

# DT24P Series User Manual

( 30A 100A 200A/ 300A 400A 500A 600A 1000A)

2.4-inch HD color screen Bluetooth digital transmission curve version

battery capacity / DC power multi-function tester



(This product will be updated at any time, please pay attention to the web page description for detailed update details)

## **1. Product description:**

This product is a multifunctional type, which can be used in battery internal resistance test, capacity test, power test, voltage and current test, monitoring DC parameters, percentage power display, modification of electric vehicles, RVs and many other uses. It is universal to measure any battery, whether it is a lead-acid battery,

Is it a ternary lithium battery or lithium iron phosphate or other types of DC batteries, as long as the operating voltage range (0~1000V) is basically universal, it can be widely used for measurement, and it can also be connected wirelessly. It can be connected to mobile phone/computer inspection APP to test when installed in the car. Data, more than the set voltage alarm, less than the set voltage alarm, over power alarm and other protection settings (if you need to cut off the power, please purchase a power off relay to control the cut off the power).

Torch has once again made a breakthrough for scientific and technological engineers, designing a new model of wide voltage and high current 1000V 1000A high-power large color screen Bluetooth wireless data transmission curve version of the multi-function electric energy meter, supporting 3 major upper computer connection system APP software, Android Apple PC computer Bluetooth Wireless connection to kill applications, all kinds of measurement parameters are readily available, adapt to a variety of measurement applications, one machine with multiple uses.

## **2.Product application:**

This product is used to detect the capacity of various batteries, discharge and aging various power adapters, and detect the voltage, current, and power of various DC power supplies.

## **3. Matters needing attention:**

3.1. When the test power supply is higher than 36V, please install a switch and pay attention to the safety of electricity.

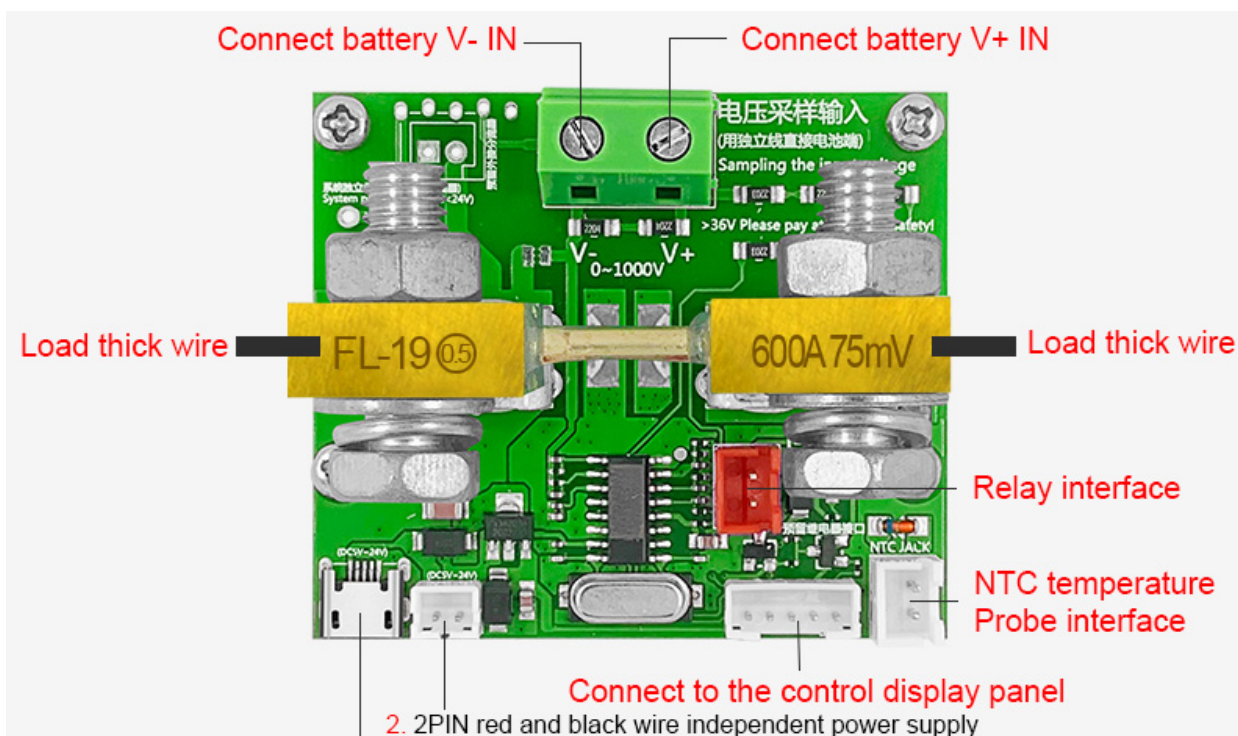
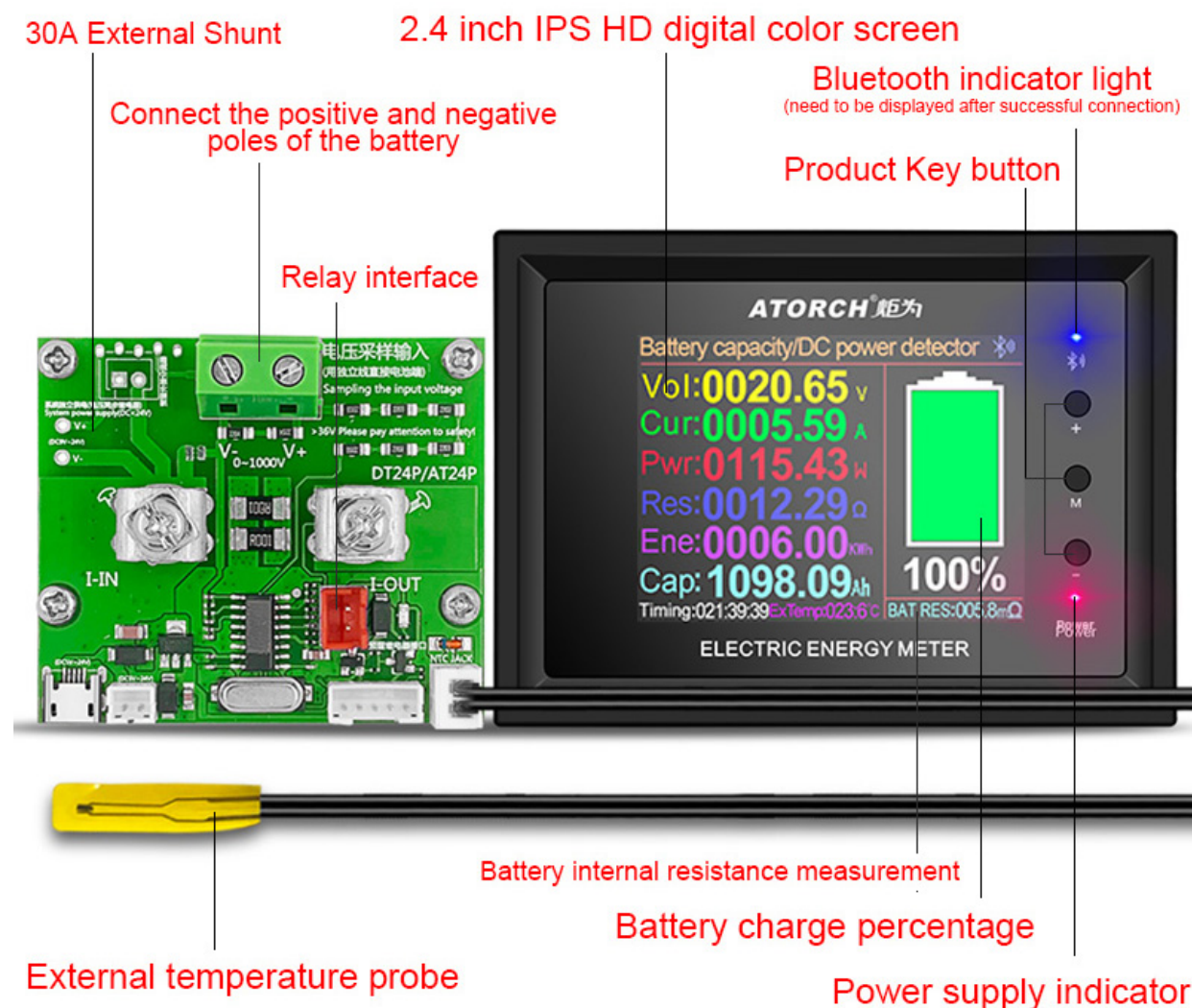
3.2. If there is a user who purchases the battery power off relay module, please be sure to query the corresponding parameters of the current battery type under test to the DT24P background menu to set the accurate low and full values, so that it will reach you during the process of discharging or charging. When the set value exceeds the range, the system will send out a control voltage. The relay will automatically disconnect the power path to prevent the battery from being over-discharged or over-charged to damage the battery (the power-off relay needs to be purchased separately).

3.3. If you enable the external power-off relay, use as much V as the independent power supply for the relay.

3.4. The product must be powered independently, 5-24V DC power supply, do not input battery power

## 4. Appearance structure diagram

The display screens of different shunts of this product are the same, as shown in the figure below:



1. USB Android power supply interface

Independent power supply for the instrument 5-24V (2 kind of methods)











Notes:

Must be powered separately, the meter will display/Do not connect the battery, no more than 24V, Otherwise there is a risk of burning the device


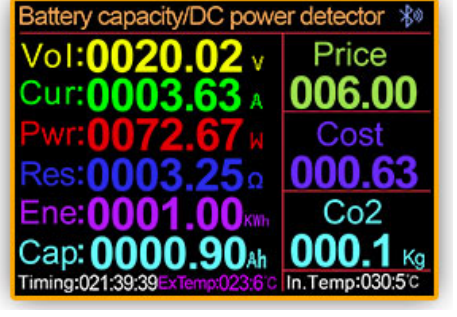
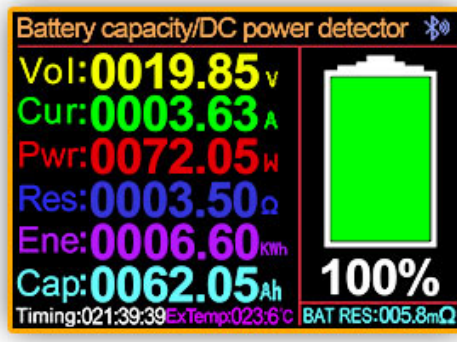






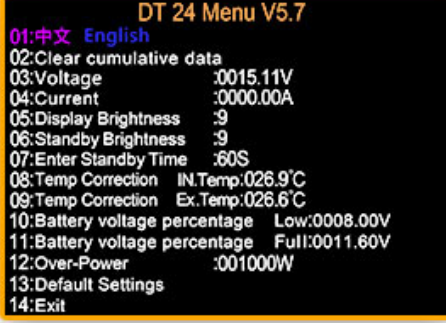
## 5. The technical parameters of different shunts are as follows

Model	DT24P-30A	DT24P-100A	DT24P-200A	DT24P-300A	DT24P-400A	DT24P-500A	DT24P-600A	DT24P-1000A
Picture								
Independent power supply	5-24V							
Voltage range	0-1000V							
Current range	0-30A	0-100A	0-200A	0-300A	0-400A	0-500A	0-600A	0-1000A
Power range	0-30KW	0-100KW	0-200KW	0-300KW	0-400KW	0-500KW	0-600KW	0-1000KW
Capacity range	0-99999AH							
WH range	0-999999Kwh							
Panel size	85.7mm X 63mm (length X width)							
Panel install size	75.8mm X 52.6mm (length X width)							
External shunt board size	58mm X 50mm (length X width)							

## 6. Function interface introduction:

This product adopts the high-end and cost-intensive "2.4-inch high-definition large color Chinese and English display screen", designed a variety of functional interface content, Various parameters are displayed on one screen, and different function interfaces can be switched by short pressing the button. The interface diagram and introduction are as follows

	<ol style="list-style-type: none"> <li>Connect independent power supply (5-24V), the startup screen will appear             <ol style="list-style-type: none"> <li>After powering on, short press the "+" / "-" key to switch between the following function interface and battery percentage interface.</li> </ol> </li> </ol>
	<ol style="list-style-type: none"> <li>Function interface:             <ol style="list-style-type: none"> <li>Short press the "M" key to check the unit price of electricity.</li> <li>After entering the unit price adjustment of electricity bill, the unit price number of electricity bill jumps, press "M" shortly at this time</li> <li>Switch between decimal places, units, tens, and hundreds.</li> <li>Press "+" / "—" to adjust the number to increase/decrease.</li> </ol> </li> </ol>
	<ol style="list-style-type: none"> <li>Percentage interface:             <p>More than 30% shows green, less than 30% shows yellow, less than 10% shows red (as on the rightPicture) After setting, you can judge whether the battery is</p> <p>The blue light will only light up when there is power.</p> <p>To display the battery percentage, you need to hold down the M key and set the maximum voltage and minimum voltage in the background to automatically calculate the current battery voltage percentage.</p> </li> </ol>

	<p>The calculation formula is:</p> $\text{battery percentage} = (\text{current voltage} - \text{minimum voltage}) / (\text{full charge voltage} - \text{minimum voltage}) \times 100 \%$
	<p>4. Low-voltage alarm reminder interface:</p> <p>Set a low percentage value (such as 306V), the product detects that the test voltage is lower than the setting. When the value is low, this alarm reminder interface will appear.</p> <p><b>Tips: Set the operation method of low voltage alarm voltage</b>  <b>Press and hold the M key to enter the background, select the battery voltage percentage low : use the + or - key to adjust the value</b></p>
	<p>5. High pressure alarm reminder interface:</p> <p>When a high percentage value (such as 296V) is set, the product detects that the test voltage exceeds the set value. When the high value, this alarm reminder interface will appear.</p> <p><b>Tips: Set the operation method of low voltage alarm voltage</b>  <b>Press and hold the M key to enter the background, select the battery voltage percentage Full : use the + or - key to adjust the value</b></p>
	<p>6. Over-power alarm reminder interface:</p> <p>When the power threshold is set (such as 998.96W), the product detects that the test power exceeds. When the value is high, this alarm reminder interface will appear.</p> <p><b>Tips: Set the operation method of low voltage alarm voltage</b>  <b>Press and hold the M key to enter the background, select the Over-Power : use the + or - key to adjust the value</b></p>
	<p>7. System background interface:</p> <p>Long press the "M" key to enter the background setting, M key: switch up and down, +/- key: plus and minus adjustment. Or the OK button. For detailed functions and settings, please see the following: System background and functions set up</p>

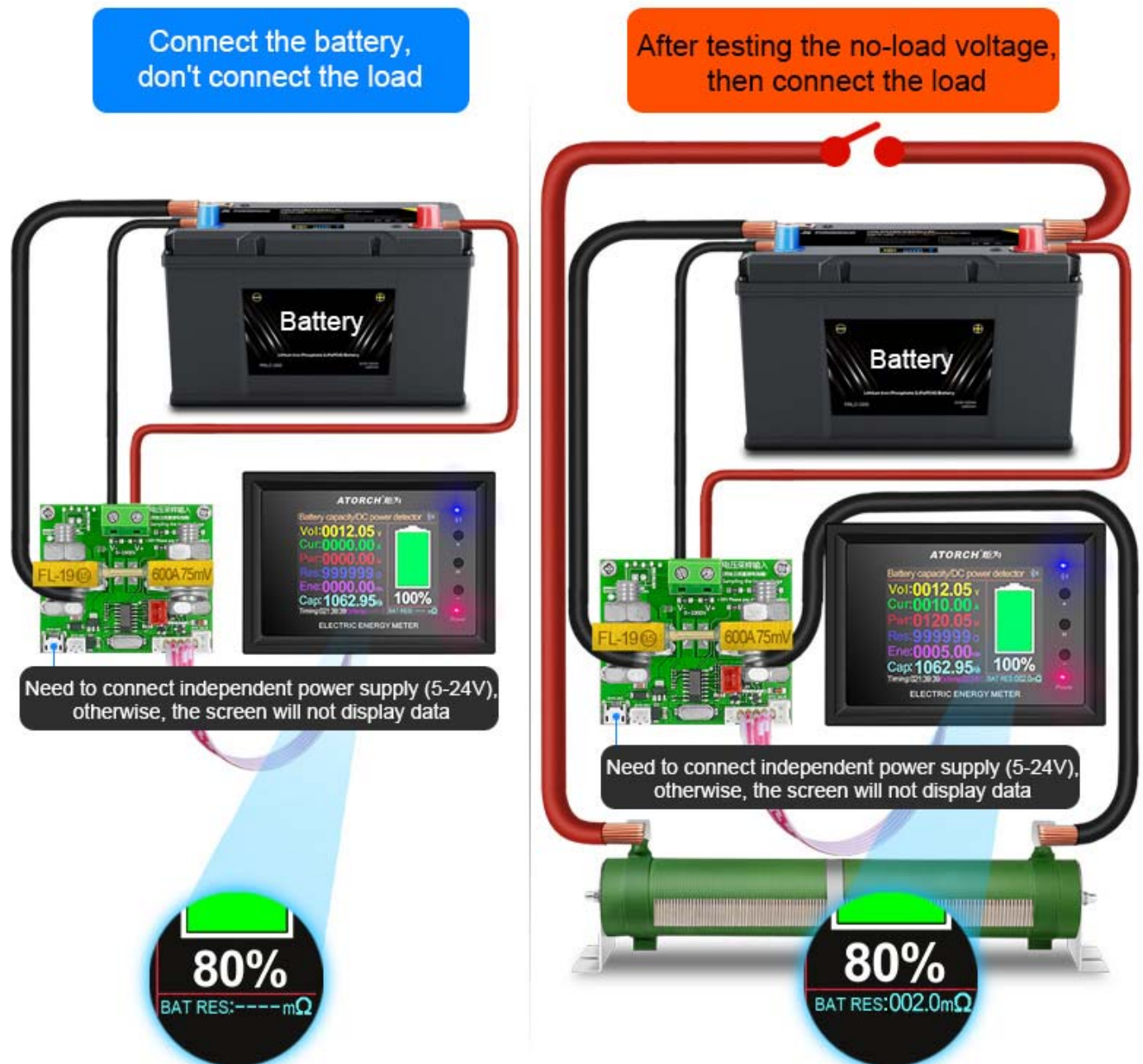
## --Key Botton operate Description--

1. By "+" or "-" key button, you can switch between different function interface test interface
2. Long press the "M" key button to enter the product background settings, long time press the button again to return to the test interface!
3. In the main interface, click the "M" key button, the value of 000.00 will flash, and through the "+" or "-" key button, you can set different electricity bill values.
4. Switch between Chinese and English: Long time press the "M" key button, you can enter the product background settings, through the "+" or "-" key button, you can adjust the Chinese or English interface!

## 7. Battery internal resistance internal resistance detection function:

According to the connection method shown in the figure below, first measure the current no-load battery voltage  $U_1$ , and then turn on the output load and pass the current  $I$ . The load  $U_2$  is measured.

The current battery internal resistance  $R$  parameter can be read at the time, the internal resistance ( $R$ ) calculation formula of this table:  $R=(U_1-U_2)/I$



## 8. Compatible with the current mainstream four online APPS

### (Android/IOS/PC system) Online Testing

DT24 Color Voltmeter Wireless Bluetooth Online Operation Diagram

#### Mobile APP interface function introduction

Use the mobile phone Bluetooth function to wirelessly connect the product, with the included mobile APP software. Achieve more measurement and control details, leaving measurement technology without boundaries.

We have updated the Bluetooth 4.0, compatible with 4.0 networks, using more advanced technology of Bluetooth 4.0, improved the old Bluetooth protocol and 4.0 network interface with each other. New Bluetooth 4.0 technology has automatic noise reduction function, and make the Bluetooth protocol can connect two phones at the same time. And Bluetooth 4.0 technology, more performance, and compatibility, low power consumption to meet your needs.



1. Plug **DT24 Voltmeter** into the USB charger and the Bluetooth indicator will light up.



2. Please download the mobile app software, only support Android 5.0 and above, <https://www.mediafire.com/folder/31bc15uhq8odb/E-meter>. Then install the E-meter APP software on the phone.



3. Bluetooth on the phone needs to be turned on, Then open E-test APP on the phone



1 When the USB tester is powered on, the Bluetooth indicator is flashing, turn on the E-test App software icon, and allow Bluetooth to turn on.



2 Click the Bluetooth icon in the upper left corner of the APP to pop up the menu for selecting the USB tester model, **DT24-BLE** return to the main APP interface.



3 During the measurement, the upper right corner shows the model currently online, **DT24-BLE**. The bluetooth icon in the upper left corner turns blue, indicating that the measurement is in online communication.

## 1) Apple Mobile APP:

Please search for **E\_test** in the **Apple store** to download and install, then click the Bluetooth APP icon to open the software, and then click the Bluetooth icon above the software to enter the selection DL24-BLE to connect, you can achieve mobile phone remote wireless remote control settings and Measurement function, the discharge status can be viewed at any time on the mobile phone, various data cleaning is visible, the voltage and current power curve of the discharge, etc.

## 2) Android phone APP(Only support Android 5.0 and above):

Scan the QR code on the back of the host to download the corresponding APP software or Android APP: search **E-test** at Google play to download. After the installation is complete, open the software and click the Bluetooth icon to enter the direct selection of DL24-BLE to successfully use it online. (No need for Bluetooth pairing, the software Bluetooth icon directly selects DL24. can)

Android APP Download Address: <http://www.mediafire.com/folder/31bc15uhq8odb/E-meter>



## --App Connection Method--



Please click this "E-test" APP to open the software




1

When the USB tester is powered on, the Bluetooth indicator is flashing, turn on the E-test App software icon , and allow Bluetooth to turn on.



2

Click the Bluetooth icon  in the upper left corner of the APP to pop up the menu for selecting the USB tester model, **DL24-BLE**, return to the main APP interface.



3

During the measurement, the upper right corner shows the model currently online. **DL24-BLE**. The bluetooth icon in the upper left corner turns blue, indicating that the measurement is in online communication.



# How to find the Bluetooth symbol in E-Test APP

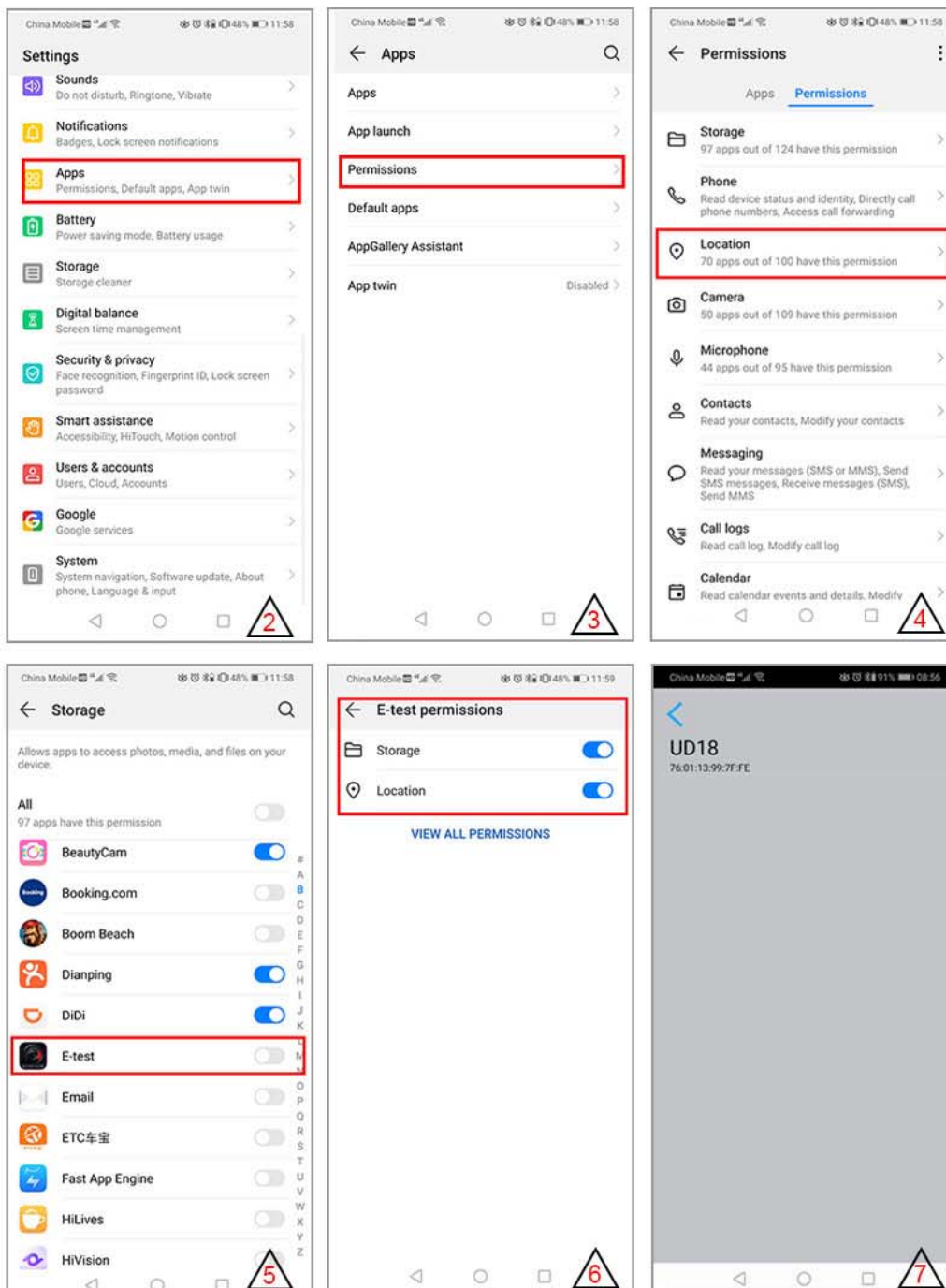
This operating instruction applies to all the company's Bluetooth products  
(UD18/DT24/DL24/AT3010/DPT3010/T18... etc.)

Please open your phone, **Setting**>>find the **Apps**>>manage the **Permissions**>>**Location**>>find our **E-test app**>>find the **storage information** and **location information**>>open the permissions **allow**, you can find us bluetooth symbol In the E-test list.



1 Please open your phone settings

Click settings

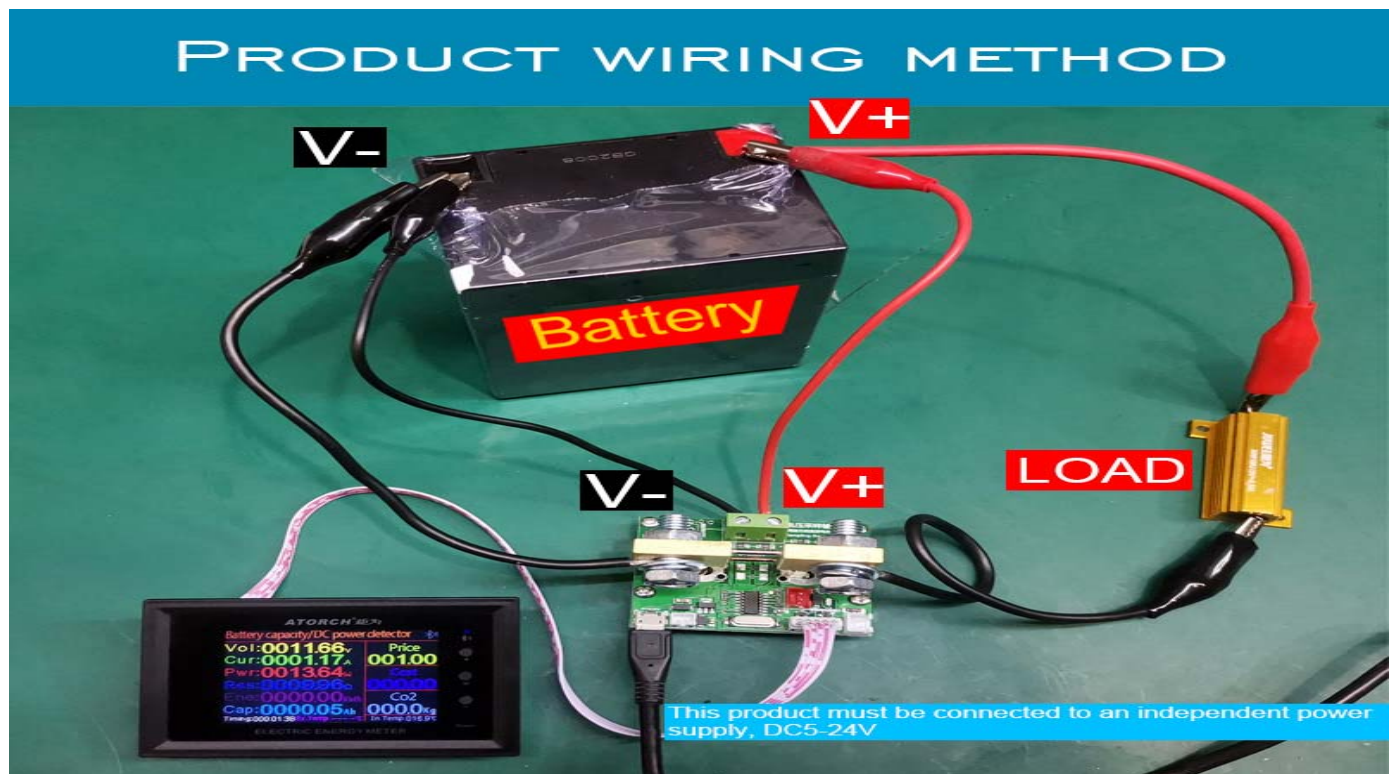


### 3) Computer Bluetooth wireless online APP:

First add the Bluetooth device to the serial port device of DT24-SPP on the computer, then scan the QR code on the back of the host to download the corresponding APP software and store it. Open the software without installing and select the Bluetooth serial port model just added. You can successfully use online

## IV.Product List

- 1.2.4 inch DC color screen voltmeter X1pcs
- 2.Crocodile clip red black male and female X2 set
- 3.2.54MM terminal temperature probe X1pcs



## DT24P

### Two power supply methods

