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› Heemol USB Tester 4-36V 10A PD Power Meter - IPS LCD Color Multimeter User Manual

## Heemol 1 PCS

# Heemol USB Tester 4-36V 10A PD Power Meter

Model: 1 PCS

## 1. INTRODUCTION

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The Heemol USB Tester is a compact and versatile digital multimeter designed for precise real-time measurement of various electrical parameters in USB-C devices. It is ideal for checking the charging performance of power banks, PD chargers, mobile phones, and power stations. Featuring an enhanced 0.96-inch IPS LCD color screen, it provides clear and dynamic data display from all viewing angles.

This device supports a wide range of measurements including voltage, current, power, capacity statistics, fast charging protocols, residual ripples, and cable resistance. Its professional safety features include over-voltage and over-current protection, bidirectional current measurement, and autonomous data storage in case of power loss.



Figure 1: Heemol USB Tester demonstrating bidirectional current testing with a laptop and power bank.

## 2. PACKAGE CONTENTS

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- 1 x Heemol USB Tester (Model: 1 PCS)
- User Manual (this document)

## 3. SETUP

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The Heemol USB Tester is designed for plug-and-play operation. Follow these steps for initial setup:

1. **Unpack the Device:** Carefully remove the USB Tester from its packaging.
2. **Remove Protective Film:** Gently peel off any protective film from the display screen before use to ensure optimal visibility.
3. **Connect to Power Source:** Plug the USB Tester into a USB-C power source (e.g., charger, power bank, computer USB-C port).
4. **Connect Device to Test:** Connect the device you wish to test (e.g., smartphone, tablet, laptop) to the output port of the USB Tester. The display will automatically power on and begin showing real-time measurements.

# COMPATIBLE WITH VARIOUS USB-C DEVICES



Figure 2: The USB Tester is compatible with various USB-C devices.

## 4. OPERATING INSTRUCTIONS

The Heemol USB Tester provides multiple display interfaces to show various measurement parameters. Use the integrated button to navigate through these screens.

### 4.1 Display Navigation

- **Short Press Button:** A short press of the button will cycle through different display pages, showing various combinations of voltage, current, power, capacity, energy, and fast charging protocol information.
- **Long Press Button:** A long press may reset certain parameters or enter specific settings menus, depending on the current display mode. Refer to the detailed interface parameters below.



Figure 3: Changing display pages with a click of a button.

#### 4.2 Understanding Display Parameters

The tester's IPS LCD screen provides detailed information. Below is an explanation of common parameters and their indicators:

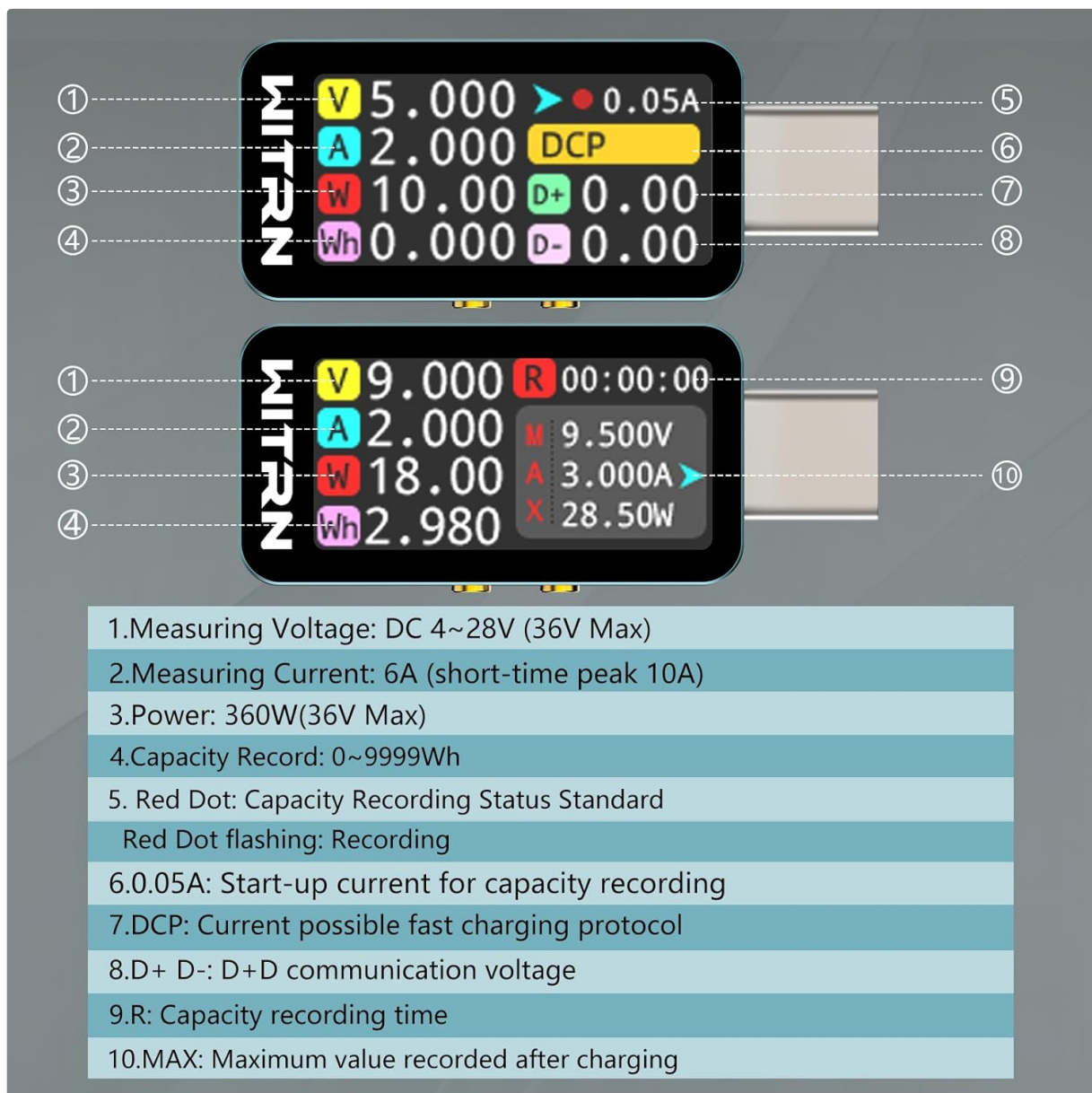


Figure 4: Overview of main interface parameters.

- **V (Voltage):** Displays the measured voltage in Volts (V). Range: DC 4-28V (max 36V).
- **A (Current):** Displays the measured current in Amperes (A). Range: 6A (short-term peak 10A).
- **W (Power):** Displays the calculated power in Watts (W). Max: 360W (at 36V).
- **Wh (Energy):** Displays the accumulated energy in Watt-hours (Wh). Range: 0-9999Wh.
- **mAh (Capacity):** Displays the accumulated capacity in Milliampere-hours (mAh). Range: 0-9999Ah.
- **R (Recording Time):** Indicates the duration of capacity recording.
- **Red Dot:** Indicates the capacity recording status standard. A flashing red dot means recording is in progress.
- **0.05A:** Represents the start-up current for capacity recording.
- **DCP:** Indicates the detected fast charging protocol (e.g., PD3.0/2.0, QC3.0/2.0).
- **D+, D-:** Displays communication line voltage.
- **Ripple:** Shows ripple voltage (e.g., 160mV @ 38KHz).
- **MAX:** Indicates the maximum value recorded after power-up.
- **AVG:** Average value calculated automatically since power-on.
- **Blue Arrow:** Indicates current direction.

Figure 5: Capacity records can be saved offline.

## 5. MAINTENANCE

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To ensure the longevity and accurate performance of your Heemol USB Tester, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the device. Avoid using abrasive cleaners or solvents that could damage the screen or casing.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures. The compact design and aluminum case provide good protection.
- **Handling:** Handle the device gently. Avoid dropping it or subjecting it to strong impacts.
- **Protective Film:** Keep the screen free from scratches. If the original protective film is removed, consider applying a universal screen protector if desired.



Figure 6: The USB Tester features a durable one-piece aluminum case.

## 6. TROUBLESHOOTING

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If you encounter issues with your Heemol USB Tester, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Display does not turn on.	No power supply or insufficient power.	Ensure the tester is properly connected to a working USB-C power source. Check if the power source is active.
Inaccurate readings.	Loose connection, faulty cable, or device incompatibility.	Ensure all connections are secure. Try a different USB-C cable or test with another device/charger to isolate the issue.
Capacity recording not working.	Start-up current not met (0.05A) or recording not initiated.	Ensure the current draw is above 0.05A. Check the display for the flashing red dot indicating active recording.
Screen frozen or unresponsive.	Temporary software glitch.	Disconnect the tester from all power sources, wait a few seconds, then reconnect.

## 7. SPECIFICATIONS

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Parameter	Value
Brand	Heemol
Model Number	1 PCS
Product Dimensions (L x W x H)	40 x 16.1 x 8.1 mm (without USB-C plug)
Weight	0.18 grams
Color	Grey
Power Source	Electric Cable (USB-C)
Measuring Voltage Range	DC 4-28V (Max 36V)
Measuring Current Range	6A (Short-time peak 10A)
Max Power Measurement	360W (at 36V)
Capacity Record Range	0-9999Ah / 0-9999Wh
Voltage Resolution	0.0001V
Current Accuracy	0.0001A (Bidirectional detection)
CPU	High-speed 32-bit processor
Core-ADC	INA226 16-bit independent ADC-chip
Display	0.96-inch IPS LCD Color Screen (80x160 resolution)
Fast Charging Protocols Supported	PD3.0/2.0, QC3.0/2.0 (Compatible with PD/PPS/EPR levels)
Compliant Specifications	CE, ETL, RoHS
Data Storage	EEPROM (Autonomous data storage on power loss)
Firmware Upgrade Method	USB-HID driver-free
Bluetooth BLE Interface	Not supported

## 8. WARRANTY AND SUPPORT

Heemol products are manufactured to high-quality standards. For any technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact your retailer or Heemol customer support directly. Please retain your proof of purchase for warranty claims.