Aideepen LCR-T7

Aideepen LCR-T7 High Precision Transistor Tester User Manual

Model: LCR-T7

1. Introduction

The Aideepen LCR-T7 is a versatile, high-precision transistor tester designed for automatic detection of various electronic components. It integrates LCR meter and capacitance test functions, providing accurate measurements without complex setup.
This manual provides detailed instructions for the safe and efficient use of your LCR-T7 tester. Please read it thoroughly before operation.

2. Key Features

- **Multi-functional Automatic Detection:** Automatically detects NPN/PNP transistors, N/P channel MOSFETs, diodes (including double diodes), thyristors, Mega328, BJTs, resistors, and capacitors.
- **One-Touch Intelligent Measurement:** No settings required; automatically identifies component types and displays high-precision measurement values upon connection.
- **Long-Life Power Management:** Built-in lithium-ion battery with a green LED charging indicator. Supports 4.5V safe charging input (do not use over-voltage). Features intelligent automatic shutdown to optimize operating time and suppress standby power consumption.
- **Expanded Infrared Decoder Function:** Analyzes remote control signals, displaying user codes, data codes, and infrared waveforms for improved project testing efficiency.
- **Portable Engineering Design:** Compact body (115g) suitable for tool box storage. Equipped with a test socket protective cover to prevent accidental short circuits and overcurrent protection circuit for enhanced safety and durability in harsh environments.
- **Professional-Grade Diagnostic Capabilities:** Detects "potential defects" in electronic components (e.g., capacitor ESR values, transistor hFE values). High-precision measurement and graphical display significantly improve fault analysis efficiency.

3. Product Overview

Figure 3.1: Front view of the Aideepen LCR-T7 Transistor Tester, showing the display and test socket.

Figure 3.2: Labeled components of the LCR-T7, including TFT display, IR receiver, multi-function key, transistor test area, Zener diode test area, MicroUSB charging port, and charging indicator LED.

Figure 3.3: Dimensions of the Aideepen LCR-T7 Transistor Tester: 88mm height, 80mm width, 28mm

depth.

Figure 3.4: The compact and portable design of the LCR-T7, shown held in a hand.

4. Setup

4.1 Unboxing and Initial Inspection

Upon receiving your Aideepen LCR-T7, carefully open the packaging and inspect the contents. Ensure all accessories are present and the device is free from any visible damage.

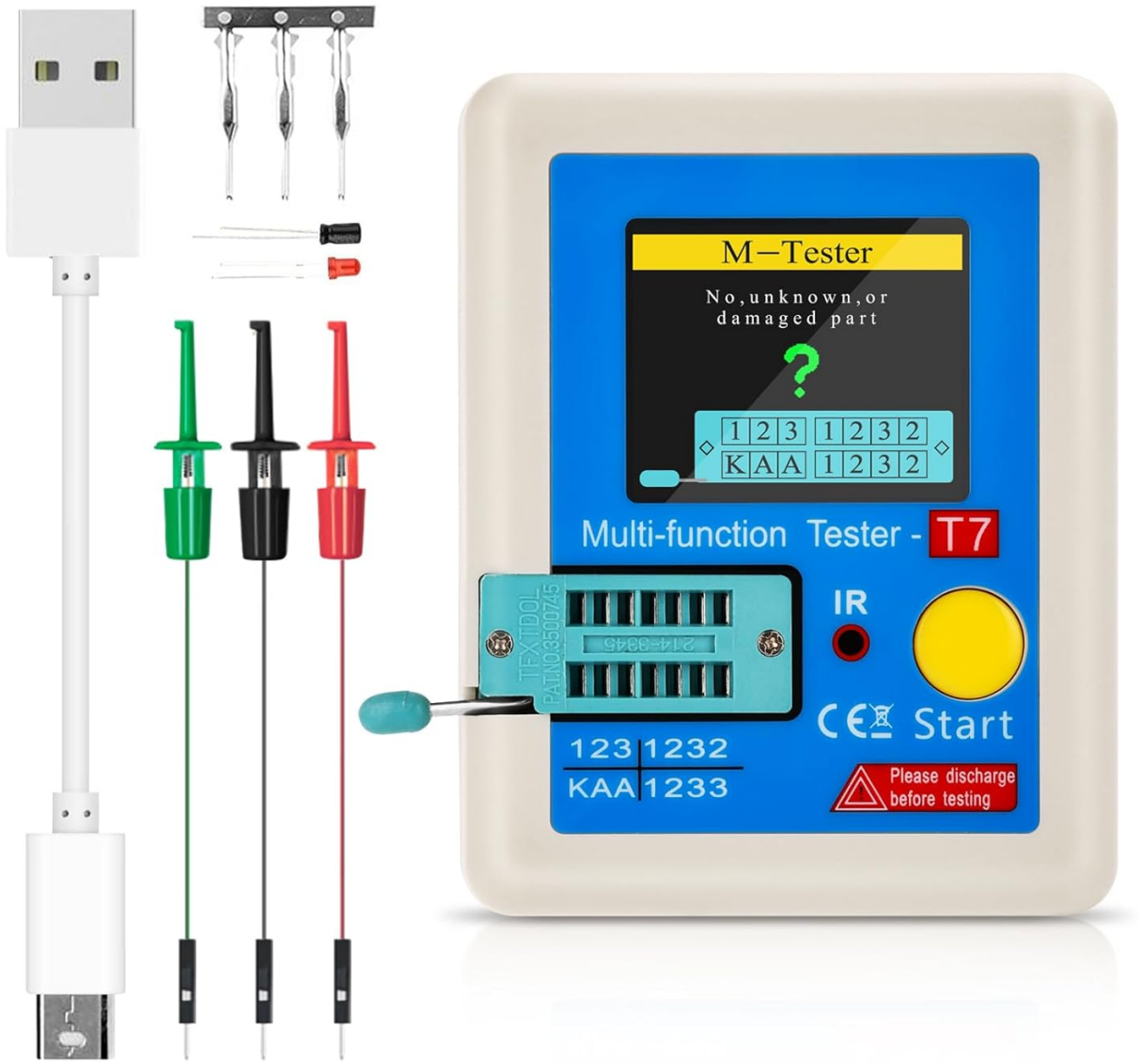

Figure 4.1: The LCR-T7 tester along with its included accessories, such as the MicroUSB cable and test clips.

4.2 Charging the Device

The LCR-T7 has a built-in rechargeable lithium-ion battery. Before first use, or when the battery indicator is low, connect the device to a 4.5V power source using the provided MicroUSB cable. The green LED charging indicator will illuminate during charging.

- Connect the MicroUSB cable to the charging port on the device.
- Connect the other end of the USB cable to a 4.5V USB power adapter (not included) or a computer USB port.
- The green LED will indicate charging status.
- **Caution:** Do not use power adapters exceeding 4.5V to prevent damage to the device.

5. Operating Instructions

5.1 Power On/Off

Press and hold the power button to turn the device on or off. The device features an intelligent automatic shutdown function to conserve battery life.

5.2 Component Testing (One-Touch Measurement)

The LCR-T7 automatically identifies and measures various electronic components. No manual range selection is needed.

1. **Prepare the Component:** Ensure the component leads are clean and free of oxidation. For capacitors, discharge them completely before testing to prevent damage to the tester.
2. **Insert the Component:**
    - For 3-pin components (e.g., transistors, MOSFETs), insert the leads into the "1-2-3" slots of the transistor test area.
    - For 2-pin components (e.g., resistors, capacitors, diodes, inductors), insert the leads into any two of the "1-2-3" slots.
    - For Zener diodes, use the dedicated "K-A-A" Zener diode test area.
3. **Lock the Lever:** Push down the lever next to the test socket to secure the component.
4. **Start Measurement:** Press the "Start" button (or the multi-function key). The device will automatically detect the component type and display its parameters on the screen.

Figure 5.1: Examples of component testing results displayed on the LCR-T7 screen, including capacitance, inductance, and resistance.

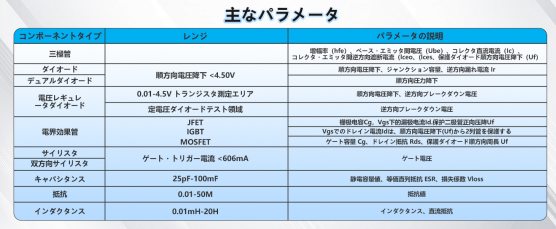

Figure 5.2: Examples of transistor (N-D-MOS, N-E-IGBT, N-JFET, BJT-NPN, BJT-PNP, N-E-MOS, P-E-MOS) and diode test results.

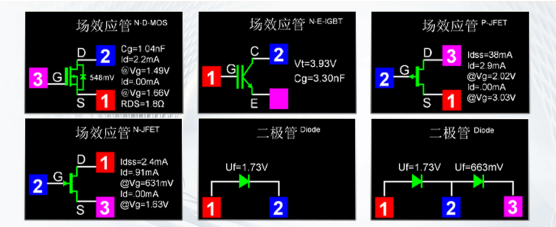

Figure 5.3: Zener diode test result. **Warning:** Do not place Zener diodes above 5V in the transistor test area.

5.3 Infrared Remote Control Decoding

The LCR-T7 can decode infrared remote control signals.

1. Navigate to the infrared decoding function (refer to the device interface for menu navigation).
2. Point the infrared remote control towards the IR receiver window on the LCR-T7.
3. Press a button on the remote control. The tester will display the user code, data code, and the infrared waveform.

5.4 Intuitive Readout

The LCR-T7 features a user-friendly backlit LCD screen for clear and easy reading of measurement results.

Figure 5.4: The LCR-T7 in operation, demonstrating its clear graphical display for easy interpretation of results.

5.5 Video Demonstration

Your browser does not support the video tag.

Video 5.1: Demonstration of the Aideepen LCR-TC1 Transistor Tester Multimeter Tester, showcasing its functionality for various electronic components. While this video features a similar model (LCR-TC1), the core testing principles and interface are comparable to the LCR-T7.

6. Specifications

Parameter	Value
Brand	Aideepen
Model Number	GXQD0071-002 (LCR-T7)
Minimum Operating Voltage	4.5 Volts
Measurement Type	LCR Meter
Included Components	Product body
Origin	China

6.1 Main Parameters (Component Type & Range)

Figure 6.1: Detailed table of main parameters, including component types, measurement ranges, and parameter descriptions.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the device. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures. When not in use, ensure the test socket protective cover is in place.
- **Battery Care:** To prolong battery life, avoid fully discharging the battery frequently. Recharge the device when the battery indicator is low. If storing for extended periods, charge the battery to approximately 50% every few months.
- **Component Discharge:** Always discharge capacitors before testing to prevent damage to the tester and ensure accurate readings.

8. Troubleshooting

- **Device does not power on:**
  - Ensure the battery is charged. Connect to a 4.5V MicroUSB power source.
  - Check the power button for proper function.
- **Incorrect or no measurement reading:**
  - Ensure component leads are clean and properly inserted into the test socket.
  - Verify the component is not damaged.
  - For capacitors, ensure they are fully discharged before testing.
  - Check if the test socket lever is securely locked.
- **Infrared decoding not working:**
  - Ensure the remote control is pointed directly at the IR receiver window.
  - Check the remote control's battery.

9. Warranty and Support

9.1 Warranty Information

All products purchased from Aideepen come with a 24-month service warranty. In case of quality issues with the item, a new replacement product can be obtained.

9.2 Customer Support

For any questions, technical assistance, or warranty claims, please contact Aideepen customer support through your purchase platform or visit the official Aideepen store for more information.
Aideepen Store: Aideepen on Amazon.co.jp