

KJ-KayJI 2 in 1 Multifunctional Digital Multimeter Tester

Tester Latest Button Functions

- Press Once-Click: Switch the Display Interface
- Fast Double-Click: Capacity mAH Clear
- Fast Press Three-Click: Current WH Clear
- Fast Press Four-Click: Time Clea
- Fast Press Five-Click: Switch Data Storage Group (NO.X)
- Long Press Button, Capacity, Power, Time, Clear the current group (mAh, Wh, 00:00:00)
- Switch to the Screen rotation interface Long Press the Screen to Flip, Other interfaces can only long press to clear data.
- Voltage and current warning interface:2 click to add, 3 click to reduce,When add and reduce, long press is continuous addition and subtraction;



Tips :

- If there is current in the tester at no load, Press and hold the tester button,insert the device,and calibrate to zero. During calibration,the output must not have any current consumption.

Tester highlights:

- When inserting the tester into the USB-C device and USB C Cable/usb a to usb c Cable, you must use the OTG adapter (Micro-usb adapter) or Micro-usb Cable to insert the Micro-USB INPUT Port of the USB Tester to trigger the PD charging function. The tester can be used normally.

Scope of application:

- Micro-usb cable, usb a to usb c Cable, usb c to usb c Cable. USB A Charger, USB C Charger, Power Bank and other USB devices.

KJ-KayJI Personal DIY portable

Test various cables

monitor charging status Charge your phone safely and check data in real time

Test various USB / Type-C chargers

Plug the tester into the charger and connect an adjustable current loader, Perform current adjustment and test the current and voltage data of the charger. Let the charger be connected to the current loader for a long time to check the stability of the charger.

Charge test / 1 X 2

Can meet the output of two devices at the same time, support Type-C devices, intelligent charging scheme, and ensure the safety of the device.

Laptop Charge Monitoring

When you power the Laptop, connect KJ-KayJI test meter to monitor the voltage, current, capacity, power, temperature and other technical parameter information in real time.

Measurement Ranges

Voltage measuring range: 3.60V ~ 32 V

Current measuring range: 0.00 ~ 5.1 A

Capacity Range: 0 ~ 99999 mAh

Electric Energy Range: 0 ~ 999999 mWh

Power Range: 000.00 ~ 150.00W

Resistance Measuring Range: 1 ~ 999.9Ω

Temperature Range: 0 ~ 80°C

Maximum Timing: 999 hours 59 min 59 s

USB D+ Voltage Range: 0-2.999V

USB D- Voltage Range: 0-2.999V

Phone Charge Completed Reminder Threshold: <2W/0.5h

Measuring Rate: about 0.5 time/s Dimension: 60*60*11mm

Self Current Consumption: <0.02A

Working Humidity: 10 ~ 80

Voltage Resolution: 0.01 V

Current Resolution: 0.01 A

Capacity Resolution: 0.001Ah

Electricity Energy: 0.001Wh

Power Resolution: 0.01W

Resistance Resolution: 0.1Ω

Temperature Resolution: 1°C

Timing Resolution: 1s

Resolution: 0.001V

Resolution: 0.001V

Working Temperature: -10 ~ +60°C

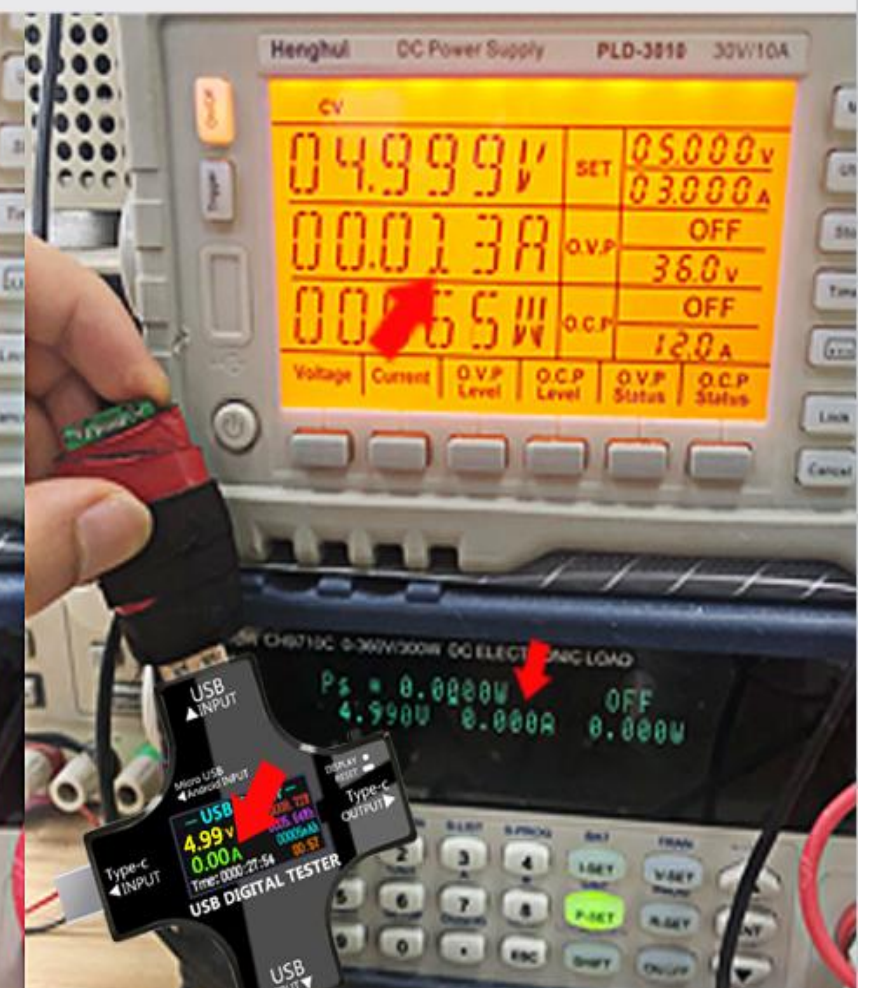
Current accuracy evaluation

The voltage difference shown in the figure is due to the cable voltage difference



Voltage accuracy evaluation

Large professional instrument precision test



Test Power Bank/Phone Capacity

Tester Power Bank

Fully charge the power bank, insert it into the tester, clear the mAh of the tester, connect to Load to quickly discharge to obtain mAh capacity, multiply by 90%.

Tester Phone Capacity

The phone is fully charged, plugged into the tester, cleared Wh data, connected to Load, quickly discharged, and acquired data.

Electricity: $\text{Wh} / 3.75\text{V (Phone battery voltage)} = \text{Capacity value} \times 1000 \times 90\% = \text{Phone mAh capacity. (which is close to the phone battery capacity)}$



Partial charging protocol voltage logic table

Protocol Type	Corresponding voltage value of 4 lines of fast charger protocol for various USB chargers				Output voltage of corresponding protocol
	V-	D+	D-	V+	
Qualcomm 2.0 fast charge protocol	0V	0.6V	0V	5V (Default)	Qualcomm QC2.0 default 5V output
	0V	3.3V	0.6V	9V	Qualcomm QC2.0 default 9V charging
	0V	0.6V	0.6V	12V	Qualcomm QC2.0 default 12V charging
	0V	3.3V	3.3V	20V	Qualcomm QC2.0 B protocol high voltage 20V charging
iPhone Fast Charge Agreement	0V	2.4V	2.4V	4.8~5.2V	iPad 2.4A current charging mode
	0V	2.7V	2V	4.8 ~ 5.2V	iPhone 2.1A current charging mode
	0V	2V	2.68V	4.8 ~ 5.2V	iPhone 1A current charging mode
	0V	2V	2V	4.8 ~ 5.2V	iPhone 0.5A current charging mode
Android DCP identification (BC 1.2 protocol)	0V	Short circuit D+D-		4.8 ~ 5.2V	Android phone fast charge recognizes high current output
Samsung phone fast charge mode	0V	1.2V	1.2V	4.8 ~ 5.2V	Samsung phone fast charge recognizes high current output

The above information is provided by various mobile phone manufacturers. For more agreement information, please check on Google.

1-3A current adjustment test is provided, and the connected load of the tester is inserted into the charger, Cable, Power Bank, Phone.

1. Test the charging quality of the charger and cable, adjust the current 1-3A, and check whether the current conforms to the current provided by the charger.

For example, the charger provides 5V-3A, the inserted load is adjusted to 3A, and the tester displays 5V-3A. The charger has excellent quality and fast charging speed; It displays 4.5V-2.4A, the quality of the charger is average, and it cannot provide 3A fast charging; When it is adjusted to 2A, the tester displays 5V-2A and provides 2A charging; It shows 5V-1.5A, which is of poor quality and cannot provide 5V-2A charging.

2. Test the cable and use the charger that has been tested and determined to be of excellent quality. Adjust the current after connecting the load tester. If the voltage and current meet the corresponding data, the cable is excellent; If the voltage and current are lower than the corresponding current, the cable quality is poor and the charging speed is slow.

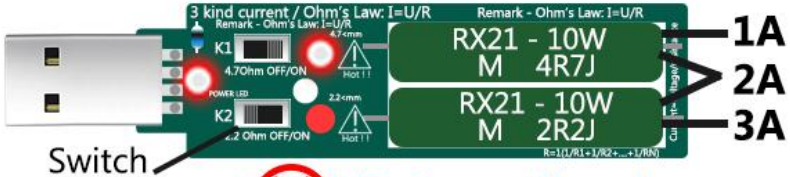
3. **Test Power Bank.** Clear the tester data, connect the load, discharge the 3A current rapidly, and check the tester Mah after discharge, $\text{Mah} * 90\% = \text{Power Bank power}$.

Test the fast charging protocol

After connecting the mobile phone with the charger, switch the page to "USB 4-wire detection interface". If "FCP" and "FAST" are displayed, the charger provides fast charging. After confirmation, insert the cable to test the fast charging. If it is not displayed, the cable does not provide fast charging.

[illegible]

Adjustable current discharge device



 Bad quality charger

1A current through,
the charger quality is
excellent.

2A current through,
the charger quality is
excellent.

3A current through,
the charger quality is
excellent.

3A test failed
3A current does not pass,
the charger does not
support 3A current.

Test Power Bank, USB A/USB C Charger
USB Charger Station

