AVHzY UD18

AVHzY UD18 USB C Tester Instruction Manual

Comprehensive guide for operating your UD18 Digital Multimeter

1. Introduction

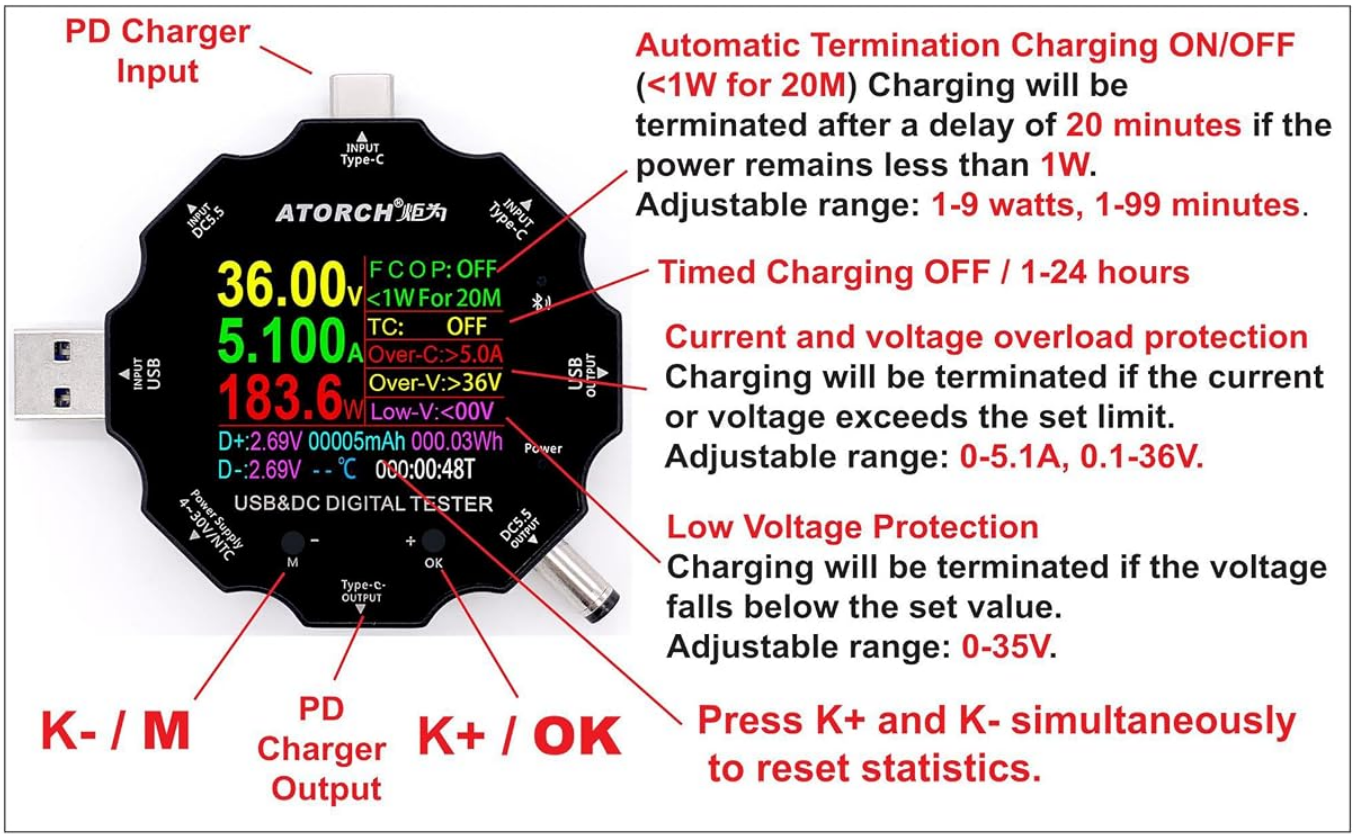
The AVHzY UD18 USB C Tester is a versatile 3-in-1 digital multimeter designed to measure voltage, current, power, resistance, and capacity. Featuring a color IPS screen, it supports various interfaces including USB, Type-C, DC5.5, and Micro USB. This device is ideal for monitoring the charging and operation of a wide range of DC inverters, such as mobile phones, notebooks, and routers, providing high-precision measurements for effective power management and troubleshooting.

2. Product Features

- **High Precision Color Screen:** Features an IPS color screen with 8 interfaces, offering measurement accuracy up to 0.00001.
- **Multi-Interface Support:** Compatible with USB, Type-C, DC5.5, and Micro USB for broad application across various devices.
- **Wide Applications:** Capable of testing notebooks, car emergency power supplies, routers, and other DC products, monitoring real-time current, voltage, power, and capacity.
- **Mobile APP Connectivity:** Allows real-time transmission and viewing of charging status, measurement data, and graphs on your smartphone via a dedicated application.
- **Diverse Functions:** Includes screen flip, fast charge recognition, energy capacity detection, temperature measurement (probe not included), accuracy measurement, and two-way current measurement.
- **Safety Protection:** Equipped with over-voltage protection, over-current protection, low-voltage protection, charging time setting, and auto-off function to safeguard connected appliances.



Figure 2.1: The AVHzY UD18 USB C Tester, showcasing its multiple input/output ports and the included USB load and clip cables.



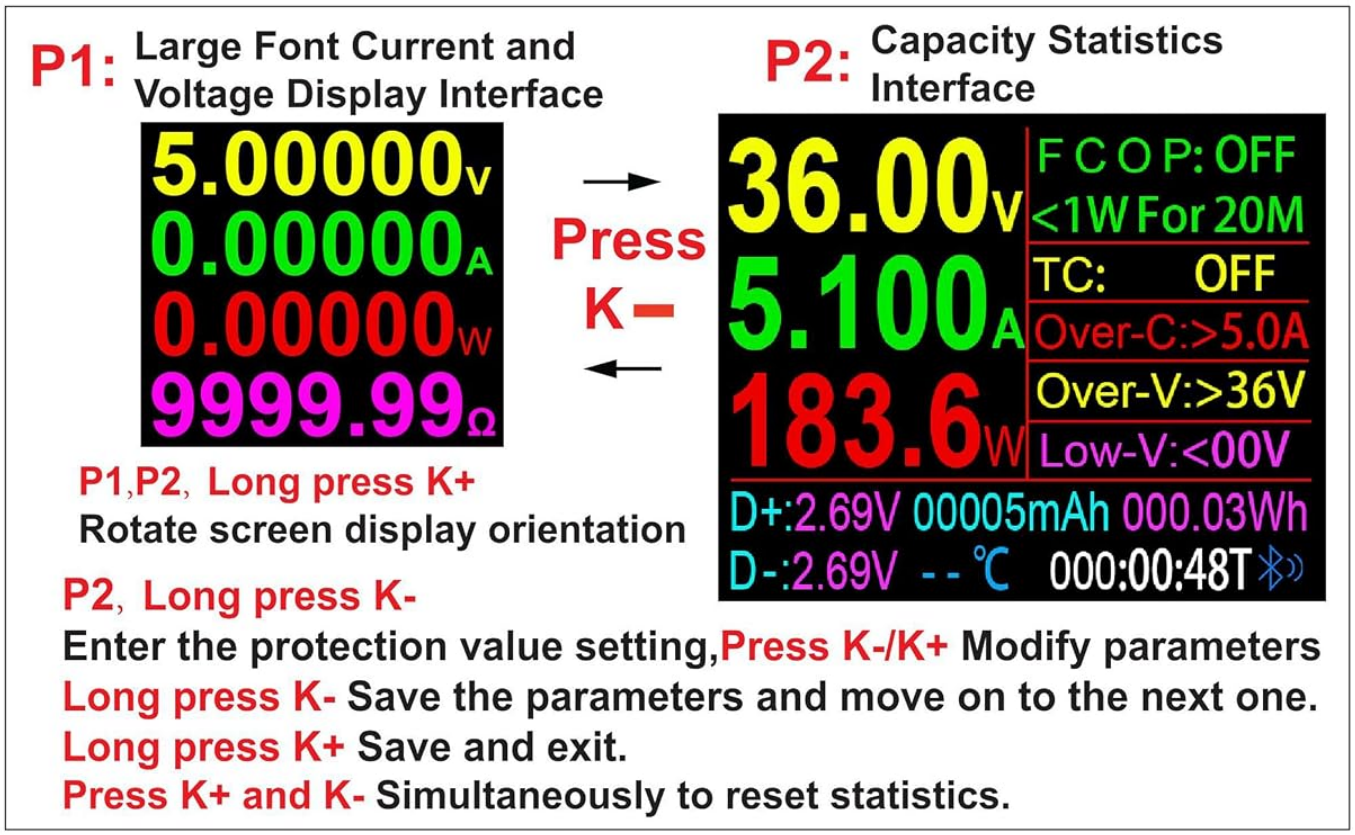


Figure 2.2: An illustration detailing the various functions and button operations of the UD18 tester, including automatic termination charging, timed charging, and voltage/current protection settings.



Figure 2.3: Examples of the UD18's display interfaces, including the main measurement screen, six-digit precision interface, and background settings for language, reference voltage, current, display brightness, and standby time.

3. Package Contents

Upon opening the package, please verify that all the following items are included:

- 1 x AVHzY UD18 USB C Tester
- 1 x USB Load (for discharge testing)
- 1 x Clip Cable (USB to Alligator Clips)
- 1 x User Manual (this document)



Figure 3.1: The UD18 tester and its accessories, including the USB load and clip cables, as packaged.

4. Setup

To begin using your UD18 USB C Tester, follow these basic setup steps:

1. **Power On:** Connect the UD18 tester to a power source (e.g., a USB charger, power bank, or device's USB port) using one of its input ports (USB, Type-C, DC5.5, or Micro USB). The screen will illuminate.
2. **Connect Device Under Test:** Plug the device you wish to test (e.g., a smartphone, laptop, or USB-powered gadget) into the corresponding output port of the UD18 tester.
3. **Observe Readings:** The screen will immediately display real-time voltage, current, power, and other relevant measurements.
4. **Using Clip Cable/USB Load:** For testing DC power supplies or specific loads, connect the clip cable or USB load to the appropriate ports as needed. Ensure correct polarity when using clip cables.

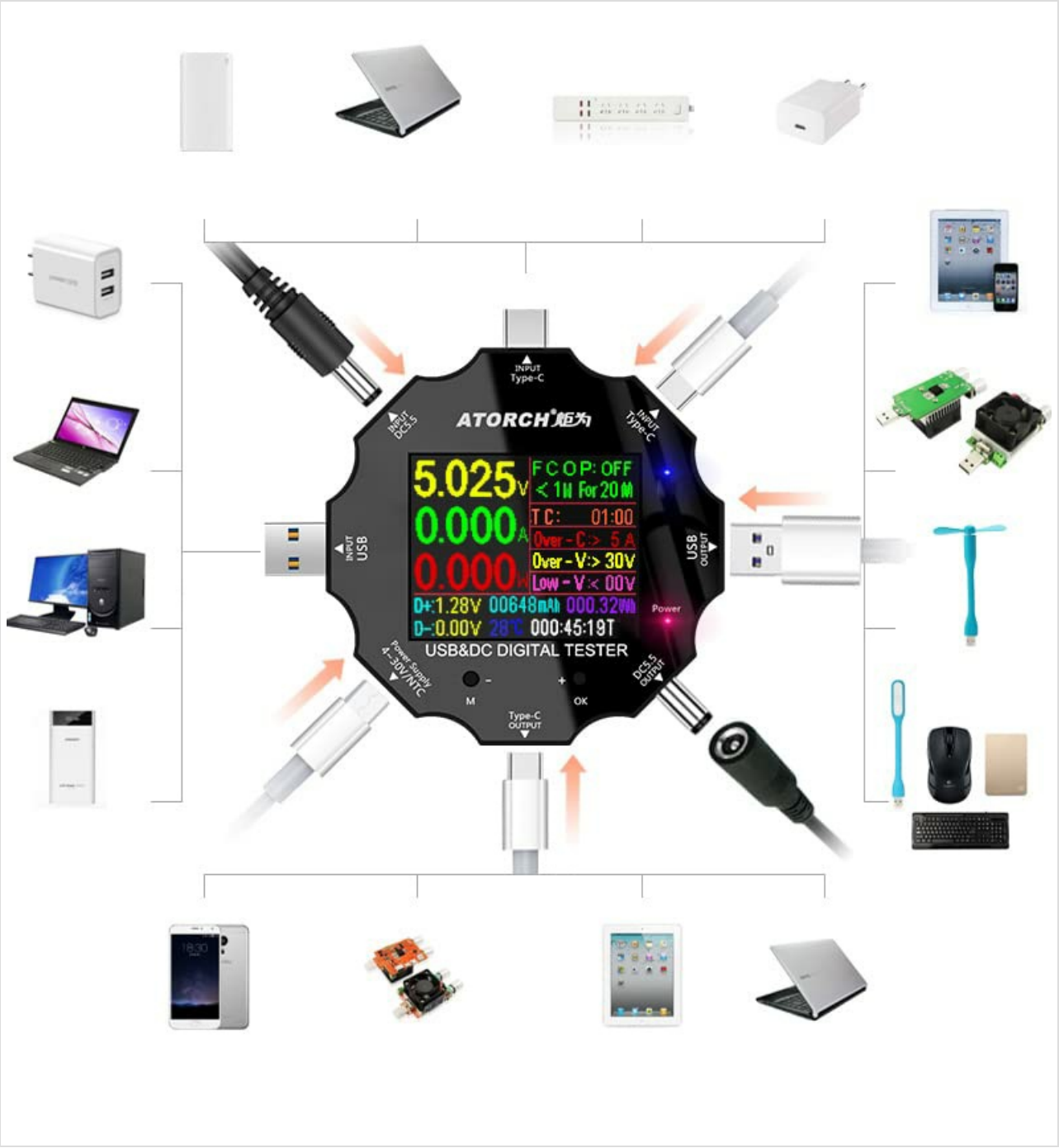


Figure 4.1: The UD18 tester connected to various devices, illustrating its versatility across different power sources and loads.

5. Operating Instructions

5.1 Navigating Interfaces

The UD18 tester features multiple display interfaces and settings accessible via its buttons:

- **Button Functions:** The tester typically has "K-" (or "M") and "K+" (or "OK") buttons for navigation and selection.
- **Switching Interfaces:** Press the "K-" button to cycle through different measurement interfaces (e.g., large font display, capacity statistics).
- **Rotating Screen:** Long press the "K+" button to rotate the screen display orientation, useful for different viewing angles.
- **Resetting Statistics:** Press "K+" and "K-" simultaneously to reset accumulated statistics (e.g., mAh, Wh).

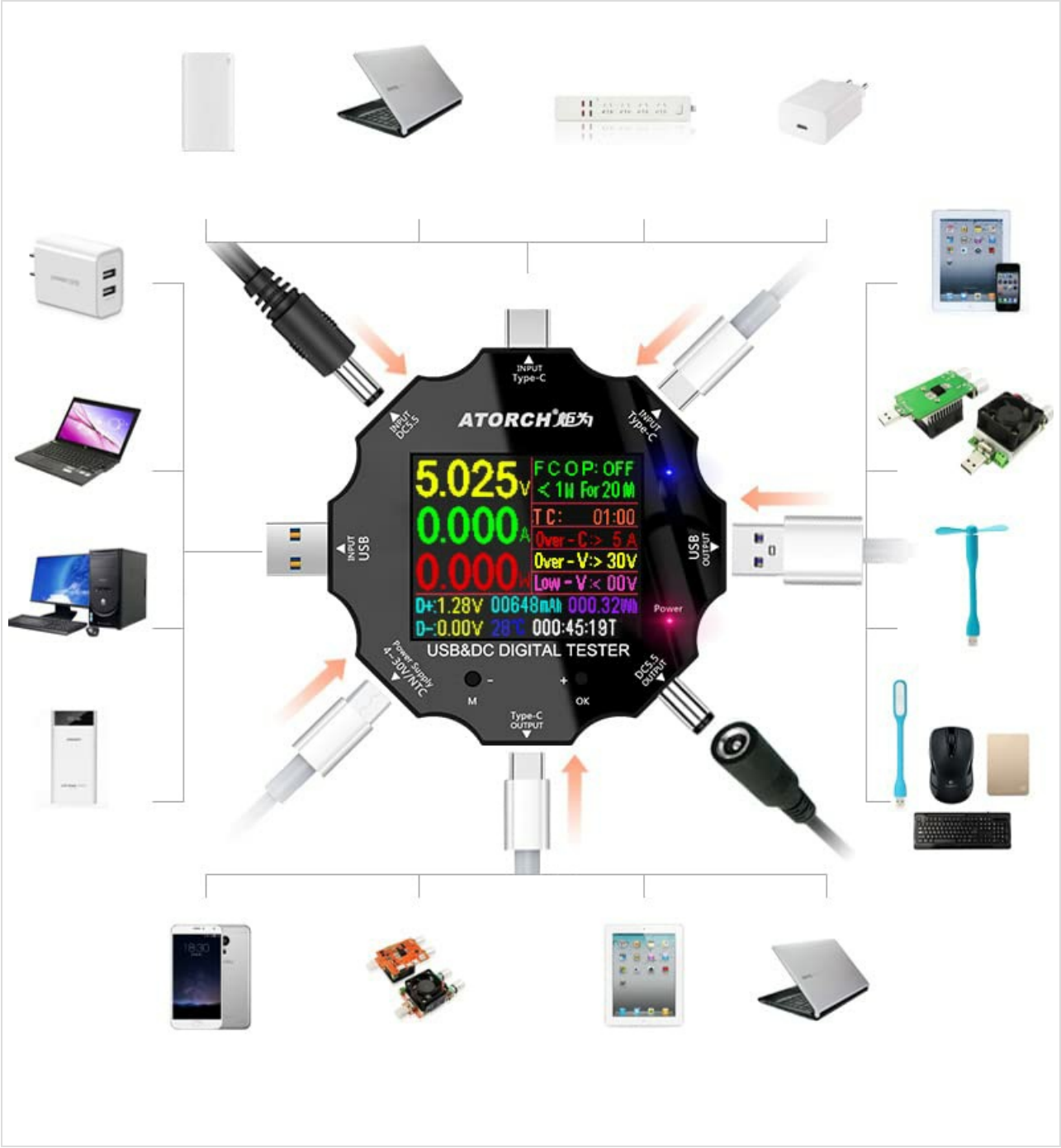


Figure 5.1: Display modes of the UD18, showing the large font current/voltage interface (P1) and the capacity statistics interface (P2).

5.2 Setting Protection Values

The UD18 allows you to set various protection parameters to safeguard your devices. These settings are typically accessed by long-pressing the "K-" button from the capacity statistics interface (P2).

1. **Enter Protection Value Setting:** From the P2 interface, long press "K-" to enter the protection value setting menu.
2. **Modify Parameters:** Use "K-" or "K+" to modify the selected parameter's value.
3. **Save and Move:** Long press "K-" to save the current parameter and move to the next one.
4. **Save and Exit:** Long press "K+" to save all changes and exit the settings menu.

Key protection functions include:

- **FCOP (Automatic Termination Charging):** Terminates charging if power remains below 1W for 20 minutes. Adjustable range: 1-9 watts, 1-99 minutes.
- **TC (Timed Charging):** Sets a specific charging duration. Adjustable range: 1-24 hours.

- **Over-C (Over-Current Protection):** Terminates charging if current exceeds the set limit. Adjustable range: 0-5.1A.
- **Over-V (Over-Voltage Protection):** Terminates charging if voltage exceeds the set limit. Adjustable range: 0.1-36V.
- **Low-V (Low-Voltage Protection):** Terminates charging if voltage falls below the set value. Adjustable range: 0-35V.

About FCOP, TC, Over-C, Over-V, Low-V Function Settings

1. FCOP: OFF / < 1W For 20M **FCOP** Means Device charging Full power Cut OFF(ON/OFF)
   FCOP: OFF < 1W For 20M Means FCOP Means Device charging Full power function is invalid
   FCOP: ON < 1W For 20M Means you can set it yourself when the power is < 1W for 1 minute, it will Power Supply Cut OFF!
2. TC: 01:00 **TC: Timed charging (ON/OFF), you can set the time period of 01:00-24:00 to charge regularly when it reaches the setting, it will automatically power cut off!**
3. Over-C > 5A **Overcurrent protection : 0.0A-5.1A range can be set by yourself**
4. Over-V> 30V **Over voltage protection: 01V-36V range can be set by yourself**
5. Over-V> 30V **Low voltage protection : 00V-35V range can be set by yourself**

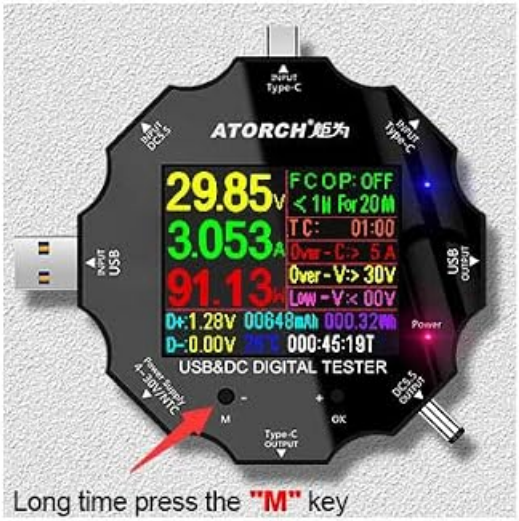


Key button operation

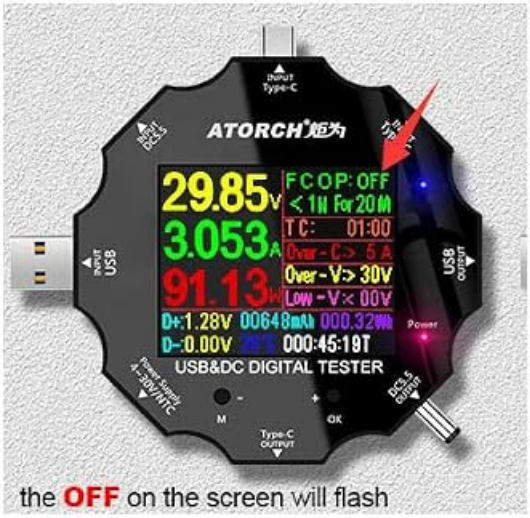
1.Long time press the **"M"** key, the **OFF** on the screen will flash, click the button **"-" or "+",** set **FCOP: ON or OFF**, Long time press the **"M"** key again, the screen will appear: **"OK!"**, the setting is complete!

2.Press this operation to set other parameters, wait a few seconds, the screen will appear: **"OK!"**, the setting is complete!

3.Or long time press the **"M"** key, the numbers on the screen will flash, you can freely choose to set the parameters!



Long time press the **"M"** key



the **OFF** on the screen will flash







Figure 5.2: Visual guide on how to access and adjust the FCOP, TC, Over-C, Over-V, and Low-V protection settings using the tester's buttons.

6. Mobile App Integration

The UD18 tester supports mobile application connectivity, allowing you to monitor and log data remotely. The app is available for both iOS and Android devices.

- **App Name:** Search for "E_Test" in your device's app store (Apple App Store for iOS, Google Play Store for Android).
- **Connection:** Enable Bluetooth on your smartphone. The app should detect the UD18 tester. Follow the in-app instructions to establish a connection.
- **Features:** Once connected, you can view real-time voltage, current, power curves, historical data, and manage certain settings directly from your phone.

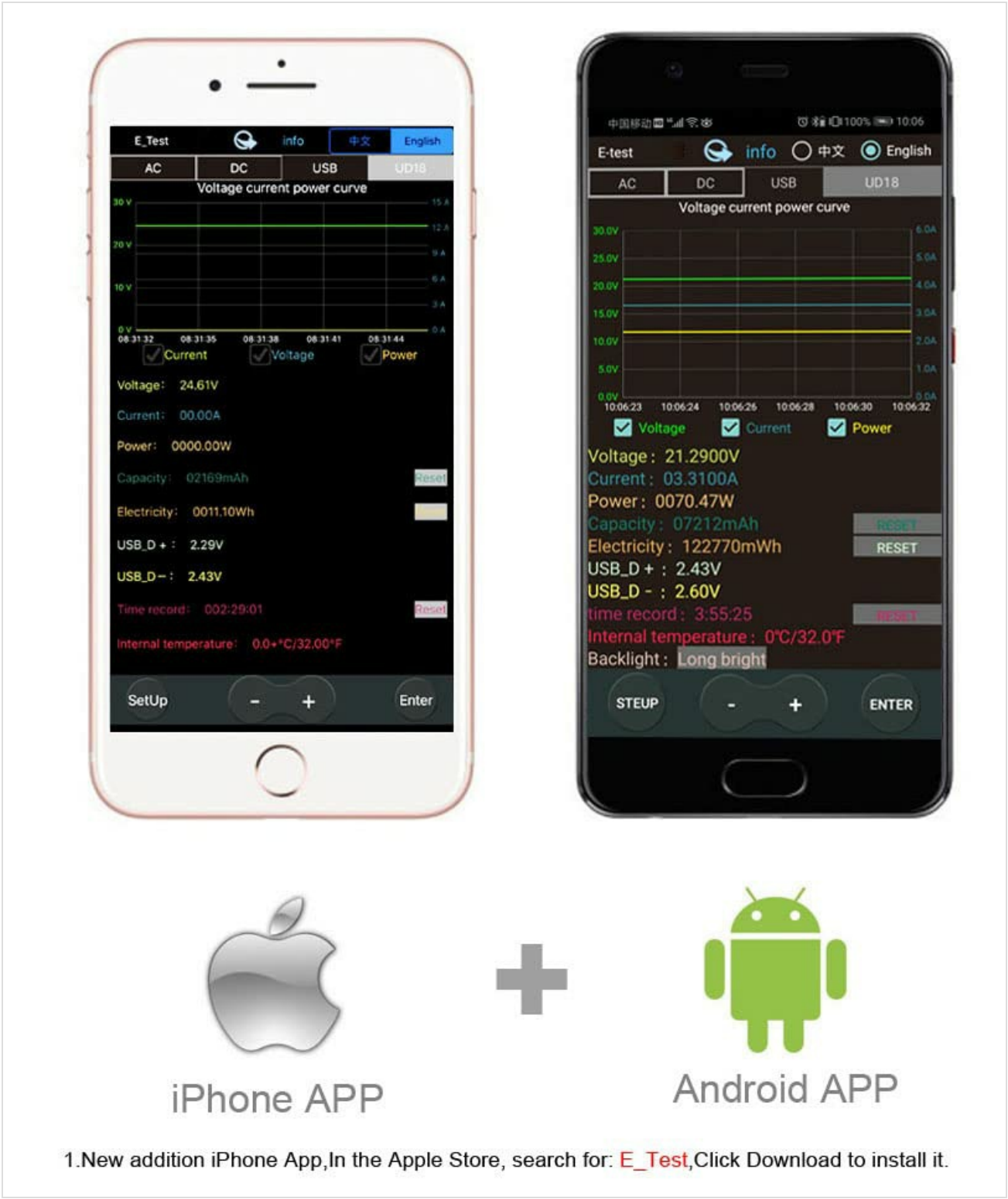


Figure 6.1: Screenshots illustrating the E_Test mobile application interface on both iPhone and Android devices, showing real-time data and curve displays.

7. Troubleshooting

This section addresses common issues you might encounter with your UD18 USB C Tester.

- **No Display/Power:**
  - Ensure the tester is properly connected to a working power source.
  - Check the cable connections for looseness or damage.
- **Inaccurate Readings:**

- Verify that the device under test is functioning correctly.
- Ensure all connections are secure and free from corrosion.
- Consider performing a factory reset or calibration if available in the settings menu (refer to advanced settings in the manual or manufacturer's support).

- **Mobile App Connection Issues:**
  - Ensure Bluetooth is enabled on your smartphone and the UD18 tester.
  - Restart both the app and the tester.
  - Check if the app requires specific permissions on your phone.
  - Ensure the app version is up to date.
- **PD Charger Compatibility:**
  - Some PD power banks and chargers require their PD protocol to be triggered by a connected mobile phone to function correctly with the tester.
  - If the tester shows "NOT Working" with a PD charger, try connecting a PD-compatible device (like a smartphone) to the tester's output to trigger the PD protocol.
- **USB-C Output Direction:**
  - The USB-C female output connector may not be reversible for all functions. If you experience unexpected voltage/current (e.g., 5V 500mA instead of fast charge), try flipping the USB-C cable connected to the output.



Figure 7.1: Examples of correct and incorrect connections for PD chargers, highlighting the need to trigger the PD protocol for proper operation.

8. Specifications

Specification	Value
Product Dimensions	1.97 x 1.97 x 0.39 inches

Specification	Value
Item Model Number	UD18
Manufacturer	AVHzY
Brand	AVHzY
Power Source	Battery Powered (internal, charged via input)
Style	UD18 (Clip Cable+load)
Color	Black
Item Weight	34 Grams (1.2 ounces)

9. Maintenance

To ensure the longevity and accurate performance of your UD18 USB C Tester, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the tester. Avoid using abrasive cleaners or solvents, which can damage the screen or casing.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures. When not in use for extended periods, ensure it is disconnected from any power source.
- **Handling:** Handle the device with care to prevent drops or impacts, which can damage internal components or the screen. Avoid putting pressure on the screen.
- **Connector Care:** Keep the USB, Type-C, DC5.5, and Micro USB ports free from dust and debris. Use compressed air if necessary to clear out any obstructions.

10. Warranty and Support

For information regarding warranty coverage, technical support, or service for your AVHzY UD18 USB C Tester, please refer to the warranty card included with your purchase or visit the official AVHzY website. You may also contact the seller directly for assistance.
AVHzY Official Store: Visit AVHzY Store on Amazon

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Example: How do I reset this device or fix this error?

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Model number, symptoms, what you tried, or the section of the manual you are using.

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