

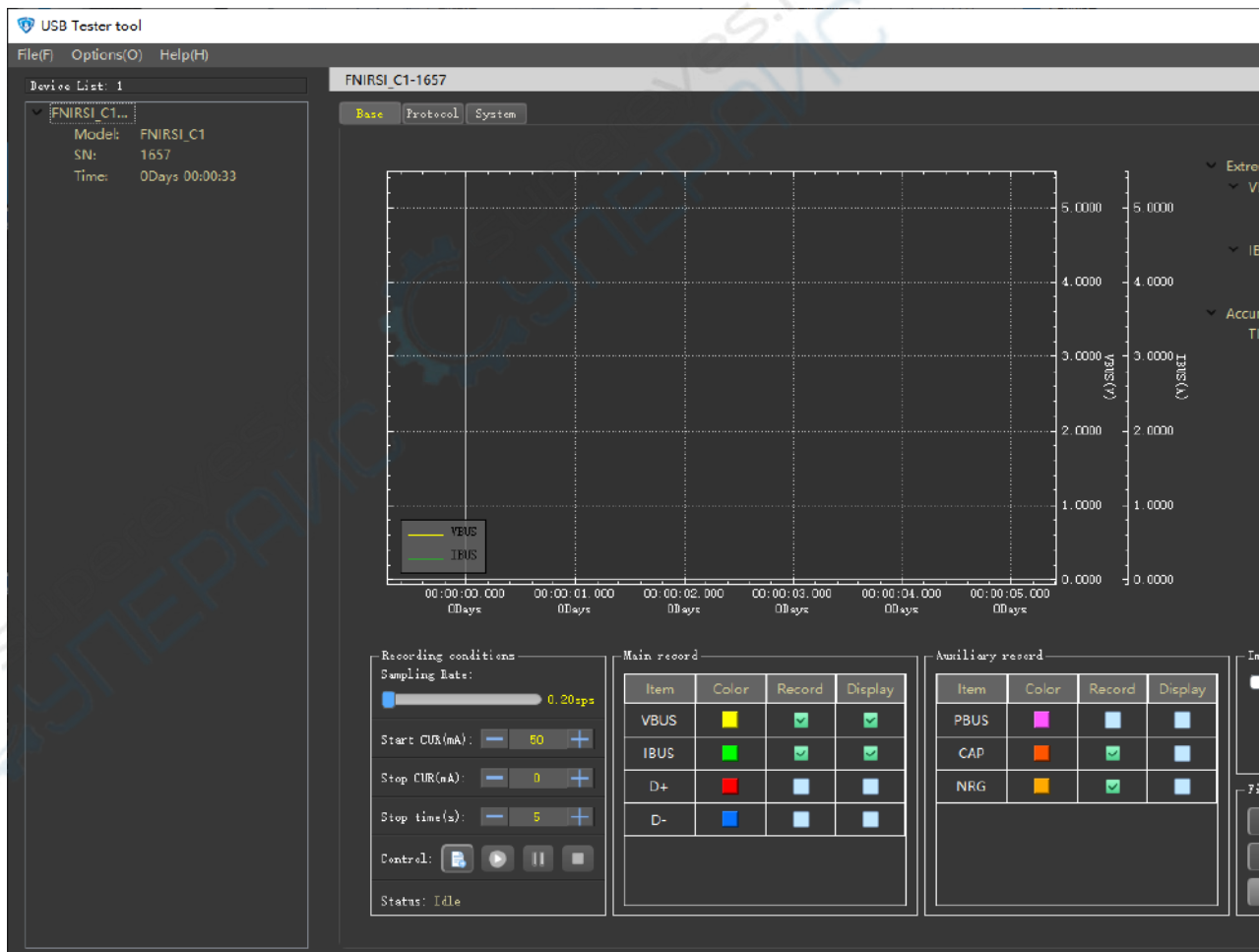
Usb Meter Tool manual (V0.2)

0.0 Version & updates

The manual may be updated at any time. Please be aware. Please get the latest update information on the official website.

1.0 connection

After opening the PC software and connecting to the PC through the micro-USB interface on the meter head, you should see the following interface:

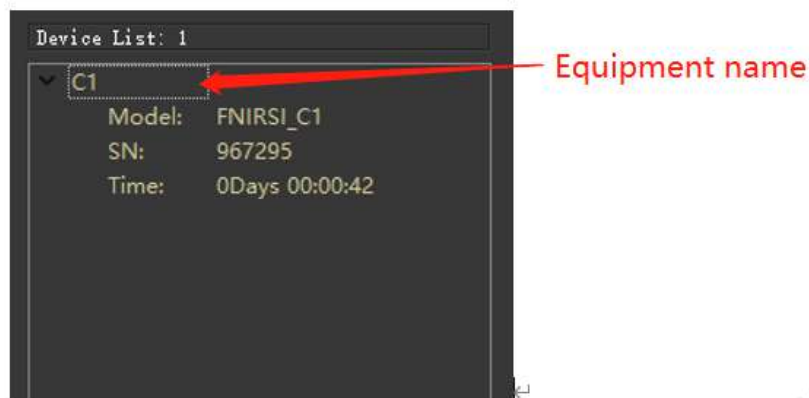


The device list on the left shows the number of currently connected devices.

The model, serial number (SN), and time of connected PC software are displayed under each

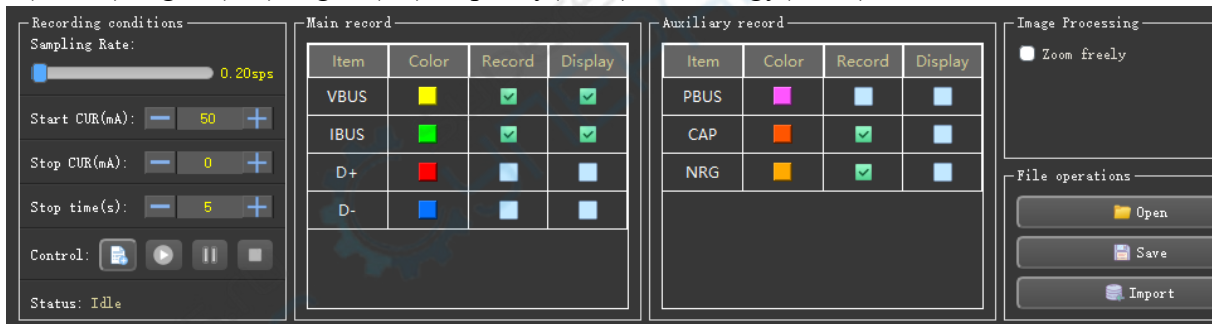
device.

Double-click the device name to change the name to facilitate the distinction when multiple headers are used at the same time.



2.0 Basic function-record data

At the same time, record up to 7 data items, namely voltage (VBUS), current (IBUS), power (PBUS), signal (D+), signal (D-), capacity (CAP), and energy (NRG).



2.0.0 Create record

Click the "Create" button to create a new record. Before creating, please select the required recording conditions. The meaning of each parameter is described below.

Tip: Move the mouse to the button and stay for a period of time to get a hint.

2.0.1 Recording conditions-sampling rate

You can drag the slider to adjust the sampling rate, ranging from 0.20 – 100sps. The data will be recorded with this data.

2.0.2 Recording conditions-starting current

After clicking the start button, the recording will not start immediately. The program will wait

until the current is greater than the start current before it starts recording. If you want to start recording directly, you should set "Start Current" to 0.

2.0.3 Recording conditions-stop current

You can set to automatically stop recording when the current is less than a certain value by changing the "Stop Current" item. If this value is 0, it will never stop automatically.

2.0.4 Recording conditions-stop time

In order to prevent the momentary low current from falsely triggering the automatic stop, you can set the "Stop Time" item. Only when the current consumption of the device under test has been less than the automatic end threshold within this time, the automatic end will be triggered.

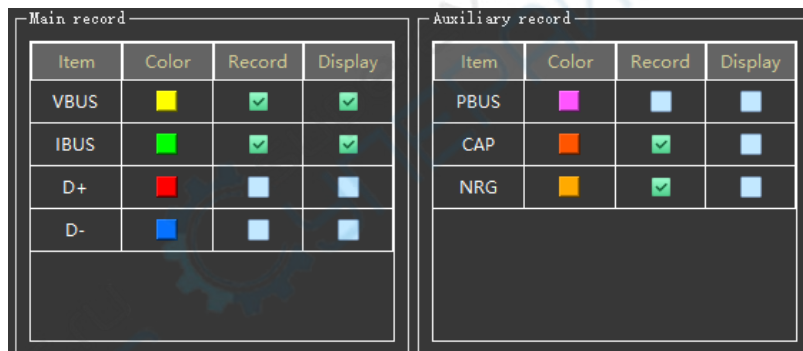
2.0.5 Record item

"Color" column, you can adjust the curve color of the data item

"Record" column, you can adjust which data will be recorded

"Display" column, you can adjust which data will be displayed

Note: "Record" does not necessarily need to be "displayed", but "display" must be "recorded".



The image shows two tables side-by-side, labeled 'Main record' and 'Auxiliary record'. Each table has four columns: 'Item', 'Color', 'Record', and 'Display'. The 'Main record' table has four rows: VBUS (yellow square, checked Record, checked Display), IBUS (green square, checked Record, checked Display), D+ (red square, unchecked Record, unchecked Display), and D- (blue square, unchecked Record, unchecked Display). The 'Auxiliary record' table has three rows: PBUS (magenta square, unchecked Record, unchecked Display), CAP (orange square, checked Record, unchecked Display), and NRG (yellow square, checked Record, unchecked Display). Below the 'Auxiliary record' table is a large empty rectangular area.

Main record			
Item	Color	Record	Display
VBUS	Yellow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IBUS	Green	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D+	Red	<input type="checkbox"/>	<input type="checkbox"/>
D-	Blue	<input type="checkbox"/>	<input type="checkbox"/>

Auxiliary record			
Item	Color	Record	Display
PBUS	Magenta	<input type="checkbox"/>	<input type="checkbox"/>
CAP	Orange	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NRG	Yellow	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.0.6 Image manipulation

2.0.6.0 Scaling freedom (currently only this item, if you have other needs, welcome to add)

After checking, you can drag the image at will when data is being recorded, otherwise it can't.

2.0.7 File operations

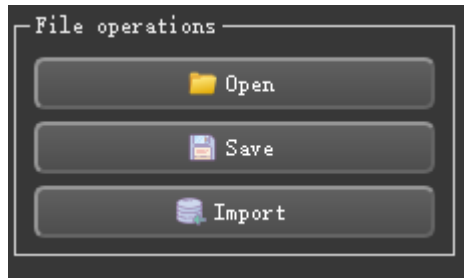
"Open"-Open the recorded data saved on the PC

"Save"-save the current record data to the PC

"Import"-Import the curve recorded offline in the meter header to the PC and create a record in the PC

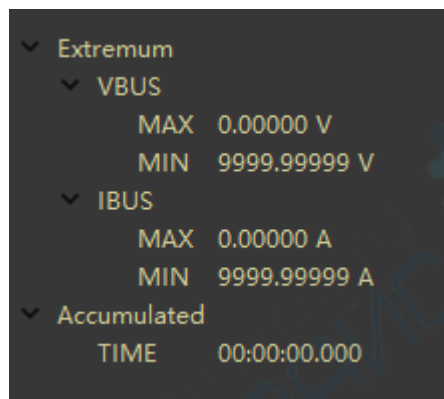
(Because the meter head may use the sampling rate that does not exist in the host computer, the sample rate displayed after the curve is imported is different from the general sampling rate of

the host computer. The imported curve can be recorded on the host computer to break through the capacity limit of the meter head)



2.0.8 Extreme value and cumulative value

The extreme value in the record curve, as well as the cumulative value, will be displayed.

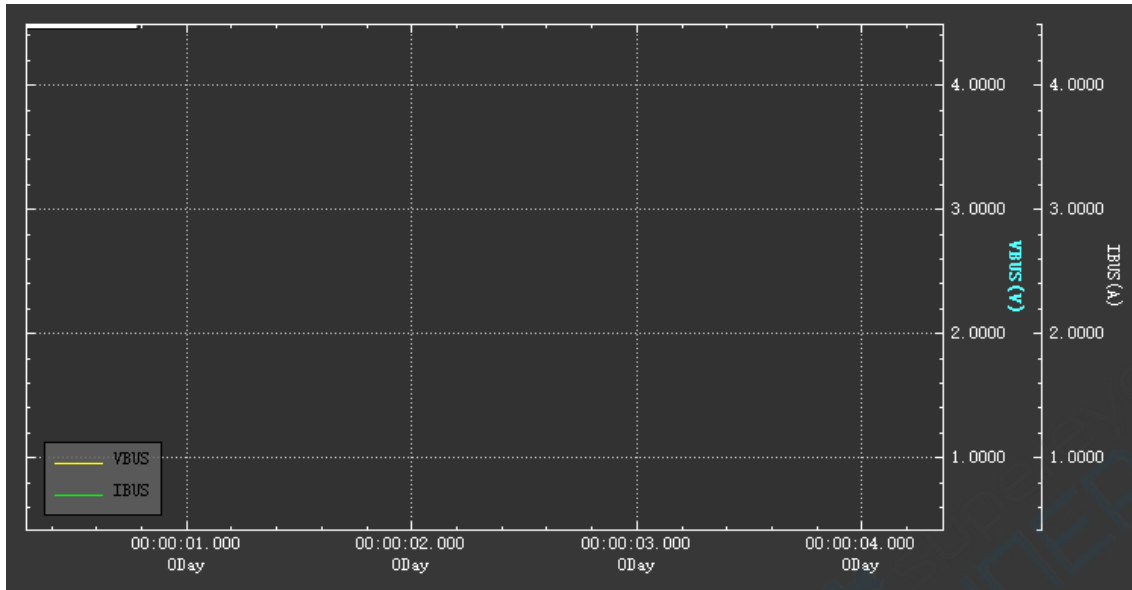


2.0.9 Image manipulation

"Left mouse button", double click to show/hide the cross cursor

"Middle mouse button", press and drag the image, scroll to zoom the image. If you place the mouse on the right Y-axis coordinate, "middle-click scrolling" can zoom the image of a certain piece of data separately; place the mouse on the lower X-axis coordinate, you can zoom the time separately. In the same way, "middle key press tight" can also act on the X axis or Y axis alone.

"Right mouse button", click tightly to select the frame, you can zoom in on the image details. Double click to display the complete image.



3.0 protocol function

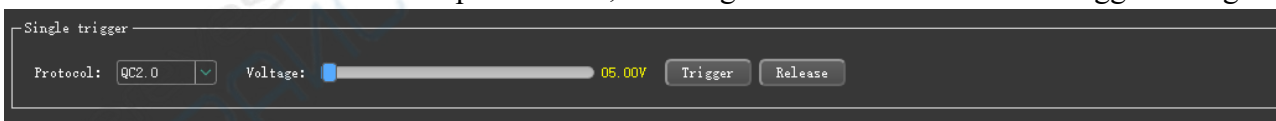
Currently, it supports triggering 5 protocols from the host computer, namely QC2.0, QC3.0, Huawei FCP, Huawei SCP, and Samsung AFC.

Support "single trigger" and "smart trigger".

Note: Due to the special nature of Huawei's SCP protocol, when switching from SCP to other protocols, the charging head may restart and cause the trigger to fail.

3.0.1 Single trigger

Select "Protocol" from the drop-down box, and drag the slide bar to select the trigger voltage.



3.0.2 Smart trigger

First, develop a trigger plan.

"Add" and "Delete" buttons to add/delete trigger steps

"Move up" and "Move down" buttons to move up/down the steps

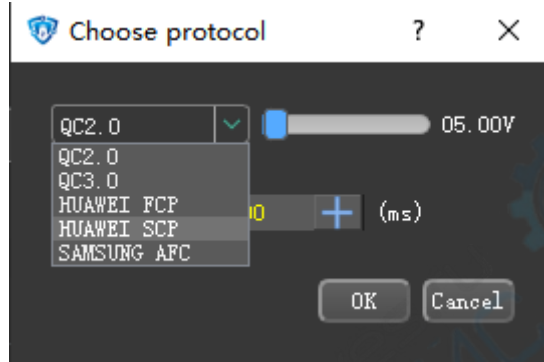
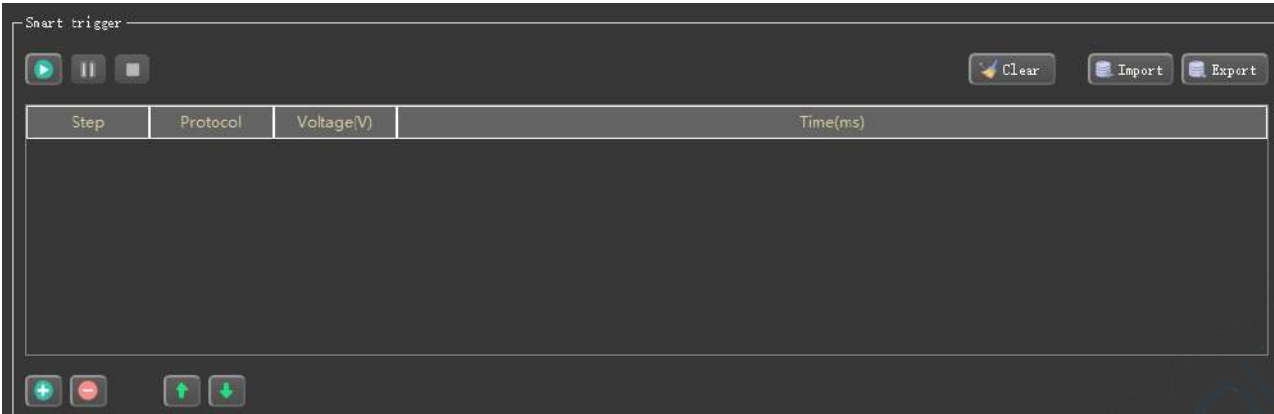
Double-click the trigger step to make changes

After the plan is developed, you can use the "Start", "Pause", and "Stop" buttons to operate.

The "Import"/"Export" button can import the trigger scheme from the PC to the upper computer, or export it from the upper computer and save it to the PC.

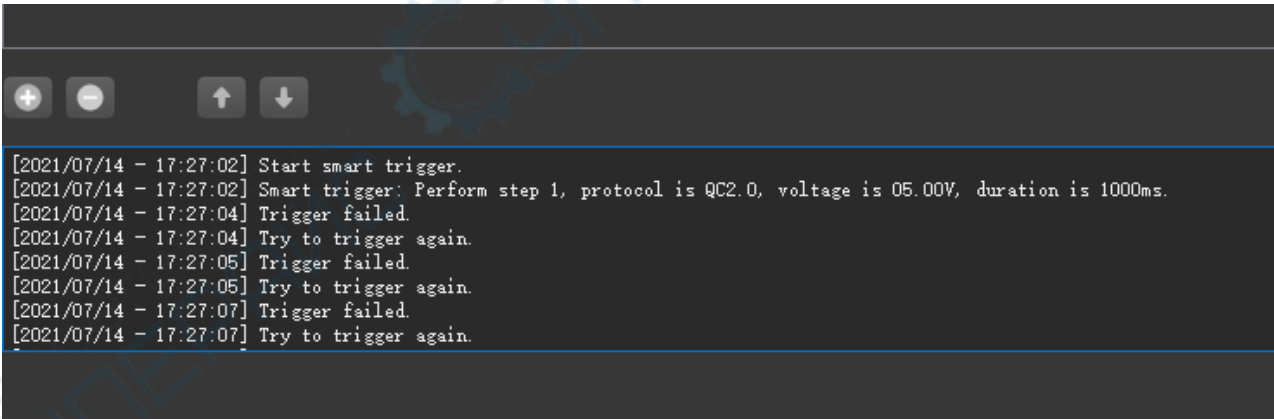
"Clear plan" can clear the current plan, so as to avoid the trouble of clicking "Delete" one by

one.



After clicking "Start", the trigger step can trigger log browsing below.

As can be seen from the trigger log below, due to the special nature of the SCP protocol, when switching from SCP to triggering AFC, the trigger fails, but the system automatically retries and finally succeeds.

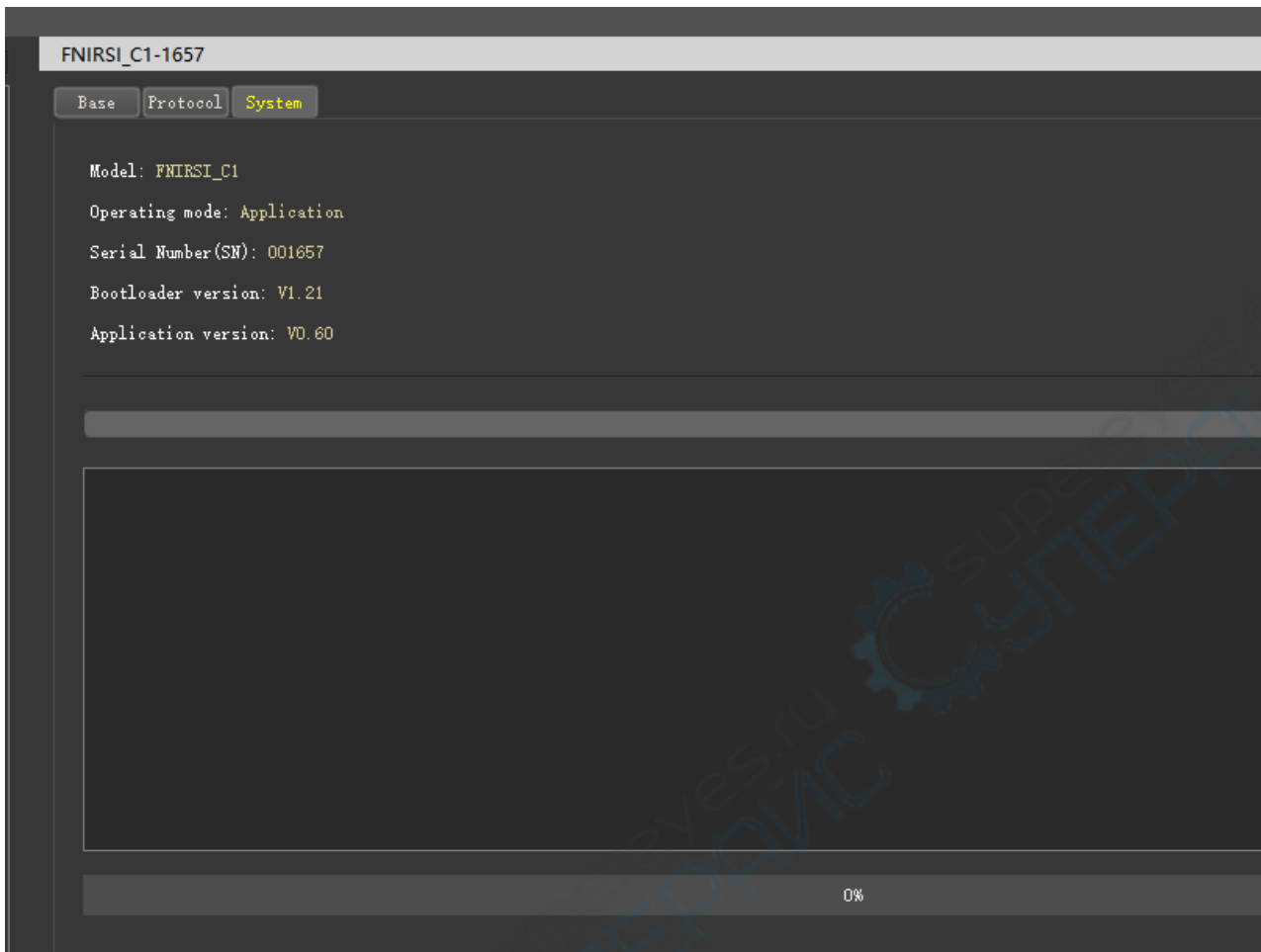


4.0 system function

The system function is mainly the firmware upgrade function, and some basic information of the tester is displayed here.

"Open file" select to upgrade the firmware."Upgrade" begins to upgrade.

When upgrading, you need to make the device enter the booter mode, usually by pressing the "OK" button when shutting down, and connecting to the PC via micro-USB.



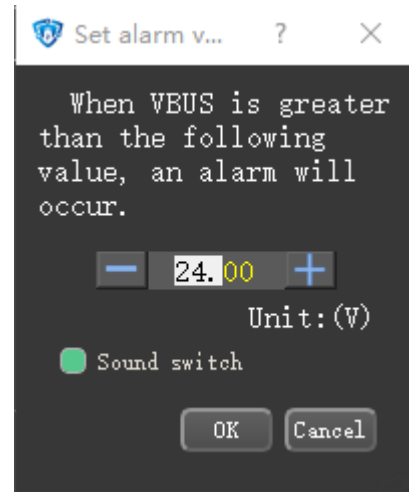
5.0 Overvoltage and overcurrent alarm

The button on the right can be used to set the alarm parameters, and you can choose whether to ring the alarm.

VBUS: 0-28V

IBUS: 0-8A

PBUS: 0-224W



6.0 Other functions

6.0.1 Multi-language support—7 types

Simplified Chinese
traditional Chinese
English language
Russian
Japanese
Portuguese
Spanish

6.0.2 The temperature unit can be switched: °C/°F

7.0 Frequently Asked Questions

7.0.1 After deleting the floating box, how to display it again?

A: Click the right mouse button in the blank area of the menu bar and check the corresponding window name to display the window.

7.0.2 How to enter the bootloader mode?

A: Press and hold the "OK" button to power on, and you will enter the bootloader mode, which is used to upgrade the firmware.

7.0.3 How to enter application mode?

A: Do not press the "ok" button to power on, and you will enter the application mode.

7.0.4 After the test instrument head is switched to the high-speed ripple interface, the upper computer D+, D-, and temperature data are not updated?

A: Because the high-speed ripple requires the meter to sample the single-channel AD at full speed, the sampling of other parameters is stopped, so this phenomenon is normal.

