Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

Aideepen LCR-T7-H LCR Meter

Aideepen High Precision LCR Meter Transistor Tester T7 TC-T7-H User Manual

Model: TC-T7-H LCR Meter

1. Introduction

The Aideepen TC-T7-H is a versatile, high-precision LCR meter and transistor tester designed for automatic detection of various electronic components. It features a graphic LCD display and is capable of identifying NPN and PNP transistors, n-channel and p-channel MOSFETs, diodes (including double diodes), thyristors, BJTs, resistors, and capacitors. This manual provides comprehensive instructions for the safe and effective use of your device.

2. Safety Information

To ensure safe operation and prevent damage to the device or components, please observe the following precautions:

- **Discharge Capacitors:** Always discharge capacitors and other test items before connecting them to the tester. Failure to do so may damage the device.
- **Charging Voltage:** The charging input voltage is 4.5V. Do not use overpressure charging, as this will damage the tester.
- **Proper Connection:** Ensure components are correctly inserted into the test sockets or connected via test leads to avoid incorrect readings or damage.
- **Environmental Conditions:** Use the device in a dry environment and avoid exposure to extreme temperatures or humidity.

3. Package Contents

Verify that all items listed below are included in your package:

- 1 x Aideepen TC-T7-H Transistor Tester
- 1 x USB cable
- 1 x Red and yellow green contact wires (test leads)
- 2 x Capacitors (for testing/calibration)
- Additional small components (e.g., LED, resistor, transistor for initial testing)



Image: The Aideepen TC-T7-H LCR Meter shown with its included USB cable, test leads, and sample components.

4. Product Features and Overview

The TC-T7-H features a compact design with a clear graphic LCD display for easy reading of test results. Key components and their functions are outlined below:



Image: Diagram illustrating the main parts of the TC-T7-H tester, including the full color display, transistor test area, Zener diode test area, multi-function button, infrared receive window, charging indicator light, and Micro USB charging interface.

- **Full Color Display:** Provides clear and detailed test results.
- **Transistor Test Area:** ZIF (Zero Insertion Force) socket for inserting components like transistors, capacitors, and resistors for testing.
- **Zener Diode Test Area:** Dedicated area for testing Zener diodes.
- **Multi-function Button:** Used to initiate tests and navigate menus.
- **Infrared Receive Window (IR):** For testing infrared remote controls.
- **Charging Indicator Light:** Indicates charging status (green when fully charged).
- **Micro USB Charging Interface:** For connecting the USB charging cable.



Image: Side view of the TC-T7-H tester, highlighting the Micro USB charging interface and charging indicator light.

5. Setup and Calibration

5.1 Charging the Device

The TC-T7-H has a built-in lithium battery. To charge, connect the provided USB cable to the Micro USB charging interface on the device and a 4.5V power source. The charging indicator light will show green when fully charged.

5.2 Initial Self-Test

It is recommended to perform a self-test for calibration and to ensure proper functionality. The self-test procedure is demonstrated in the video below. During the self-test, the device will prompt you to isolate the probe at approximately 22% completion. Ensure no components are inserted during this step.

▶ **Watch video online**

Aideepen T7-H High Precision Transistor Tester

Video: This video demonstrates the self-test mode of the Aideepen T7-H High Precision Transistor Tester, showing the progress bar and

the prompt to remove the probe at 22% completion.

6. Operating Instructions

The TC-T7-H automatically detects the component type and displays its parameters. Always ensure components are discharged before testing.

6.1 Component Testing

Insert the component leads into the appropriate pins of the ZIF socket (pins 1, 2, or 3). Close the ZIF socket lever and press the "Start" button. The tester will automatically identify the component and display its characteristics.



Image: Close-up view of the TC-T7-H's ZIF socket, indicating the transistor test area and Zener diode test area. A warning reminds users to discharge components before testing.

6.1.1 Testing Capacitors

Insert the capacitor leads into any two or three of the test pins (1, 2, 3). The display will show capacitance value (e.g., 921.3uF) and ESR (Equivalent Series Resistance). The video demonstrates testing a 1000uF capacitor from 0:04 to 0:14.

6.1.2 Testing Inductors

Connect the inductor leads to the test pins. The tester will display the inductance value (e.g., 0.02mH) and resistance. The video demonstrates testing a 0.02mH inductor from 0:15 to 0:23.

6.1.3 Testing Resistors

Place the resistor leads into the test pins. The display will show the resistance value (e.g., 10.00kΩ). The video demonstrates testing a 10kΩ resistor from 0:24 to 0:31, and a 1kΩ resistor from 0:55 to 1:02 using external leads.

6.1.4 Testing Diodes

Insert the diode leads into the test pins. The tester will identify it as a diode and show its forward voltage (Uf) and capacitance (C). The video demonstrates testing a diode from 0:32 to 0:39.

6.1.5 Testing Transistors (MOSFET, BJT)

Insert the transistor leads into the test pins. The tester will identify the transistor type (e.g., N-B-MOS, BJT-NPN), pinout (Base, Collector, Emitter or Gate, Drain, Source), and relevant parameters like Vgs, Cgs, and current gain (hFE). The video demonstrates testing an 80NF70 MOSFET from 0:40 to 0:47 and an s9014 BJT from 0:48 to 0:54.

6.2 IR Decoder Function

After a component detection is completed, you can test an infrared remote control. Point the infrared remote control at the tester's "IR" test hole. Press a key on the remote control, and the tester will display the user code, data code, and the corresponding infrared waveform after successful decoding.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** If the device will not be used for an extended period, charge it periodically to maintain battery health.

8. Troubleshooting

- **"Testing..." or No Reading:** Ensure the component is properly inserted into the ZIF socket and the lever is closed. Verify the component is not damaged.
- **Inaccurate Readings:** Ensure capacitors are fully discharged before testing. Perform a self-test to recalibrate the device.
- **Device Not Turning On:** Check battery charge level. Connect to a 4.5V USB power source to charge.
- **"Pls Isolate Probe!" during Self-Test:** This message indicates that the test pins are not isolated. Remove any components or test leads from the ZIF socket and ensure nothing is touching the pins.

9. Specifications

Feature	Value
Model Number	LCR-T7-H LCR Meter
Brand	Aideepen
Power Source	Battery Powered (Built-in Lithium Battery)
Min. Operating Voltage	0.1 Volts (DC)
Capacitor Test Range	25pF - 100mF
Display	Graphic LCD Display
Dimensions	4.37 x 3.23 x 1.93 inches
Weight	4.66 ounces

10. Warranty and Support

Aideepen offers a 6-month extended warranty for this product. For any quality issues or technical assistance, please contact Aideepen customer service. They provide 24/7 friendly customer service.
A detailed User Guide in PDF format is also available for download:

Download User Guide (PDF)

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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

Open the live page

https://manuals.plus/asin/B07RZRSBC5

More documents and user manuals: **https://manuals.plus/**