

[Manuals.plus](#) /

› [MakerHawk](#) /

› MakerHawk Electronic Load Tester User Manual

## **MakerHawk H1168EJBUK89PN55OQTRXCJK**

# **MakerHawk Electronic Load Tester User Manual**

Model: H1168EJBUK89PN55OQTRXCJK

### **INTRODUCTION**

The MakerHawk Electronic Load Tester is a versatile device designed for testing battery capacity, power supplies, and various charging devices. It features adjustable constant current discharge, voltage and current measurement, and multiple protection settings. This manual provides essential information for safe and effective operation of your device.

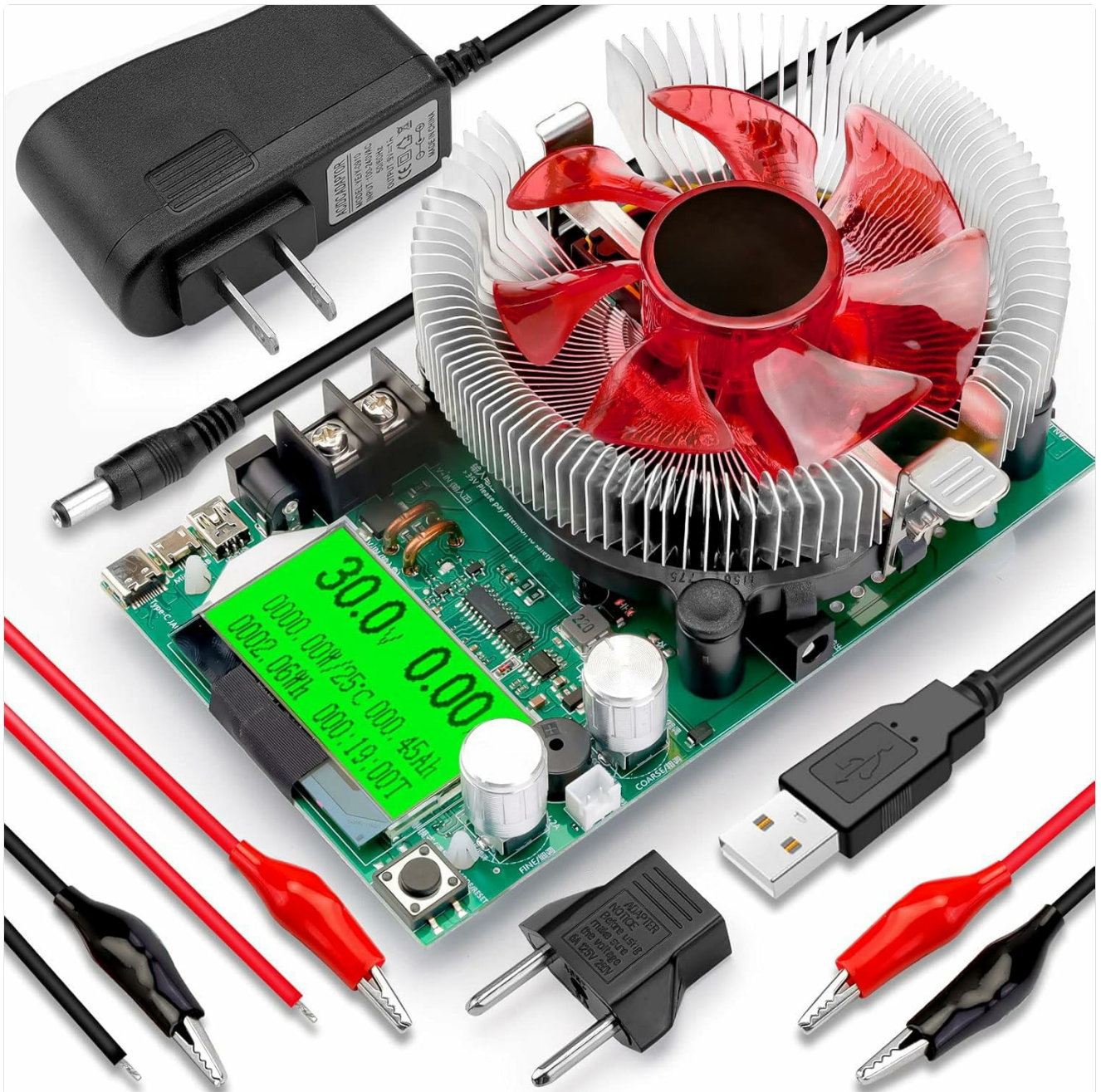


Image: The MakerHawk Electronic Load Tester, showcasing its main components including the circuit board with a large red fan, an LCD display, control knobs, and various connection ports. Accessories like a power adapter, alligator clips, and USB cables are also visible.

## SAFETY PRECAUTIONS

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

- **Prevent Burning Warning:** When testing high-voltage batteries or large power sources, ensure both current adjustment knobs are turned fully counter-clockwise to their minimum (zero) position before connecting the power source. After connection, slowly adjust the current knob according to the desired power. Do not instantly transfer to full power, as this can cause excessive instantaneous power load, risking damage to the discharge tube.
- The body discharge power must not exceed 150W to prevent burnout.
- Ensure proper polarity when connecting batteries or power supplies to avoid damage. The battery terminal polarity is indicated on the device.

- Use appropriate gauge wires for higher amperage tests to prevent overheating of cables.



### Prevention Warning:

When testing a high-voltage battery or high-power power supply, be sure to turn both current knobs counterclockwise to **0** before connecting them.

After connecting, **Slowly Adjust** the current knobs based on the displayed current and power.

**Big adjustments** can significantly **burn out** the load and **damage** the tubes!

Image: A visual representation of the prevention warning, emphasizing the importance of turning current knobs to zero before connecting high-voltage or high-power sources. It shows the device connected to an external power supply and a larger electronic load.

## PRODUCT OVERVIEW

Familiarize yourself with the components of your Electronic Load Tester:

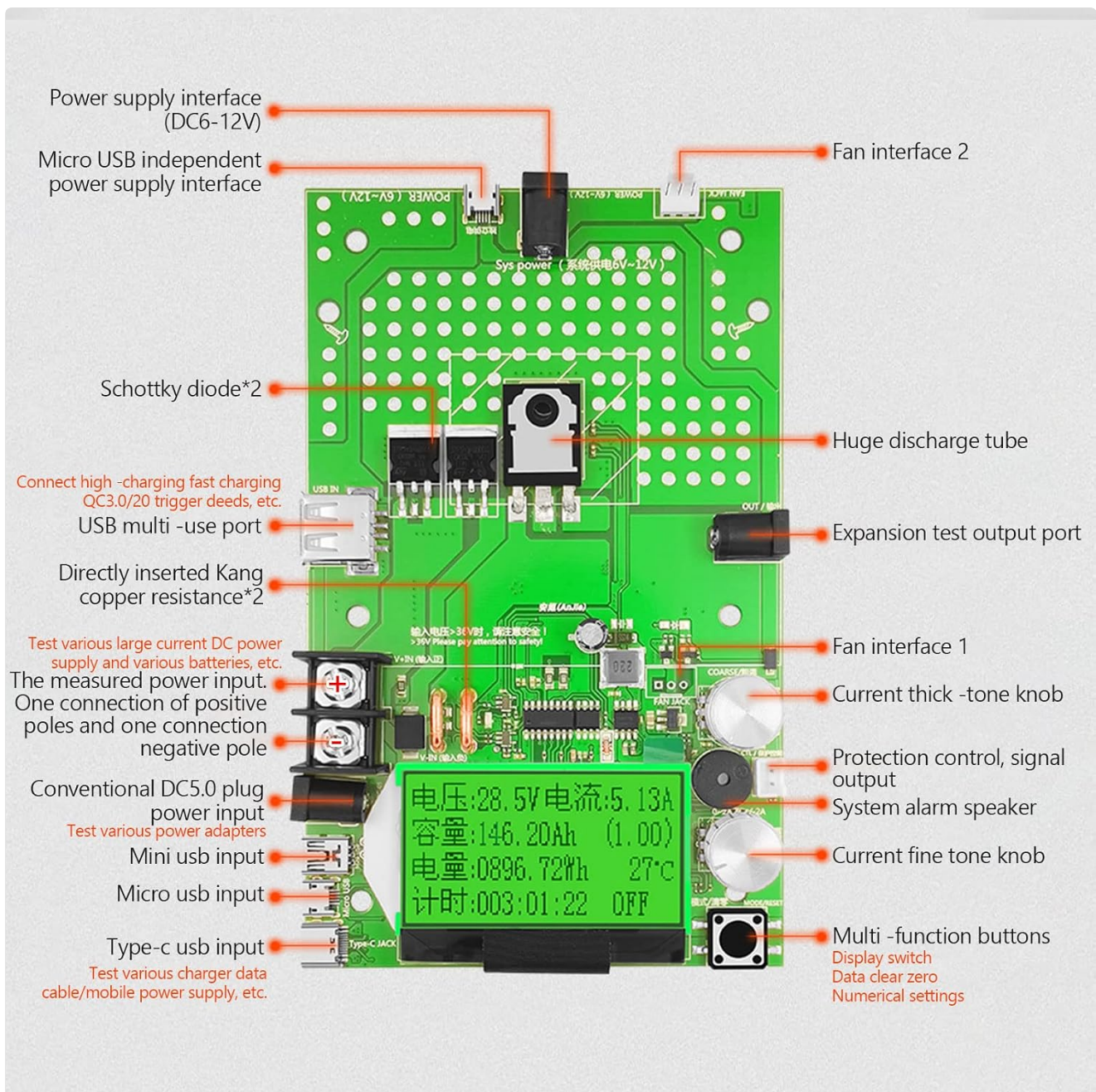


Image: A detailed diagram of the MakerHawk Electronic Load Tester circuit board, labeling key components such as power supply interfaces (DC5.0, Micro USB), Schottky diodes, huge discharge tube, fan interfaces, current adjustment knobs (coarse and fine), multi-function buttons, and various input ports (Mini USB, Micro USB, Type-C USB).

### Key Components:

- **Power Supply Interfaces:** DC6-12V DC5.0 and DC6-12V Micro USB.
- **Current Adjustment Knobs:** Two knobs for precise current control (coarse and fine).
- **Display Screen:** Shows voltage, current, capacity, power, temperature, and time.
- **Multi-function Buttons:** Used for setting parameters and resetting data.
- **Input Ports:** USB, Mini USB, Micro USB, Type-C USB for various testing scenarios.

### SETUP AND CONNECTION

Follow these steps to set up your Electronic Load Tester:

1. **Powering the Device:** Connect the tester to a DC6-12V power source using either the DC5.0 power supply port or the Micro USB power supply port.
2. **Initial Current Adjustment:** Before connecting any battery or power supply for testing, ensure both the coarse and fine current adjustment knobs are turned fully counter-clockwise to their minimum (zero) position. This is crucial to prevent sudden high current draw.
3. **Connecting the Load:**
  - For batteries or DC power supplies, use the provided alligator clips. Connect the positive (+) terminal of the battery/supply to the positive input of the tester and the negative (-) terminal to the negative input.
  - For USB devices (e.g., power banks, chargers), use the appropriate USB input port (USB, Mini USB, Micro USB, Type-C USB).
4. **Slowly Adjust Current:** Once the load is connected, slowly turn the current adjustment knobs clockwise to increase the discharge current to your desired level. Observe the display for real-time current and power readings.

## OPERATION

The Electronic Load Tester offers various measurement and testing capabilities:

### Measurement Ranges:

- **Voltage Measurement:** 0.00V ~ 200V
- **Current Measurement:** 0.00A ~ 20A
- **Power Measurement:** 0000.00W ~ 150W ( $P = U \times I$ )

For example, at 10V input, approximately 18A discharge current is possible. At 20V input, approximately 9A; at 30V input, approximately 6A.

### Keystroke Operations:

The multi-function button allows for various settings and data resets:

- **Long Press:** Resets all data (mAh, Wh, time).
- **Double Press:** Resets capacity data (mAh).
- **Triple Press:** Resets power data (Wh).
- **Four Presses:** Resets time data (00:00:00).
- **Five Presses:** Toggles auto standby and discharge countdown.
- **Seven Presses (No Load):** With no load connected, performs current zero calibration and environmental temperature accurate calibration.

### Setting Alarm Thresholds:

The device can be configured with various alarm settings to protect the connected device and the tester itself. These settings are typically adjusted using the multi-function button with specific click patterns (e.g., three-click for decrement, double-click for increment) to navigate and set values.

- **Overvoltage Warning:** Default 300V. Adjustable range 1-300V. If input voltage exceeds this, an alarm sounds.

- **Low Voltage Warning:** Default 0.00V. Adjustable range 0.00-290V. If input voltage drops below this, an alarm sounds.
- **Overcurrent Warning:** Default 100A. Adjustable range 0.2-150A. If input current exceeds this, an alarm sounds.
- **Power Overload Warning:** Default 185W. Adjustable range 1.00W-150A. If input power exceeds this, an alarm sounds.



Click the button to switch to the Low-voltage discharge mode: <0.00V (the system default is 0.00V), you can adjust the Low-voltage alarm voltage (0.00-290V) by the three-click button (-) or double-click the button (+). Press the button continuously (-) or continuous (+) to quickly adjust the low-voltage voltage value, release the button to complete the setting!

This main function, when the input voltage is lower than this value, the load tester will give a cramped alarm sound, thus reminding the user to stop the product discharge protection product equipment!



Click the button to switch to the over-current threshold mode: >100A (the system default value is 100A). You can adjust the over-current alarm current (0.2-150A) by using the three-stroke button (-) or double-click button (+). Press the button continuously (-) or continuous (+) to quickly adjust the overcurrent alarm value, release the button and complete the setting!

This main function, when the input current is greater than this value, the load tester will give a cramped alarm sound, thus reminding the user to stop the product discharge protection product



Click the button to switch to the power threshold mode: >185W (the system default value is 185W). You can adjust the power alarm value (1.00W-150A) by long-pressing the three-click button (-) or double-click the button (+). Press the button continuously (-) or continuous (+) to quickly adjust the power alarm value, release the button and complete the setting!

This main function, when the input power is greater than this value, the load tester will emit a cramped alarm sound, thus reminding the user to stop the product discharge protection product equipment!

Image: A visual guide to setting alarm thresholds for the Electronic Load Tester, including Overvoltage, Lowvoltage, Overcurrent, and Power overload warnings, showing how the display changes to indicate an alarm.

## Testing Fast Charge Protocols:

The tester supports testing Qualcomm QC2.0/3.0 and PD fast charge voltages. To trigger these, you must use a compatible QC/PD charger and a voltage trigger inducer to output the desired voltages (5V/9V/12V/15V/20V) for aging tests.

# Test Qualcomm QC2.0/3.0 fast charge, and also detect PD fast charge voltage

First of all, you must use Qual comm QC2.0/3.0 or PD charger, and then use QC2.0/3.0 voltage to **trigger the induction**, to **ensure the charger outputs power**. so that you can trick Output 5V/9V/12V/15V/20V and other voltages, can only use Qual comm QC/PD charger to induce high -voltage aging testing.

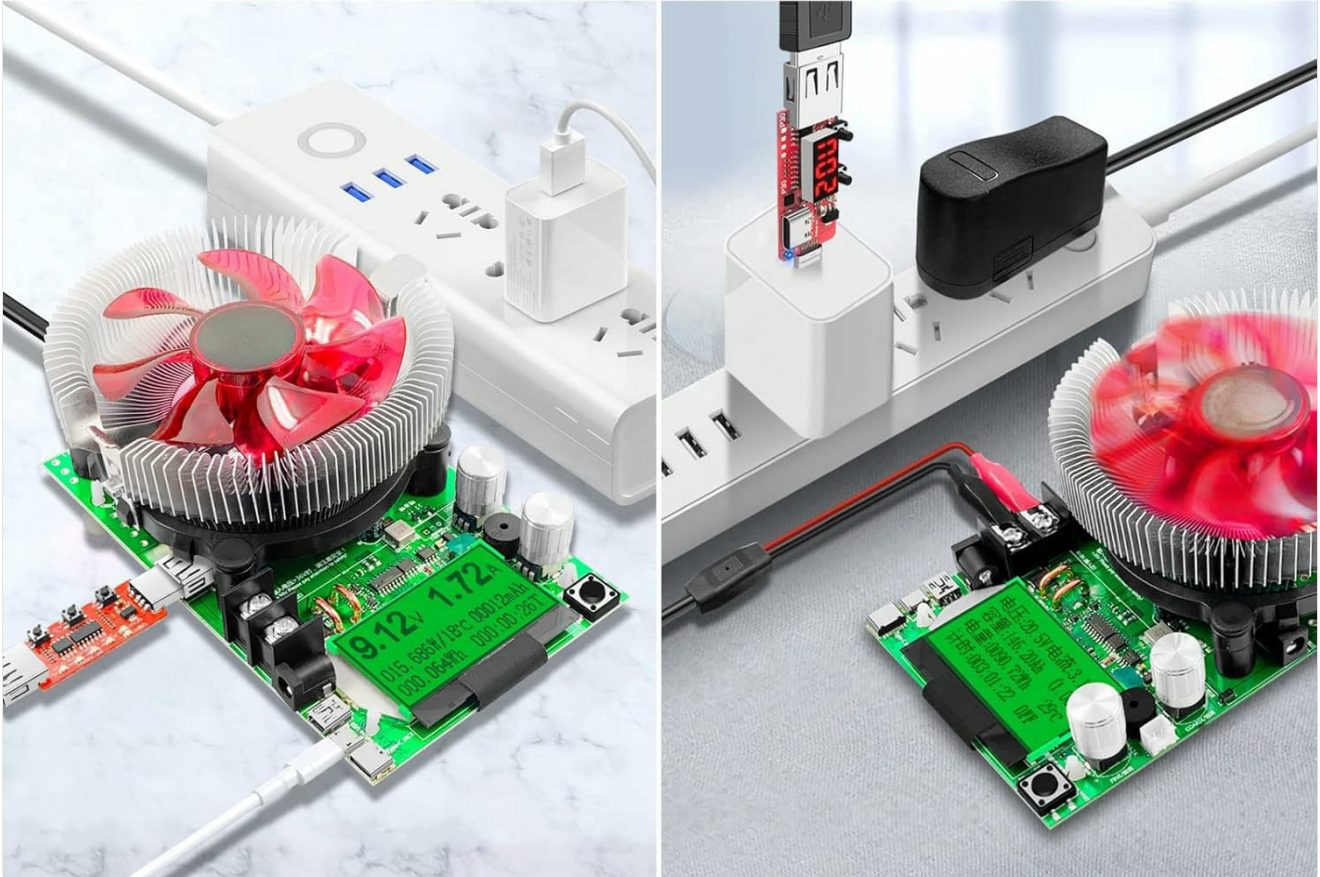


Image: The Electronic Load Tester connected to a power strip, demonstrating its ability to test Qualcomm QC2.0/3.0 and PD fast charge protocols. It shows the device connected to a USB charger and a fast charge trigger module.

## Applications:

The device can be used to test a variety of electronic components and power sources:

- Various types of batteries (e.g., Li-ion, NiMH, Lead-acid)
- Data cables for voltage drop and current capacity
- DC power supplies
- Charging treasures (power banks)
- USB chargers
- AC/DC power adapters



Image: A collage of images illustrating various applications of the Electronic Load Tester, including testing different types of batteries, data cables, DC power supplies, power banks, USB chargers, and AC/DC adapters.

## MAINTENANCE

The MakerHawk Electronic Load Tester is designed for durability and requires minimal maintenance. Adhering to the following guidelines will help ensure its longevity:

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents. Ensure no liquids enter the device.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Fan Check:** Periodically inspect the cooling fan for any obstructions or debris. Ensure the fan blades can spin freely to maintain optimal cooling during operation.
- **Cable Inspection:** Regularly check all connecting cables and alligator clips for signs of wear, damage, or loose connections. Replace any damaged cables immediately.
- **Proper Handling:** Avoid dropping the device or subjecting it to strong impacts, which could damage internal

components.

## TROUBLESHOOTING

If you encounter issues with your Electronic Load Tester, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Device does not power on.	No power supply connected. Incorrect power supply voltage (not 6-12V). Faulty power adapter or Micro USB cable.	Ensure a DC6-12V power supply is connected to either the DC5.0 or Micro USB port. Verify the power supply output voltage. Try a different power adapter or Micro USB cable.
No current discharge or incorrect readings.	Current knobs are at minimum (zero). Incorrect connection polarity. Load device is not supplying power or is faulty. USB input not working for specific devices.	Slowly turn current adjustment knobs clockwise. Check and correct the polarity of connections. Verify the load device (battery/power supply) is functional. Ensure the USB device is compatible and try different USB ports or cables.
Device alarms frequently.	Overvoltage, low voltage, overcurrent, or power overload threshold exceeded.	Check the input voltage, current, and power against the set alarm thresholds. Adjust the alarm settings if necessary, or reduce the load/input power.
Cooling fan not spinning.	Obstruction preventing fan rotation. Fan malfunction.	Carefully inspect the fan for any bent heat sink fins or debris that might be blocking it. Gently clear any obstructions. If the fan still does not spin, contact support.

## SPECIFICATIONS

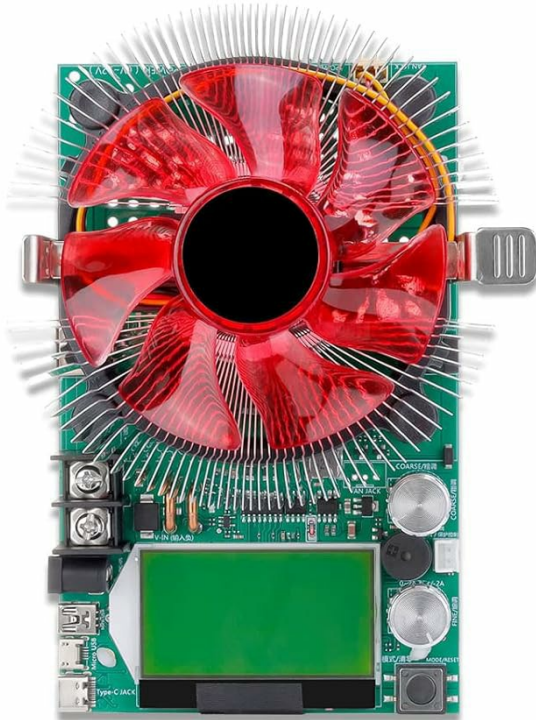
Detailed technical specifications for the MakerHawk Electronic Load Tester:

Feature	Specification
Voltage Measurement Range	0.00V ~ 200V
Current Measurement Range	0.00A ~ 20A
Power Measurement Range	0000.00W ~ 150W
Capacity Cumulative Range	0 ~ 999.999AH

<b>Feature</b>	<b>Specification</b>
Power Accumulative Range	0 ~ 9999.9WH
Impedance Measurement Range	1 ~ 999.9 ohms
Temperature Measurement Range	0 ~ 99 degrees Celsius
Timing Maximum Time	999 hours 59 minutes 59 seconds
Refresh Time	>500MS/time >500MS/TIMES
Measurement Rate	About 0.5 times/second
Overvoltage Reminder Setting Range	1 ~ 200V
Low Voltage Reminder Setting Range	0 ~ 190V
Overcurrent Reminder Setting Range	0.2 ~ 100A
Display Type	Micro-power liquid crystal module LCM black font green backlight Chinese and English display
Product Dimensions	156mm * 96mm * 58mm (6.14 x 3.78 x 2.28 inches)
Working Temperature	-10 ~ +60 degrees Celsius
Working Humidity	10 ~ 80 (NO DOUBT)
Working Air Pressure	80 ~ 106KPA
Item Weight	83 Grams (2.93 ounces)
Model Number	H1168EJBUK89PN55OQTRXCJK

## Packing list

156 mm  
6.14 inch



96 mm  
3.78 inch

### Packing list

- 2 \* Alligator clip
- 1 \* USB Alligator
- 1 \* 9V/1A ADP
- 1\* US gauge charging head
- 1\* Electronic load



Image: The packing list and physical dimensions of the Electronic Load Tester, showing the device, alligator clips, USB alligator cable, power adapter, and US plug adapter.

## WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official MakerHawk channels.

- **Official User Guide (PDF):** For detailed instructions and additional information, you can download the official user guide [here](#).
- **MakerHawk Store:** Visit the official MakerHawk store on Amazon for product information and customer service: [MakerHawk Store](#).
- **Customer Service:** For specific inquiries or technical assistance, please contact MakerHawk customer support through their official website or the platform where the product was purchased.

*Note: No specific warranty period is provided in the product data. Please refer to the manufacturer's official documentation or contact customer support for warranty details.*

