

USB 彩屏测试仪使用说明

English Instruction for USB Tester with Full Colour Display

型号:AT35

修订时间：2019/05/13

尊敬的用户：

感谢您购买由杭州睿登科技有限公司出品的 USB 彩屏测试仪，为了让您更快了解本产品的全部功能，获得更好的使用体验，避免出现误操作，使用前请仔细阅读并保留好本说明书，以便日后查阅。



产品技术指标:

型号：AT35	显示屏幕：0.96 寸 IPS 彩色液晶显示屏
测量电压：3.700-30.000V	电压测量分辨率：0.001V
测量电流：0-4.0000A	电流测量分辨率：0.0001A
容量测量范围：0-99999mAh	电压测量精度：±（0.1%+2 个字）
能量测量范围：0-99999mWh-999.99Wh	电流测量精度：±（0.2%+4 个字）
负载阻抗测量范围：1Ω-9999.9Ω	功率测量范围：0-120W
温度测量范围：0℃~65℃/32℉~149℉	温度测量误差：± 3℃/ ± 6℉
工作温度范围：0-45℃/32℉~113℉	数据刷新频率：约 0.5Hz
产品尺寸：64mmx22mmx12mm	含包装重量:约 27g
D+/D- 电压测量范围：0-3.3V	D+/D-电压测量精度：±（10%+10 个字）
快充识别模式：QC2.0、QC3.0、APPLE 2.4A/2.1A/ 1A/0.5A、Android DCP、SAMSUNG	

功能界面:



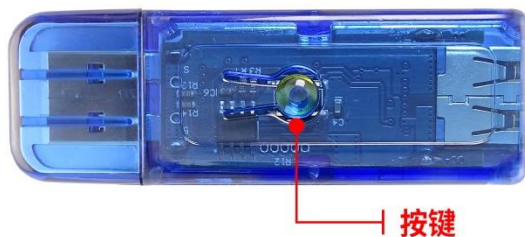
测量主界面



快充识别界面

按键说明:

按键位于测试仪背面，操作有短按、长按两种方式。短按实现测量主界面和快充识别界面的切换，长按实现系统设置切换。



界面图标代表功能:

- 1: 长按按键直到此图标选中后松开按键实现关屏
- 2: 长按按键选中后松开按键实现温度单位切换
- 3: 长按按键选中后松开按键实现数据组切换
- 4: 长按按键选中后松开按键实现当前数据组数据清除
- 5: 长按按键选中后松开按键实现屏幕旋转



操作说明:

上电后首先显示欢迎界面，然后进入测量主界面。

测量主界面如下图:

- 6: 电压测量值
- 7: 电流测量值
- 8: 累计容量值
- 9: 累计能量值
- 10: 温度测量值
- 11: 数据组编号
- 12: 负载等效阻抗值
- 13: 功率测量值



欢迎界面



测量主界面

短按按键，切换至主界面二（快充识别界面）:

快充识别界面如下图:

- 14: D+, DP, 数据正信号电压
- 15: D-, DM, 数据负信号电压
- 16: 当前快充模式显示

该产品会自动识别快充模式，本产品能识别 QC2.0、QC3.0、APPLE 2.4A/2.1A/1A/0.5A、Android DCP、SAMSUNG（快充协议识别


模式仅供参考，手机更新换代较快，无法百分百准确识别）





快充识别界面


参数设置:


在任意界面，长按按键实现参数设置；长按按键约 0.5 秒以上功能图标反显选中（图标黑底变蓝底）时，可依次在关屏、温度单位切换、数据组切换、数据组数据清除、屏幕翻转中进行切换；在对应的功能反选时松开按键即可。

长按按键，对应图标反显选中时，松开按键后，屏幕关闭。再短按按键或者重新上电测试仪屏幕重新点亮。

长按按键，对应图标反显选中时，松开按键后，温度单位实现切换。默认温度单位：摄氏度。

长按按键，对应图标反显选中时，松开按键后，数据组实现切换。本测量仪可提供 0 或 1 共两组数据的保存和查看。当数据组为第 0 组时，掉电时暂存当前容量和能量，待下次开机时闪烁提醒上次容量和能量，当累加容量超过 1mAh 自动清除上次数据，重新开始累计。当数据组为第 1 组，掉电时存储当前容量和能量，待下次开机继续累加。

长按按键，对应图标反显选中时，松开按键后，当前数据组数据清零。

长按按键，对应图标反显选中时，松开按键后，测试仪屏幕显示实现 180° 翻转，并自动记忆，方便以后使用。

Instruction for USB Tester with Full Colour Display

Model: AT35

Version: 2019/05/13

Dear Customer,

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



Technical Parameters:

Model: AT35	Display screen: 0.96 Inch color IPS display
Voltage measurement range: 3.700-30.000V	Voltage measurement resolution: 0.001V
Current measurement range: 0-4.0000A	Current measurement resolution: 0.0001A
Capacity accumulation range: 0-99999mAh	Voltage measurement accuracy: $\pm (0.1\% + 2\text{digits})$
Energy accumulation range: 0-99999mWh-999.99Wh	Current measurement accuracy: $\pm (0.2\% + 4\text{ digits})$
Load impedance range: 1 Ω -9999.9 Ω	Power measurement range: 0-120W
Temperature range: 0 $^{\circ}\text{C}$ ~65 $^{\circ}\text{C}$ /32 $^{\circ}\text{F}$ ~149 $^{\circ}\text{F}$	Temperature measurement error: $\pm 3^{\circ}\text{C} / \pm 6^{\circ}\text{F}$
Working temperature range: 0~45 $^{\circ}\text{C}$ /32 $^{\circ}\text{F}$ ~113 $^{\circ}\text{F}$	Data refresh rate: about 0.5Hz
Dimensions: 64mmx22mmx12mm	Product weight(package included): about 27g
D+/D- voltage measurement range: 0-3.3V	D+/D- voltage measurement accuracy: $\pm (10\% + 10\text{digits})$
Quick charge recognition mode: QC2.0、QC3.0、APPLE 2.4A/2.1A/ 1A/0.5A、Android DCP、SAMSUNG	

Function Interface



Measurement Main Interface

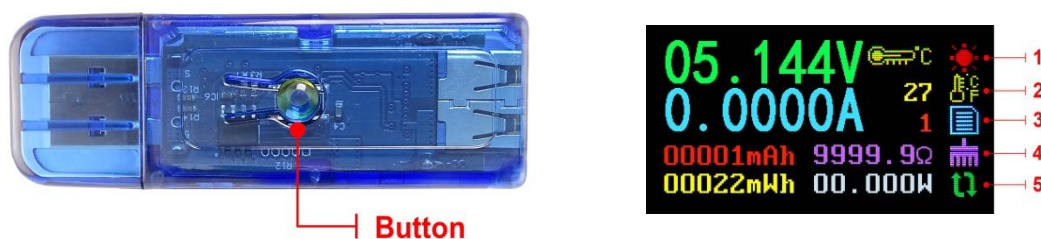


Quick Charge Recognition Interface

Button Instruction:

The button is located on back of the tester. There are 2 ways of operation, long press and short press. Short press is to realize switch between Main Interface and Quick Charge

Recognition Interface. Long press is to realize switch of system setting.



Introduction of Icon Function

- 1: Press and hold the button to choose this icon to turn on/off the screen.
- 2: Press and hold the button to choose this icon to switch the temperature unit(°C/°F).
- 3: Press and hold the button to choose this icon to switch data group.
- 4: Press and hold the button to choose this icon to clear data in current data group.
- 5: Press and hold the button to choose this icon to rotate the screen.

Operation Instruction:

After power on, welcome interface will be displayed firstly, and then measurement main interface will be shown.



welcome interface

Interface 1: Measurement Main Interface:

- 6: Voltage Measurement Value
- 7: Current Measurement Value
- 8: Accumulated Capacity
- 9: Accumulated Energy
- 10: Temperature Measurement Value
- 11: Number of the Data Group in use
- 12: Load Equivalent Impedance
- 13: Power Measurement Value

Press the button on the back to switch to Quick Charge Recognition Interface

Interface 2: Quick Charge Recognition Interface:

- 14: D+: data positive signal voltage
- 15: D-: data negative signal voltage
- 16: Current quick charge mode display





Quick Charge Recognition Interface


The product will automatically identify a device with a supported fast charging mode. At this time the device supports the QC2.0、QC3.0、APPLE2.4A/2.1A/1A/0.5A、Android DCP、SAMSUNG. (Note : D+/D- voltage and quick charge protocol recognition function is for reference only, because mobile phone is updated quickly, it can't be absolutely accurate)


Parameter Setting:


At any interface of 2 interfaces, Press and hold the button to realize data set. Long press the button for more than 0.5s, the corresponding icon will be selected and displayed (the background of icon becomes blue), then step through the options of screen off, temperature display units, data group switch, data group clear zero and screen rotation. Stop on the function you wish to set, and then loosen the button.

Press and hold the button, when the corresponding  icon is selected and displayed, loosen the button, screen will be turned off, and then press the button or power on again, the display will light again.

Press and hold the button, when the corresponding  icon is selected and displayed, loosen the button, the temperature unit will be switched. Default temperature unit: degrees Celsius.

Press and hold the button, when the corresponding  icon is selected and displayed, loosen the button and data group will be switched. This tester can provide 2 groups to store and check, data group 0 and data group 1. When the data set is group 0, the current capacity and energy will be stored after power off. When power on next time, the stored mAh and mWh is blinking displayed. When the new mAh is accumulated up to 1mAh, the stored mAh and mWh will be covered, and the values will start over. When data set is group 1, the current capacity will be stored after power off. And the stored capacity will be accumulated after power on.

Press and hold the button, when the corresponding  icon is selected and displayed, loosen the button, the data of the current data group will be cleared.

Press and hold the button, when the corresponding  icon is selected and displayed, loosen the button, the screen will be rotated 180 degree, and stored automatically, which is convenient for later using.