Hantek CC-650

Hantek CC-650 AC/DC Current Clamp Meter User Manual

Model: CC-650 | Brand: Hantek

1. Product Overview

The Hantek CC-650 is a versatile AC/DC current clamp meter designed for precise measurement of electrical currents. It features a wide effective measurement range from 20mA to 650A DC and an AC/DC frequency range up to 400Hz, making it suitable for various applications including circuit measurement, malfunction analysis, and motor drive diagnostics.



Figure 1: Front view of the Hantek CC-650 AC/DC Current Clamp Meter, showing the clamp jaws, function switch, and BNC connector.

2. Setup Instructions

Before operating the Hantek CC-650, ensure proper connection to your multimeter or oscilloscope.

1. **Connect the BNC Connector:** Connect the BNC connector of the CC-650 clamp to the BNC input connector of your oscilloscope or multimeter.
2. **Power On:** Set the power switch on the clamp from the "Off" position to either the "1mV/100mA" or "1mV/1A" position. The green LED indicator will illuminate, confirming the clamp is powered on.
3. **Multimeter Range Setting:** If using a multimeter, set its range to 200mV AC or 200mV DC, depending on the type of current you intend to measure.



Figure 2: The Hantek CC-650 with its integrated BNC cable, ready for connection to a measurement device.

3. Operating Instructions

Follow these steps for accurate current measurement using the Hantek CC-650.

1. **Select Current Range:** For currents not exceeding 20 amperes, set the current clamp range to "1mV/100mA". For higher currents, use the "1mV/1A" range.
2. **Zero Adjustment (DC Current):** Before measuring DC current, press and hold the zero adjustment knob on the clamp until your connected multimeter reads zero. Release the knob once zeroed. If using an oscilloscope, set it to DC coupled mode for DC current measurement.
3. **Clamp the Conductor:** Carefully open the jaws of the clamp and position them around the single current-carrying conductor you wish to measure. Ensure the conductor is centered within the jaws for optimal accuracy.
4. **Read Measurement:** Observe the current reading on your connected multimeter or oscilloscope.

4. Maintenance

To ensure the longevity and accuracy of your Hantek CC-650, follow these maintenance guidelines:

- **Cleaning:** Wipe the exterior of the clamp meter with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Replacement:** If the "LO BAT" indicator illuminates, replace the internal battery promptly to ensure proper operation. Refer to the battery compartment for specific battery type and replacement instructions.
- **Handle with Care:** Avoid dropping the device or subjecting it to strong impacts, as this can damage internal components or the clamp mechanism.

5. Troubleshooting

If you encounter issues with your Hantek CC-650, consider the following common problems and solutions:

- **No Power/Indicator Light Off:**
  - Check if the power switch is in the "ON" position (1mV/100mA or 1mV/1A).
  - Verify the battery level. Replace batteries if the "LO BAT" indicator is on or if the device does not power on.
- **Inaccurate Readings:**
  - Ensure the BNC connector is securely attached to your multimeter/oscilloscope.
  - Perform the zero adjustment procedure for DC current measurements.
  - Confirm the correct range (1mV/100mA or 1mV/1A) is selected on the clamp meter for the current being measured.
  - Ensure only one conductor is clamped within the jaws. Clamping multiple conductors or the entire cable will result in incorrect readings.
- **Zero Adjustment Button Sticks/Does Not Work:**
  - Gently press the button multiple times to dislodge any debris. If the issue persists, contact customer support.

6. Technical Specifications

Feature	Specification
Model Number	CC-650
AC/DC Frequency Range	Up to 400Hz
Effective Measurement Range	20mA to 650A DC
Product Dimensions	5.12 x 3.15 x 7.87 inches
Item Weight	10.4 ounces
Power Source	Battery Powered
Connector Type	BNC Connector
Manufacturer	Qingdao Hantek Electronic Co., Ltd.
Country of Origin	China

7. Warranty Information

Hantek products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Hantek website. Keep your purchase receipt as proof of purchase for any warranty claims.

8. Customer Support

For technical assistance, product inquiries, or service requests, please contact Hantek customer support through their official channels. Visit the Hantek website for contact information, FAQs, and additional resources.

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

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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