Instructions for USB Tester with Full Colour Display

-Model: UM25/UM25C

Dear Customer,

Thank you for purchasing this Full Colour USB Tester from Ruideng Technology Co. Ltd. Prior to using this product we recommended that you briefly familiarize yourself with these instructions in In order to ensure the correct operation and use of the device. We also advise that you keep these instructions in a safe place for future reference as may be needed.

Technical Parameters:

Model: UM34/UM34C

Display screen：1.44 Inch color LCD display

Voltage measurement range:4-24.00V

Voltage measurement resolution:0.01V

Current measurement range: 0-4.000A

Current measurement resolution: 0.001A

Capacity accumulation range: 0-99999mAh

Voltage measurement accuracy:±（0.2％+1digit）

Energy accumulation range:0-99999mWh-999.99Wh

Current measurement accuracy:±（0.8％+3digits）

Load impedance range: 0.8Ω-9999.9Ω

Time measurement range:0-99h59min59s

Temperature range:-10℃~100℃/0℉~200℉

Temperature measurement error:± 3℃/ ± 6℉

Screen brightness setting: Levels 0-5

Delay off the screen time：0-9minutes

Voltage graphing range: 4-24.00V

Current graphing range:0-4.000A

Product weight:22.87g(UM34C)/18.39g (UM34) (No packaging);51.43g(UM34C)/46.95g (UM34)(With packaging)

Refresh rate: 2Hz

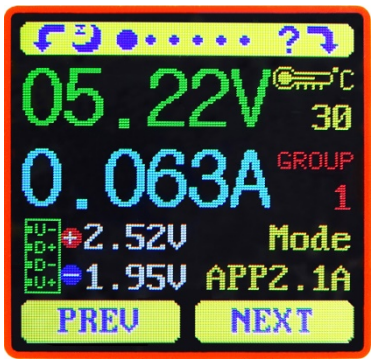
Dimensions:71.2mmx30.5mmx12.4mm(UM34C)/71.2mmx30.5mmx11.3mm(UM34)

Quick charge recognition mode：QC2.0、QC3.0、APPLE 2.4A/2.1A/ 1A/0.5A、Android DCP、SAMSUNG

(**Note**: *This quick charge agreement recognition model is for reference only, because cell phone updated quickly, it can't be absolutely accurate identification*）

Function Interfaces

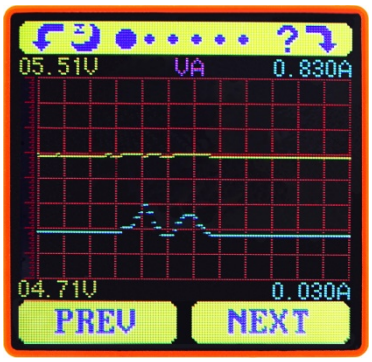
Measurement Main Interface



Quick Charge Recognition Interface

Charging Recording Interface

Data Connection Cable Impedance Measurement Interface



Measurement Graphing Interface

System Parameter Setting Interface

The Core Function:

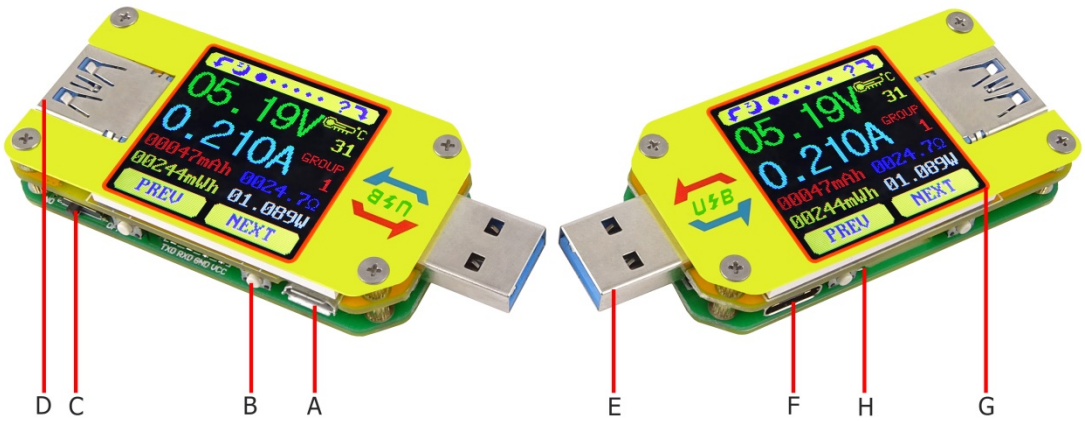
USB 3.0 port
Android Phone APP Control
Data Record and Store

Differential Voltage Method Measurement Data

Connection Cable Impedance
Load connecting detection function (screen auto off, plug the load, screen auto lighting)

Quick Charge Recognition
With Chinese and English help interface
Capacity/Energy Detection
Voltage/Current/Power Detection
屏幕可四向旋转

Device Layout



A：Micro USB Port

B：Multifunction buttons (4)

C：Bluetooth Switch

D：USB 3.0 A Female Port

E：USB 3.0 A Male Port

F：Type-C Input Port (Only VBUS、GND、CC1、CC2 four wires)

F：Type-C Input interface (only for measuring internal resistance of USB-to-TYPE-c line)

G：1.44 Inch Color Screen

H：Bluetooth Indicator: When connected to the host computer control software, the Bluetooth indicator changes from flashing to steady state. When connecting, the Bluetooth icon is displayed on the screen. (Bluetooth communication version only).

Interface Prompt Representing Functions

1： Press and hold the key to rotate the Screen Left

2： Press the key to close the screen

3： Press the key to open the help interface

4： Press and hold the key to rotate the screen right

5 :Press PREV PREV to previous page

6： NEXT Press Next to next page

Operating Instructions

When the unit is first powered on the welcome screen is displayed followed shortly by the main interface screen.

Hidden interface: Pressing any button whilst powering on the module will display four options. Option 1 selects the Chinese Interface and option 2 selects the English interface.

Welcome Interface

Hidden Interface

The third option is to reset（after reset, system setting data was restored to the factory setting, all the stored data was not reset）, The four option is to zero the Current reading (Ensure there is no load connected to the unit). Release the button at the desired selection. Pressing and holding the button after stepping to the four options will exit the hidden interface.

Interface 1: Main Measurment Interface.(As shown below)

7：Voltage Measurement

8：Current Measurement

9：Accumulated Capacity

10：Accumulated Energy

11：Temperature Measurement

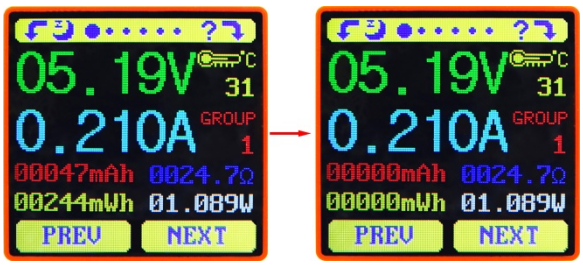
12：Number of the Data Group in use

13：Load Equivalent Impedance

14：Power Measurement

Press the ‘ ? ’ button to enter the interface as shown above:

Press and hold the ‘NEXT’ button to switch Data Group. The USB tester can provide a total of 10 groups of data to save and view. These are numbered 0-9.



With Data Groups 1-9 selected the current mAh and mWh are saved after power off. They will continue accumulating the next time the tester is powered on. When the data group selected is 0 then the current value of mAh and mWh will be temporarily saved at power off. When the device is next powered on these values will be recalled and will begin flashing. When the accumulated mAh exceeds 1 mAh, the previous data will be cleared and accumulation will restart.

With a Data Group selected, press and hold the ‘PREV’ button to clear the mAh and mWh. (As shown)

Press ‘NEXT’ to switch to the Quick Charge Recognition Interface.

Interface 2: Quick Charge Recognition Interface

15：D +: (DP) data positive signal level.

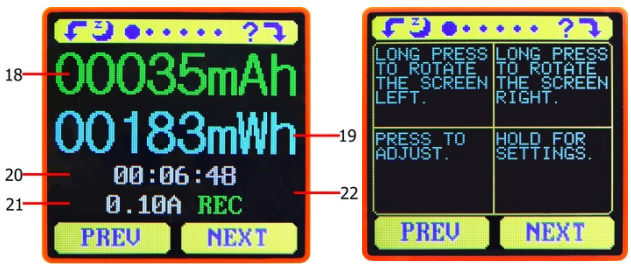
16：D-: (DM), data negative signal level.

17：Mode display

The product will automatically identify a device with a supported fast charging mode. At this time the device supports the QC2.0、QC3.0、APPLE 2.4A/2.1A/ 1A/0.5A、Android DCP、SAMSUNG.(**Note**: *This quick charge agreement recognition model is for reference only, because cell phone updated quickly, it can't be absolutely accurate identification*）

Press ‘NEXT’ to switch to the Charging Recording Interface.

Interface 3: Charging Recording Interface



18：Accumulated Capacity

19：Accumulated Energy

20：Time display：The total accumulated recording time.

21 ： Capacity/Energy statistics trigger current

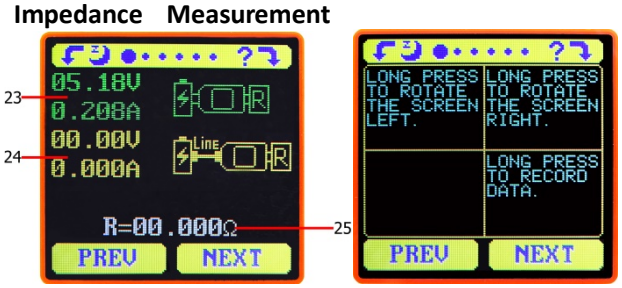
22：REC：recording status indicator. ‘REC’ displayed in red indicates that recording is stopped. ‘REC’ displayed in green indicates that recording is in progress.

After power on, when the current flowing is greater than the Low Current trigger value. The system automatically begins to record the accumulated capacity, energy, and time elapsed. The ‘REC’ indicator will change from red to green.

To set the Current trigger value, press and hold the "Next" button to highlight the value then press the ‘PREV’ button to adjust the value as required. The value can be set anywhere between 0.01A- and 0.30A. (10mA to 300mA).

Press "Next" button to switch to the Data Connection Cable impedance Measurement Interface.

Interface 4: Data Connection Cable Impedance Measurement Interface.



23：USB Tester directly connected to the power supply with Voltage and Current values displayed

24：USB Tester connected via a data connection cable with Voltage and Current values displayed.

25：Data Connection Cable resistance.

Measurement procedure:

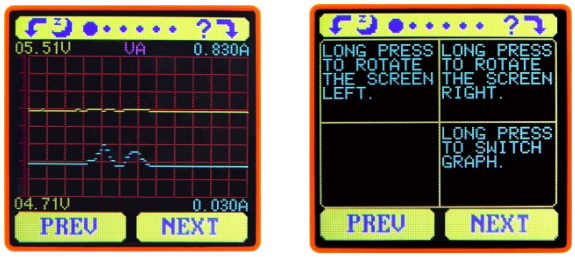
First, connect the USB Tester directly to the power supply and adjust the appropriate load current (recommended value 1A) . Press and hold the 'NEXT' button to begin recording data. The indicator prompt will stop flashing .

Second, unplug the USB Tester and then reconnect it to the power supply via the Micro USB/Type-C IN data connection cable and adjust the load current to the same value as in the first step. Press and hold the 'NEXT' button to begin recording data. The indicator prompt stops flashing and the Data Connection Cable resistance measurement test is completed and the value displayed.

Note: If during the second step the screen turns black, this indicates that the voltage difference is too high and the tester will enter the 4V power-down state. The load current needs be reduced. Then re-start the measurement from the first step. After the Data Connection Cable resistance test is completed, the Tester needs to be powered off and then on again to resume measurement.

Press the 'NEXT' button to switch to the Measurement Graphing Interface.

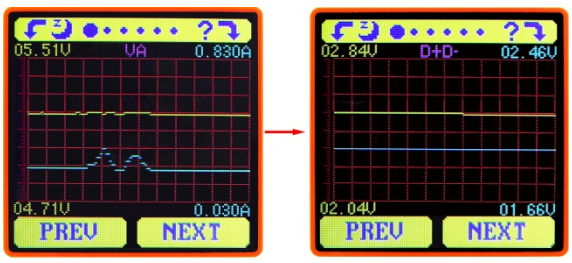
Interface 5: Measurement Graphing Interface



This interface displays the voltage measurement over time in the 4-24V range and will automatically adjust the displayed range in real time to account for voltage fluctuations. And the current measurement over time in the 0-5.000A range and will automatically adjust the display range in real time to account for current fluctuations.

Press and hold "NEXT" to switch to D+D- graphing, as picture

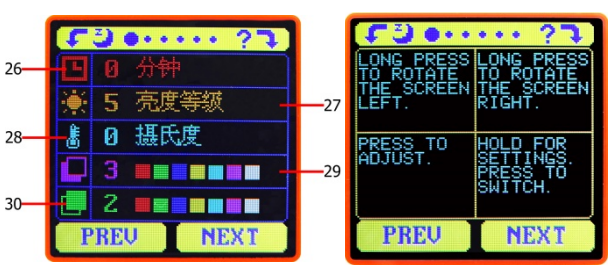
This interface displays the D+ /D- voltage measurement over time in the 0-3.3V range and will automatically adjust the displayed range in real time to account for D+/D- voltage fluctuations.



Voltage Current Graphing D+D- Signal Graphing

Press the 'NEXT' button to switch to the system parameter setting interface.

Interface 6: System Parameter Setting Interface



26：Auto screen off time

27：Screen brightness

28：Temperature display C /F

29：Theme background color

30：Theme foreground color

Press and hold the "Next" button to enter into setting state, press “NEXT” button to step through the options of auto screen off time, brightness level, temperature display units, theme background color and theme foreground color. Stop on the value you wish to change then press the "PREV" button to change the setting.

For auto screen off time setting press ‘PREV’ to repeatedly step though the 10 options from 0 to 9 minutes. Default time is 1 minutes.

For the screen brightness setting, press ‘PREV’ to repeatedly step though the 6 options from 0 to 5 where 0 is the lowest brightness level and 5 is the highest. Default brightness is 4.

For the temperature display units, pressing the ‘Next’ button toggles the setting between C and F. default temperature unite is C.

For theme background color, press ‘PREV’ to repeatedly step though the 7 options from 0 to 6 where the color sequence is red, green, blue, yellow, light blue, pink, white and black. Default color is 2, blue.

For theme foreground color, press ‘PREV’ to repeatedly step though the 7 options from 0 to 6 where the color sequence is red, green, blue, yellow, light blue, pink, white and black. Default color is 6, white.

At any setting state, press and hold the ‘Next’ button to exit the settings menu.

UM25C Android APP Instruction

1, APP Installation:

NOTE： The APP only support Android 5.0 and above

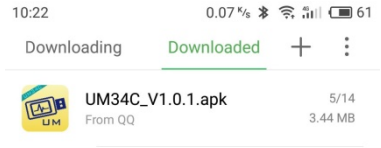
UM34C Android APP download：

http://www.mediafire.com/folder/q2b8h079hpywq/UM34

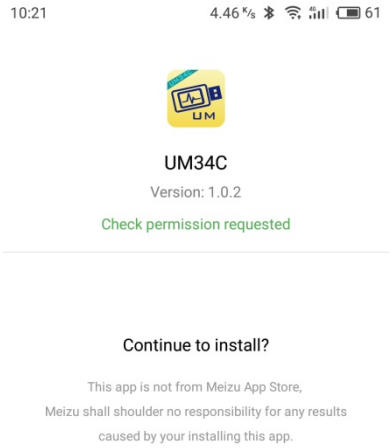
1.1 APP download link : http://www.mediafire.com/folder/q2b8h079hpywq/UM34, choose UM25C android APP file to download, you can use the computer to download , then sent the phone, or use the phone download directly.

1.2 Open the installation package

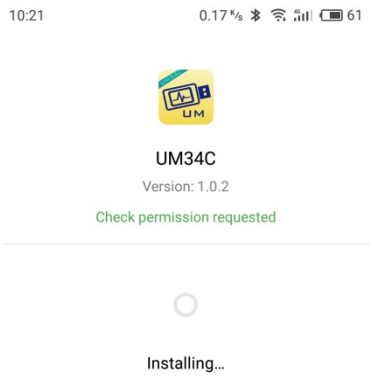
A.



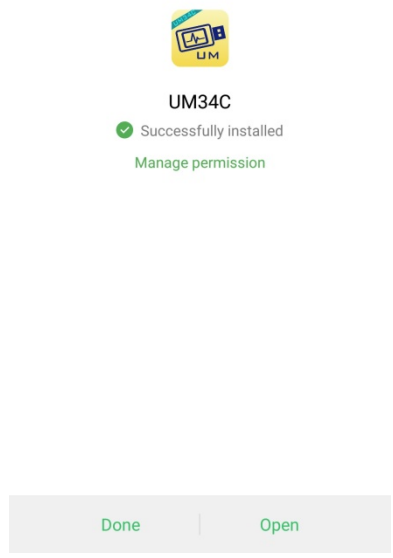
B.



C.

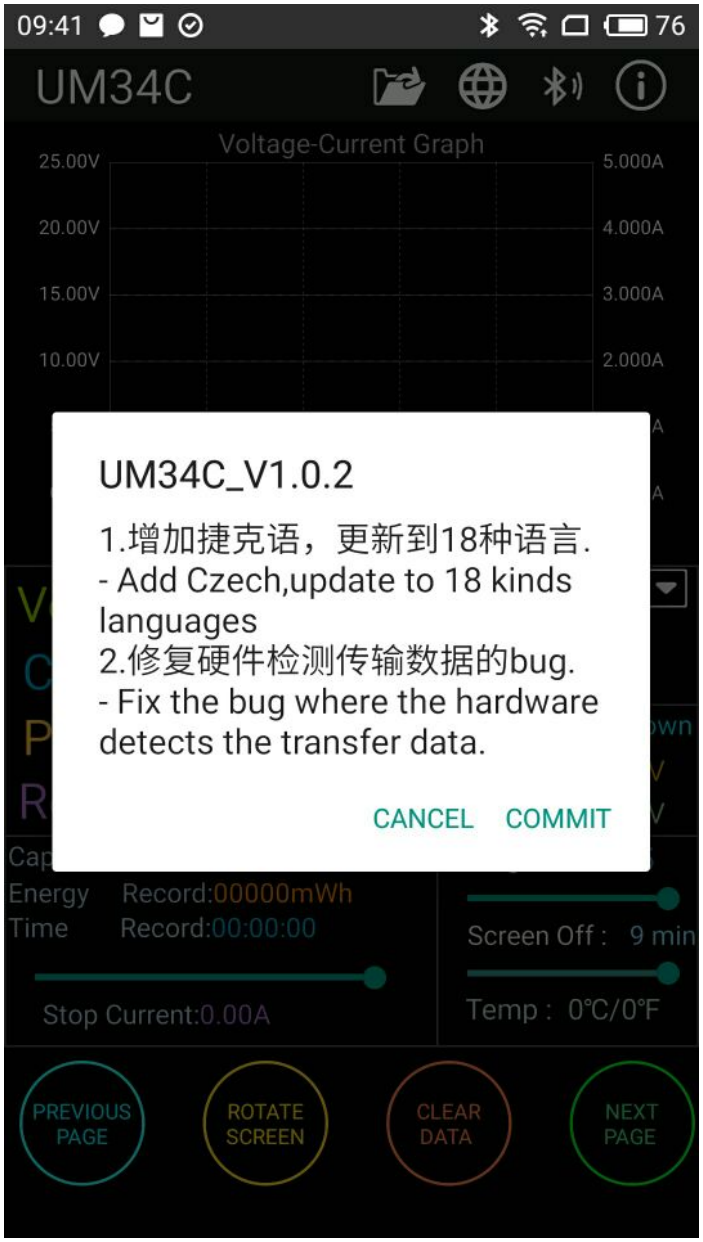


D.

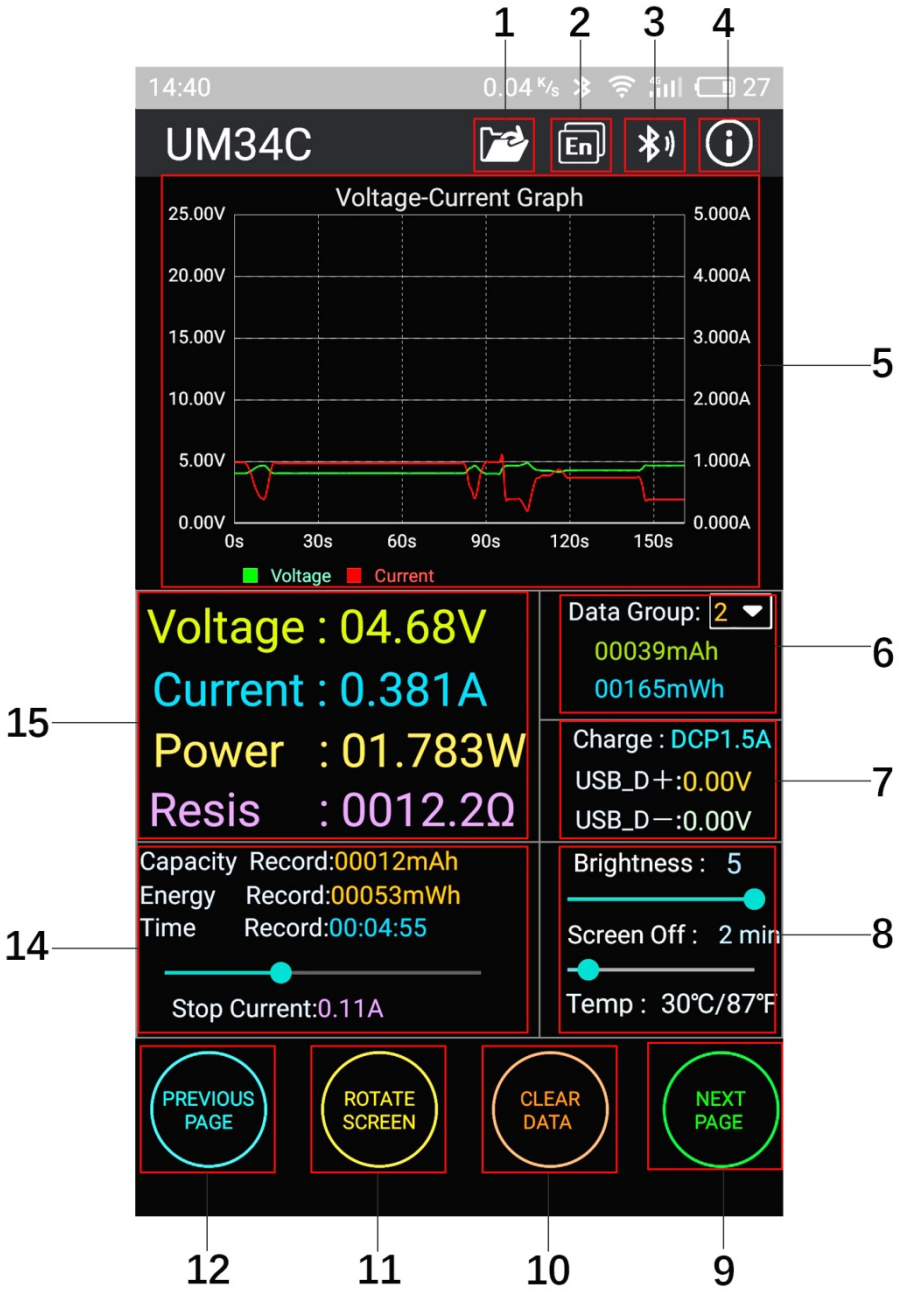


2. After Installation APP icon as the picture

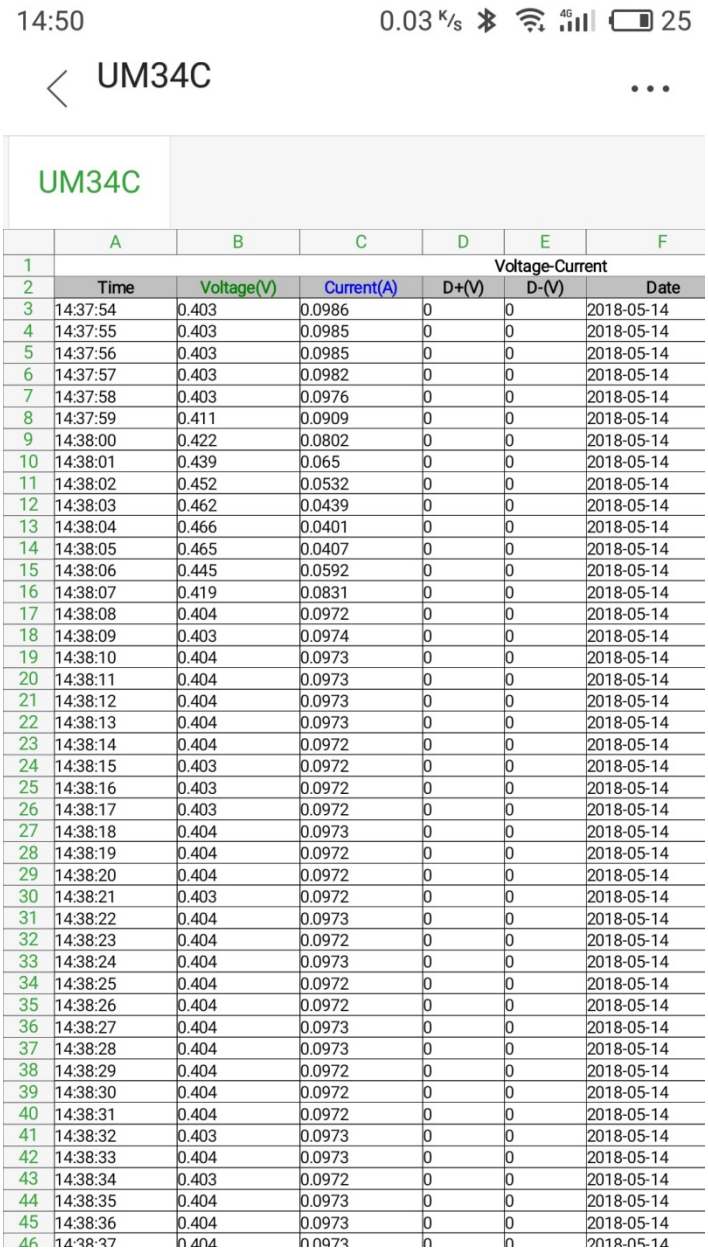
2.1 Click the APP icon. After the APP is started, the system will automatically check whether the APP version is updated in the background. The pop-up box of the new version will remind you of the update.



After the update, the main interface of the APP will display as follows:



1: Export data to the mobile phone folder（phone SD card root director, repeat to write, generate graph directly in the excel.）



	A	B	C	D	E	F
1				Voltage-Current		
2	Time	Voltage(V)	Current(A)	D+(V)	D-(V)	Date
3	14:37:54	0.403	0.0986	0	0	2018-05-14
4	14:37:55	0.403	0.0985	0	0	2018-05-14
5	14:37:56	0.403	0.0985	0	0	2018-05-14
6	14:37:57	0.403	0.0982	0	0	2018-05-14
7	14:37:58	0.403	0.0976	0	0	2018-05-14
8	14:37:59	0.411	0.0909	0	0	2018-05-14
9	14:38:00	0.422	0.0802	0	0	2018-05-14
10	14:38:01	0.439	0.065	0	0	2018-05-14
11	14:38:02	0.452	0.0532	0	0	2018-05-14
12	14:38:03	0.462	0.0439	0	0	2018-05-14
13	14:38:04	0.466	0.0401	0	0	2018-05-14
14	14:38:05	0.465	0.0407	0	0	2018-05-14
15	14:38:06	0.445	0.0592	0	0	2018-05-14
16	14:38:07	0.419	0.0831	0	0	2018-05-14
17	14:38:08	0.404	0.0972	0	0	2018-05-14
18	14:38:09	0.403	0.0974	0	0	2018-05-14
19	14:38:10	0.404	0.0973	0	0	2018-05-14
20	14:38:11	0.404	0.0973	0	0	2018-05-14
21	14:38:12	0.404	0.0973	0	0	2018-05-14
22	14:38:13	0.404	0.0973	0	0	2018-05-14
23	14:38:14	0.404	0.0972	0	0	2018-05-14
24	14:38:15	0.403	0.0972	0	0	2018-05-14
25	14:38:16	0.403	0.0972	0	0	2018-05-14
26	14:38:17	0.403	0.0972	0	0	2018-05-14
27	14:38:18	0.404	0.0973	0	0	2018-05-14
28	14:38:19	0.404	0.0972	0	0	2018-05-14
29	14:38:20	0.404	0.0972	0	0	2018-05-14
30	14:38:21	0.403	0.0972	0	0	2018-05-14
31	14:38:22	0.404	0.0973	0	0	2018-05-14
32	14:38:23	0.404	0.0972	0	0	2018-05-14
33	14:38:24	0.404	0.0973	0	0	2018-05-14
34	14:38:25	0.404	0.0972	0	0	2018-05-14
35	14:38:26	0.404	0.0972	0	0	2018-05-14
36	14:38:27	0.404	0.0973	0	0	2018-05-14
37	14:38:28	0.404	0.0973	0	0	2018-05-14
38	14:38:29	0.404	0.0972	0	0	2018-05-14
39	14:38:30	0.404	0.0972	0	0	2018-05-14
40	14:38:31	0.404	0.0972	0	0	2018-05-14
41	14:38:32	0.403	0.0973	0	0	2018-05-14
42	14:38:33	0.404	0.0973	0	0	2018-05-14
43	14:38:34	0.403	0.0972	0	0	2018-05-14
44	14:38:35	0.404	0.0973	0	0	2018-05-14
45	14:38:36	0.404	0.0973	0	0	2018-05-14
46	14:38:37	0.404	0.0973	0	0	2018-05-14

2: Multiple language choice, click this to select language. For now there are 18 kinds language (简体中文 繁體中文 English Русский Español Deutsch Français 日本語 한국어 Bahasa Indonesia Nederlands Polski Slovenskýjazyk latviešu valoda Türkçe Čeština), More languages continue to be updated.

3: Bluetooth connection: click this to select the device, search this device bluetooth name, select it and enter pair code (0000 or 1234), click connection (if you can't search UM24C bluetooth name, you can connect the bluetooth on the phone bluetooth, then open APP to connect directly)

4: Procedural information the version number, the assist personnel information

5：Voltage-current measurement dual graph

6：Corresponding the main display interface 1: accumulated mAh, accumulated mWh.

7：Corresponding the main display interface 2: quick charge recognition, D+ D- data signal wire

voltage

8：Corresponding the main display interface 6:

Screen brightness adjustment: press and hold the slider to adjust.

Off the screen time adjustment: press and hold the slider to adjust

Temperature display: Celsius/ Fahrenheit

9：Switch to next page

10：clearing key：clear current data group to zero

11：Rotation button: control USB tester display to rotate

12：Switch to previous page

13：Corresponding the main display interface 3, mAh and mWh display , time recording, control the slider to adjust the Low Current trigger value.

14：Corresponding the main display interface 1, voltage measurement value, current measurement value, power measurement value, load equivalent load impedance

Note

A：Because there are too many kinds android phone, so the UI display interface will be different at some brand phone or different scale screen of one brand phone

B：Application access requirements, allowing the necessary permissions when installing (allows the background running, allows to use bluetooth, allowing folder operation, allowed to read the application list); and also set application permissions at phone after installation: allows the background running , allow to be not cleaned after screen locked, allow auto-start and so on

C：Languages selection memory, only at first time you need to select the language when open APP.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception,
which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.
The device has been evaluated to meet general RF exposure requirement. The device can be u sed in portable exposure condition without restriction