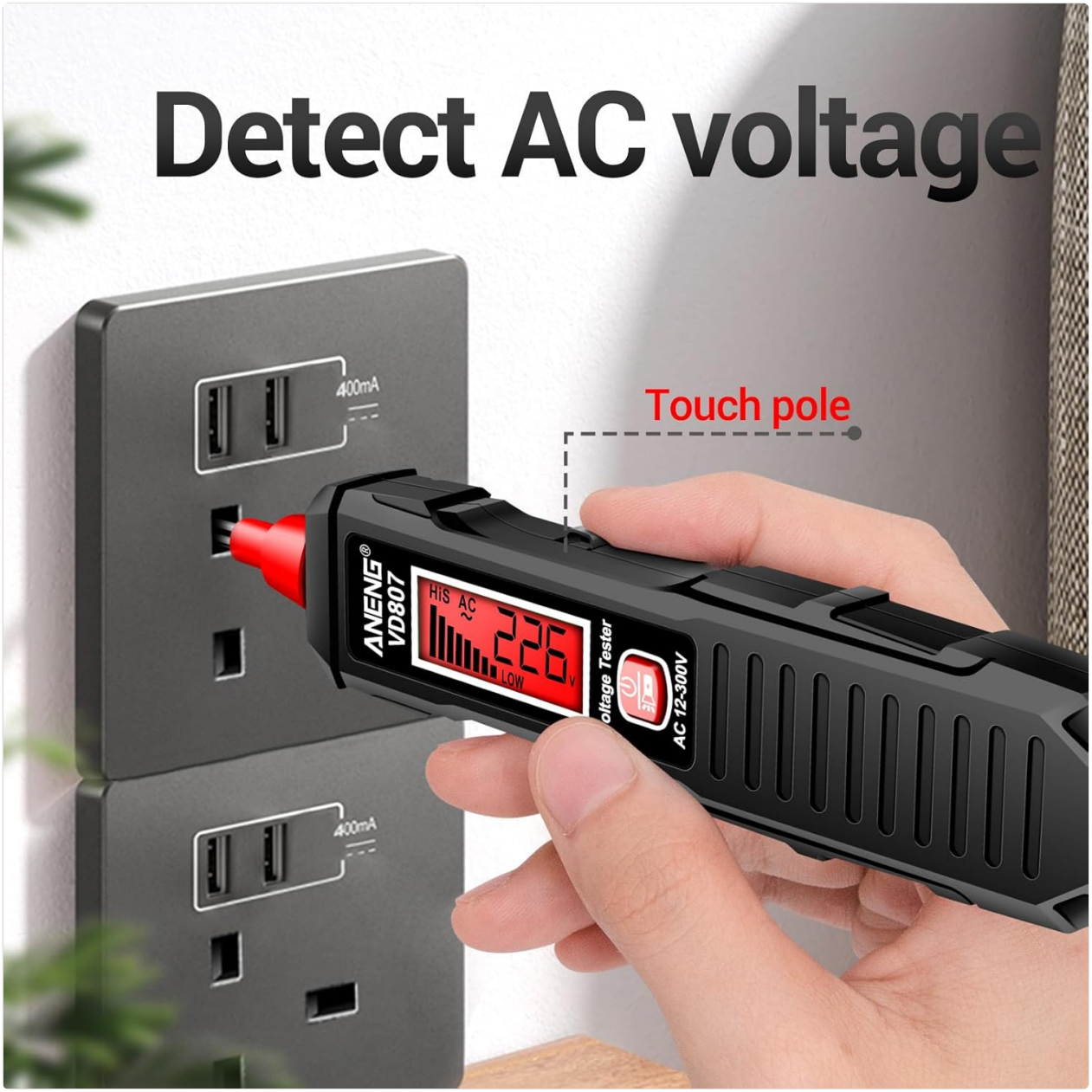

Image: The ANENG VD807 Non-Contact Voltage Tester is shown with its tip touching an electrical outlet, displaying an AC voltage reading on its screen, demonstrating direct contact voltage detection.

2. Live Wire / Zero Line Identification (VD807)

The VD807 can differentiate between live and neutral (zero) lines:

- When the tip is near a live wire, the display will turn red and show a high signal strength.
- When the tip is near a neutral (zero) line, the display will turn green and show a low signal strength.

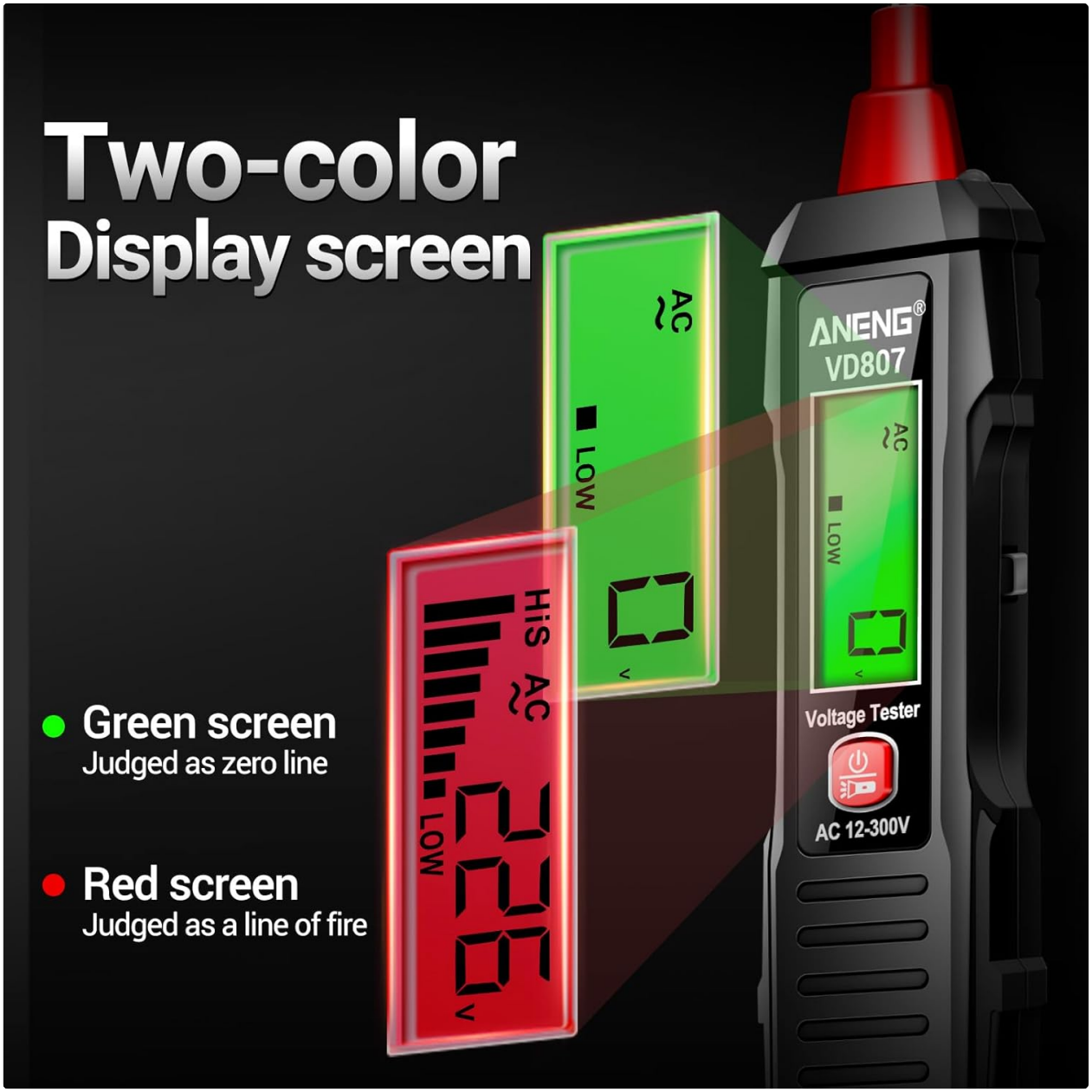

Image: This image illustrates the ANENG VD807 Non-Contact Voltage Tester's two-color display feature, showing a green screen for a judged zero line and a red screen for a judged live (fire) line, aiding in quick identification.

3. Line Breakpoint Detection (VD807)

The VD807 can help locate breaks in live wires:

1. Trace the live wire with the tip of the VD807.
2. The tester will indicate voltage presence until it reaches the point of the break, where the indication will stop.

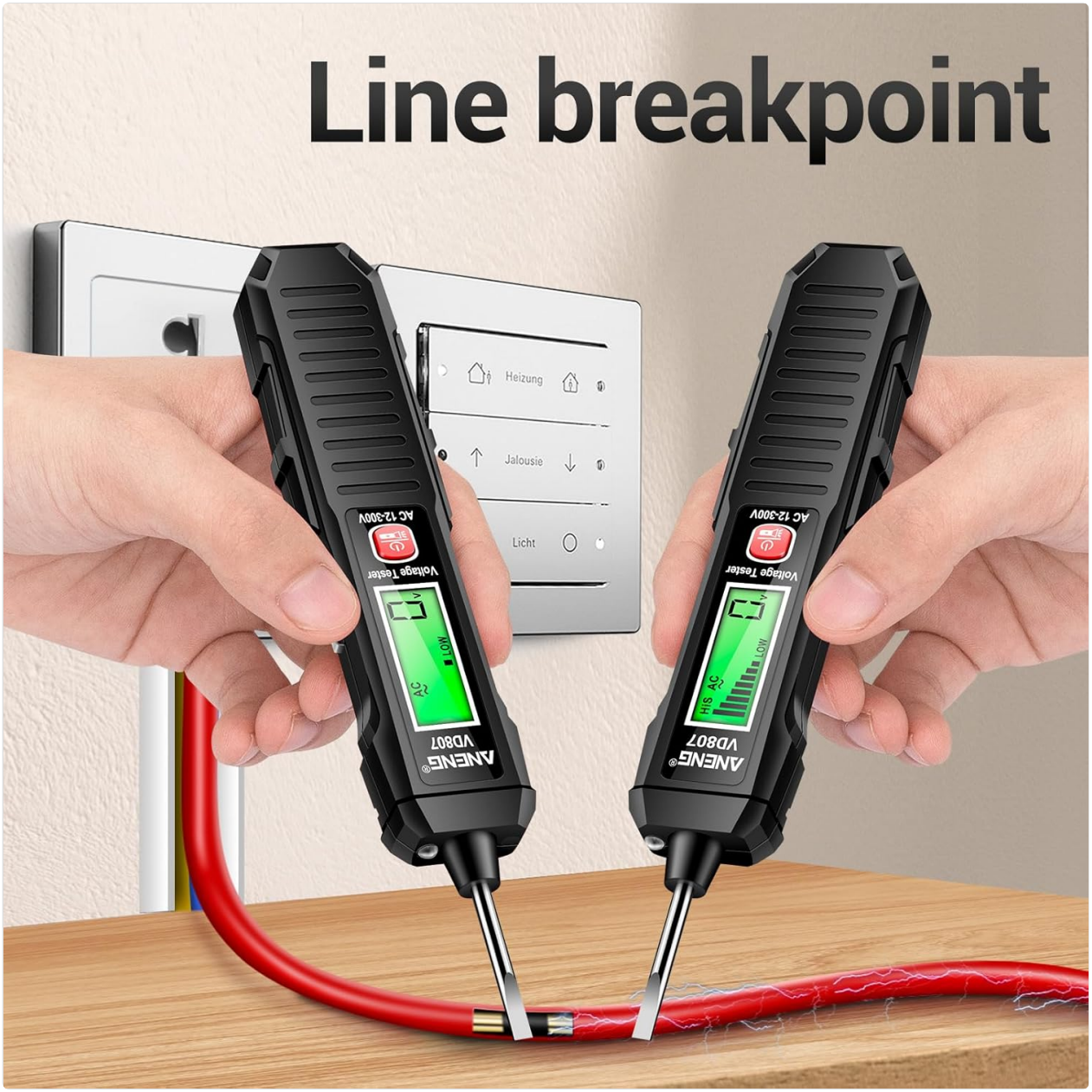

Image: The ANENG VD807 Non-Contact Voltage Tester is shown being used to identify a breakpoint in an electrical cable, demonstrating its utility for wire fault detection.

Maintenance and Care

- **Cleaning:** Wipe the device with a dry, clean cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears on the display to ensure accurate readings. Remove batteries if the device will not be used for an extended period.
- **Storage:** Store the multimeter and voltage tester in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Test Leads:** Inspect test leads for any damage (cracks, frayed insulation) before each use. Replace damaged leads immediately.

Troubleshooting Common Issues

- **No Display/Device Not Turning On:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate Readings:** Verify that the correct function and range are selected for the measurement.

Ensure test leads are properly connected and not damaged. Clean the test lead tips if they appear dirty.

- **"OL" (Overload) Display:** This indicates that the measured value exceeds the selected range. Switch to a higher range or ensure the measurement is within the device's capabilities.
- **No NCV Detection (VD807):** Ensure the VD807 is powered on. The signal might be too weak or the wire may not be live.

Technical Specifications

Feature	Specification
Model Numbers	SZ301 (Multimeter), VD807 (Voltage Tester)
Measurement Type	Multimeter, Voltmeter, Non-Contact Voltage Tester
Power Source	Battery Powered (SZ301: 2xAA, VD807: 2xAAA)
Display	LCD Display (SZ301), LCD Display with Two-Color Indication (VD807)
Safety Features	Anti-burn with fuses, Overload protection, Insulated probes (SZ301); Sound and light alarms (VD807)
Portability	Compact and lightweight design

Warranty and Customer Support

ANENG is committed to providing exceptional customer service and support for its electrical tools. If you encounter any issues or require technical assistance with your SZ301 Multimeter or VD807 Voltage Tester, please refer to the contact information provided with your purchase or visit the official ANENG store.

For further information and support, you may visit the ANENG Store on Amazon.