OPERATION MANUAL

Changzhou JinAiLian Electronic Technology Co.,Ltd
Add: C3, No.22 Building, New Impetus Pioneering Center, No.1 North Qingyang Road, Tianning District, Changzhou City
Phone:4001128155 Fax：0519-85565067
Http://www.jaldz.com Email:mailjk17@163.com
Technical support :18961417787

Security needs

Warning! Strictly prohibit battery positive and negative connection!
Remind! Before opening the machine, ensure that the clamp can not be loaded!
Do not abort testing during testing, which will lead to inaccuracy of measurement data.

 WARNING  DANGER :When you find the following abnormal conditions, please terminate the operation immediately and disconnect the power cord. Contact with the Jinke instrument sales department immediately. Otherwise, it will cause a fire or a potential electrocution hazard to the operator.

*Abnormal operation of the instrument.
*During operation, the instrument produces abnormal noise, peculiar smell, smoke or flash.
*During operation, the instrument produces high temperature or electric shock.
*Power line, power switch or power socket damage.
*The flow of impurities or liquids into the instrument.

Security information

 WARNING  DANGER :To avoid possible electrical shock and personal safety, follow these guidelines.

Disclaimer: please read the following safety information carefully before the user begins to use the instrument. It will not take any responsibility for the user's personal safety and property loss due to the failure to comply with the following terms.

Instrument grounding: to prevent the danger of electric shock, please connect the power ground.

Do not use instruments in explosive atmospheres: do not use instruments in flammable, explosive gas, steam or dusty environments. The use of any electronic device in such an environment is an adventure for personal safety.

Do not turn on the case: non professional maintenance personnel can not open the instrument shell to try to repair the instrument. There are still unreleased charges after the shutdown of the instrument, which may cause electrical shock to the person.

Do not use damaged instruments: if the instrument has been damaged, the danger will be

unpredictable. Please disconnect the power cord, do not use it again, and do not attempt to repair it yourself.

Do not use abnormal instruments: if the instrument is not working properly, its danger is unpredictable, please disconnect the power line, do not use it, and do not try to repair it.

Do not exceed the scope specified in this instruction: beyond the scope, the protective measures provided by the instrument will be invalid.

Catalog

Preface.....1
Function Overview.....3
The appearance of the instrument.....6
Connection mode.....7
Main function menu.....8
Battery static parameter measurement mode.....16
Battery capacity measurement mode.....18
Separate charging mode.....20
Separate discharge mode.....20
Program control power mode.....20
Program controlled electronic load mode.....21
Voltage and internal resistance meter mode.....24
Instrument characteristic index.....25
Warranty Ordinance.....27

Preface

The common rechargeable batteries include lithium batteries, nickel cadmium batteries, nickel hydrogen batteries, and sealed lead-acid batteries. Lithium battery has the characteristics of large capacity, light weight and high cycle times. It is widely used in mobile phone, PDA, digital camera, video camera, notebook computer and so on. It is the most advanced rechargeable battery at present.The lithium battery is made of lithium battery pack, which consists of lithium battery core (Li ion core or internal polymer battery) and lithium battery protection board. Nickel cadmium battery is an early application of rechargeable battery, with low cost, low internal resistance, high current discharge characteristics, so far in some electric tools, electric vehicles have been widely used.

NiMH batteries are similar to nickel cadmium batteries, but because they do not contain heavy metals, they have less pollution to the environment, and are widely used in some common consumer electronics products. It has basically replaced the application field of nickel cadmium batteries.The small sealed lead acid battery, also known as the maintenance free lead acid electric power, is now mature in technology. At present, it is mainly used in fixed backup power supply, such as uninterrupted power supply, emergency lighting and so on.

In view of the needs of production and testing of these rechargeable batteries,Specially developed Integrated detector for rechargeable battery.This tester can make a quantitative and accurate measurement of some basic parameters of the battery. It can measure the open circuit voltage, internal resistance, charge, discharge performance, and the battery capacity, especially for the functions of lithium battery, such as overcharge protection, overdischarge protection, overcurrent protection, short circuit protection and so on. The numerical value greatly facilitates the production and sale of the battery before and after service.With very simple steps, the performance and quality of the battery can be judged intuitively. At the same time, it also has the function of fast screening. It can set the upper limit and lower limit of the measurement parameters. It can easily detect the bad battery from a batch of battery products and improve the production efficiency.In addition, some special functions are added to make it characteristic of some general instrument and equipment, expand the flexibility of the equipment, and have a wide range of features.

In addition, the tester can provide a software upgrade service based on the needs of the customer. On the basis of the basic model, the tester can be upgraded to a connecting computer model by software. The test data can be set and stored by the computer, the test results are recorded automatically, and the test data of each battery can be recorded by the battery bar code. It is conducive to the analysis and control of production quality, product recovery and so on.In addition, by adding hardware upgrade module, the test accuracy of voltage and internal resistance will be increased by an order of magnitude to meet the more stringent quality requirements.

The battery performance tester can be tested Inter phone battery, cell phone battery, etc.Many kinds of lithium ion batteries, nickel hydrogen batteries, polymer batteries (groups) within 10V20A, such as: MP3/4 battery, digital battery, double battery battery, cell phone battery and so on.This testing equipment is widely used in battery manufacturers, cell phone batteries, digital batteries and other battery manufacturers, and can meet the manufacturers' production testing of high, medium and low-grade batteries. The time of testing a battery is not more than one second. It is fast, functional and accurate. It is the most accurate instrument in the market.

It is widely used for battery manufacturers, cell phone batteries, digital batteries and other battery manufacturers, and can meet the manufacturers' production testing of high, medium and low-grade batteries. The time of testing a battery is not more than one second. It is fast, functional and accurate. It is the most accurate instrument in the market.In order to detect the production of rechargeable battery, a special rechargeable battery comprehensive detector needs to be developed, which can measure the basic parameters of the battery with a quantitative and accurate measurement, and can measure the open circuit voltage, internal resistance, charge and discharge performance of the battery.The battery capacity, especially for the lithium battery, has the functions of overcharge protection, over discharge protection, over current protection, short circuit protection and so on, and measured the corresponding value, which greatly facilitates the production of the battery and the service of the pre-sale and after sale service.With very simple steps, the performance and quality of the battery can be judged intuitively. At the same time, it also has the function of fast screening. It can set the upper limit and lower limit of the measurement parameters. It can easily detect the bad battery from a batch of battery products and improve the production efficiency.

Functional Overview

JK5530 The basic functions of the battery integrated tester include：

1．The static parameters of the battery are detected quickly.

1.1 battery voltage detection (for lithium battery that has been protected, it can be automatically awakened)

1.2 battery internal resistance detection

1.3 Battery charge performance detection

1.4 Detection of battery discharge performance

1.5 Battery over current size detection (for lithium battery only)

1.6 Battery short-circuit protection function test (for lithium battery only)）

1.7 The above can be detected Part of a numeric size ,The upper and lower limits can be set up for quick screening.

2．Battery capacity detection.

According to the selected battery type, the number of battery series and battery capacity, the most suitable voltage and current are selected, and a complete charge and discharge test is carried out. In the discharge process, the real capacity of the battery is calculated, which provides a powerful reference for the performance of the battery.

3．The battery charging function can be selected separately.

With this function, the tester can be used as a multifunctional intelligent charger, charging for various types of rechargeable battery pack.(JK-5530 models can be used for 4 sections of lithium batteries, 12 series of Ni MH batteries, 6 series of maintenance free batteries for quick charging), which greatly facilitates the use and testing of the battery. At the same time, the charging time is displayed in real time, as well as the amount of charge that has been charged (in mAH unit).

4．The battery discharge function can be selected separately.

With this function, the tester can discharge the battery individually and control the discharge cut-off voltage.The disadvantages of electronic discharge or discharge caused by resistance discharge are avoided.It is suitable for the test of the battery products in the factory. It is also convenient to operate. Only the battery type is selected. The voltage and capacity can start the intelligent discharge program, and the battery can be operated safely.

5．The function of the numerical control current and voltage source.

With this function, the instrument can be used as a precision numerical control DC power supply, and the maximum output 25V maximum output 5A DC power supply.The output voltage and limiting current can be set directly, which can be easily used in the special battery charging, testing, and power supply to other equipment, and the scope of application of the expanded instrument.

6．Numerical control electronic load function.

Choosing this function, the instrument can be used as a precise electronic load. It can set the operation in constant current mode and also set cut-off voltage (cut off) to facilitate the discharge measurement of the battery. It can make the load voltage lower than the set cut-off voltage and automatically cut off the working current to avoid the deep discharge of the battery. Damage to the battery.In addition, this instrument can also be used in other occasions requiring electronic load, such as charger test, aging test of switching power supply and so on.

7．Function of voltage and internal resistance meter

This function can be used as an ordinary 3 bit half digital voltmeter and digital milliohm. It can continuously indicate the input voltage and the internal resistance of the battery. It can be used directly instead of the special internal resistance meter, and can be used for rapid battery screening and detection.

Technical parameters:

Model		JK5530	JK5530B
Test range	battery voltage test range	0-36V,minimum resolution10mV,accuracy: ±30mV	0-62V ,minimum resolution 1mV，accuracy:±5mV
	The internal resistance test range	0-999mΩ,minimum resolution 1mΩ	0-1999mΩ,minimum resolution 1mΩ
	Capacity test range	0-10000mAH, minimum resolution 1mAH	
Measurement accuracy	voltage measurement accuracy	±（result*0.1%+3mV）（voltage 0~36V） ±（result*0.1%+30mV）（voltage 37~60V）	
	Current measurement accuracy	±（result*0.2%+30mA）（Current 0~10A） ±（result*0.5%+30mA）（Current 11~30A）	
	Accuracy of internal resistance measurement	±（result*1%+1mΩ）	
	The measurement accuracy of battery capacity	10AH :±2%	100AH：±2%
Test speed	static test (test all functions)	1.1-2 sec	
	Capacity test (1C current	3-4 hours	

	charge and discharge)			
Internal numerical control voltage source index	output maximum voltage	20V	60V	
	output maximum current	5A	5A (conventional)/10A (customized)	
	output power	80W	200W	
	Ripple voltage	＜20mV	＜100mV	
	Load adjustment rate	＜10%		
	Response time	1S		
Internal numerical control electronic load index		highest discharge voltage	30V	60V
		highest discharge current	10A(continuous) 15A （10secs）	20A(continuous)，30A(Need to explain in advance, there is a jump in the small current range) 60A（need to be customized)
		Limit power	50W （ continuous）80W（10 secs）	200W （continuous）
		Power supply voltage	220V±10%50Hz	
U disk storage		no	yes	
communication interface		no	yes （ with upper computer software）	
Attachment		Kelvin clip test line, test probe		
Dimensions and weight		JK5530: 225(w)*110(H)*355(D) mm, about 3.6kgs JK5530B:225(W)*110(H)*410(D) mm, about 4.5kgs		

Appearance of instrument

The appearance panel of the instrument is mainly composed of three parts, LCD for displaying operation and measurement information, keyboard and wiring hole, as shown in the figure.

JK5530

JK5530B

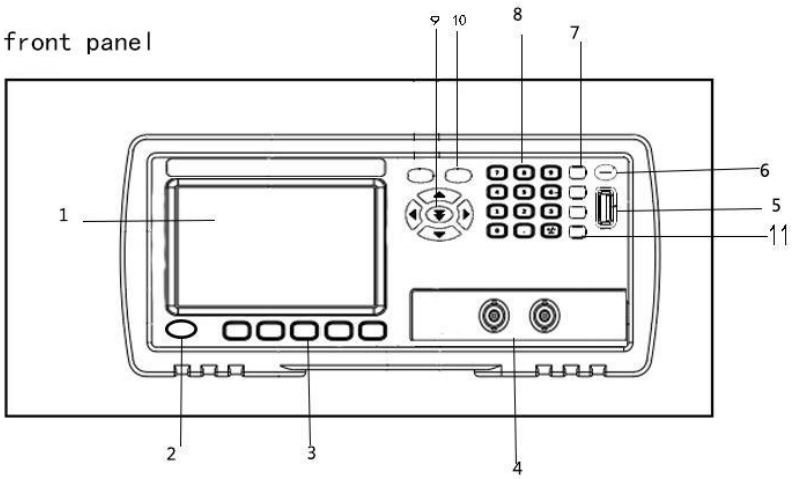
Display interface

The display interface of this instrument is a large screen 4.3 inch TFT LCD, and it can display more information at the same time. For details, see the operation instructions.

Operating interface

The input interface of this instrument is 6 light touch keys, which are upward key, down key, left key, reduced, right key, increase, return, confirm key, start / pause key. The operation is very simple. The functions of each button are single. Anyone who is familiar with it can operate the instrument skillfully.

As shown in the following figure,



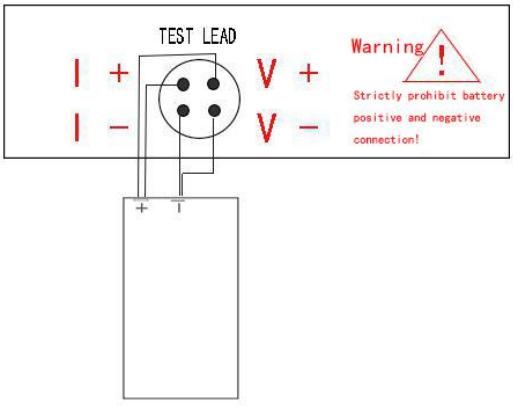
1, display screen
2, opening the key
3, function key
4, test end
5, USB interface
6, qualified / unqualified

7, lock key
8, the number key
9, confirmation key
10, set the key
11, trigger key

The operation interface of the instrument adopts a common multi-level, page to turn menu operation interface, which supports many functions and is simple to operate.The main menu is the 8 main functions mentioned above, select the corresponding function according to the upward key or down key, select the key to select and enter the setting operation interface. In the operation interface, the corresponding adjustment item is selected according to the upward and downward key, by the left, decrease, right, increase, select the set value, press confirm key, can open. Start the test run.
In any one of the operating interfaces, you can switch functional tests to each other, such as the current setting state, starting with the trigger key, such as in the running state, the current operation can be suspended by the confirmation key, and the confirmation key is pressed again, and the current run can be started again.

Connection mode

This instrument has 4 terminals, of which I+ and I- are connected to the cathode and anode of the battery respectively.As a connecting channel for charging current and discharge current,In addition, V + and V - are also connected to the cathode and anode of the battery by two independent wires.And confluence on the battery pole.As a connecting channel for measuring signals, when measuring,By measuring the 4 wire system, the measurement error caused by the wire can be eliminated and the accuracy of the test can be improved.
The following is an example of testing a lithium battery with identification resistor.
The way of connection is shown as shown in the diagram.

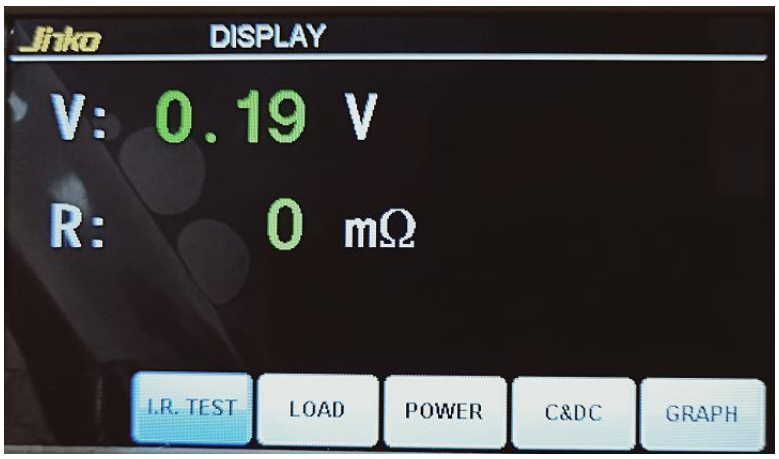


Main function selection menu

After the boot screen is displayed, enter the main function menu display interface, display the information of voltage and battery internal resistance.

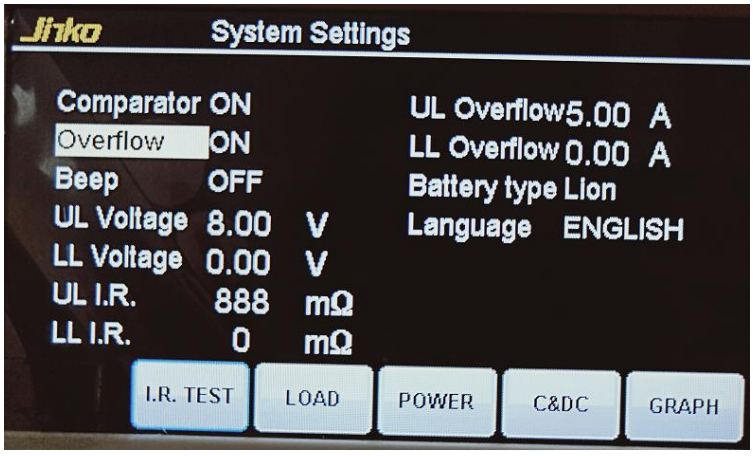
In the system settings interface, press the "DISP" button to return to the previous test interface.

As shown in the picture.



The system default overflow test is closed, the main function interface does not display the over current test parameters, such as the need to open the over current test function, press the "SETUP" key into the setting interface, press the up and down keys to select the function, the cursor moves to the over current test, and opens the test function according to the "confirmation ▼" key.

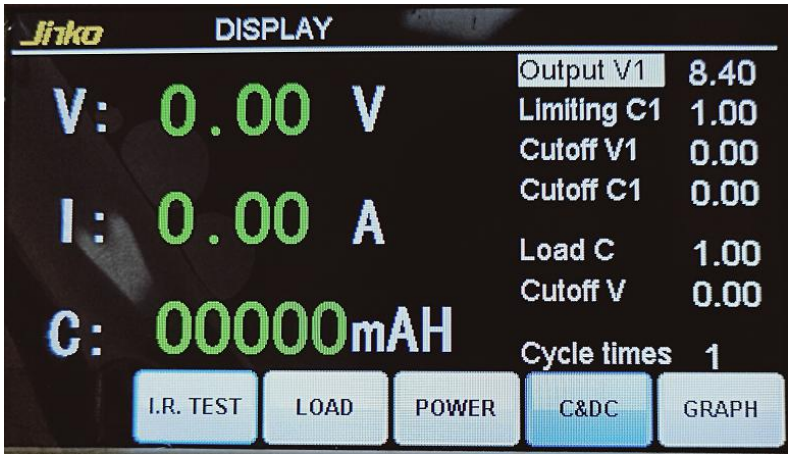
As shown in the picture.



After setting up, press the "internal resistance test" button and return to the internal resistance test interface, the overcurrent test parameters will appear.

As shown in the picture.

JK5530



JK5530B

The bottom-left corner of the internal resistance test interface shows the BIN status of the current internal resistance test. If it is displayed as AUTO, the BIN will switch automatically. If it is displayed as 250mΩ,the current measurement range of internal resistance is 0-250mΩ. If it is displayed as 2000mΩ, the internal resistance range of the current measurement is 0-2000mmΩ. The three state is set by the shift key switch point (this function is JK5530B only).

The overcurrent test is aimed at batteries with protective plates. The protection board of the battery will start protection, disconnect the load function, and record the overcurrent value.

Overflow test parameter settings:

1. starting current (0~15A),
2. step current: step XA per second, such as 0.1A, 0.1A per second.
3.Threshold voltage: if the threshold voltage is 0, the default is automatic test mode. If it is not 0, the default mode is manual test mode. If the threshold voltage is set, the test can only be started if the battery voltage is greater than the threshold voltage.

4. current: current reaches the overcurrent value of the battery,
5. short circuit time: the short circuit time is displayed after the test.
6. Charging Voltage: Charging Voltage for Charging and discharging Test.
7.Charging current ： Charging current for Charging and discharging Test.
8.load current：Discharging current for Charging and discharging Test.
9.Charging and discharging Test： If the charge and discharging test is turned on,The charge and discharge test will be carried out according to the parameters set by the user before the overcurrent test.

After the completion of the overcurrent test parameter, the battery will automatically start testing after 3 seconds.

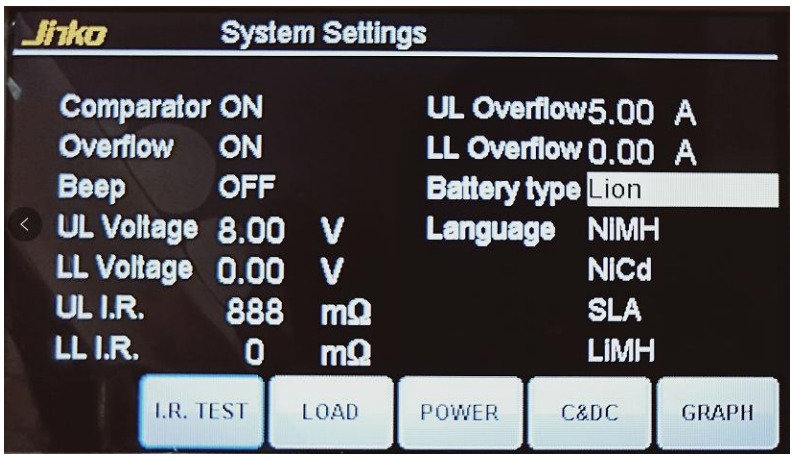
If you do not need over-current testing, you need to shut down the overcurrent test in system settings.

Setting steps:
Press the "SETUP" button to enter the setup interface, select the function according to the up and down keys, move the cursor to the overcurrent test, and press the "confirm▼" button to turn off the overcurrent test function.

The instrument supports battery type detection. According to "SETUP", the battery type can be selected, and the battery type can be preset.
Optional items for battery type selection

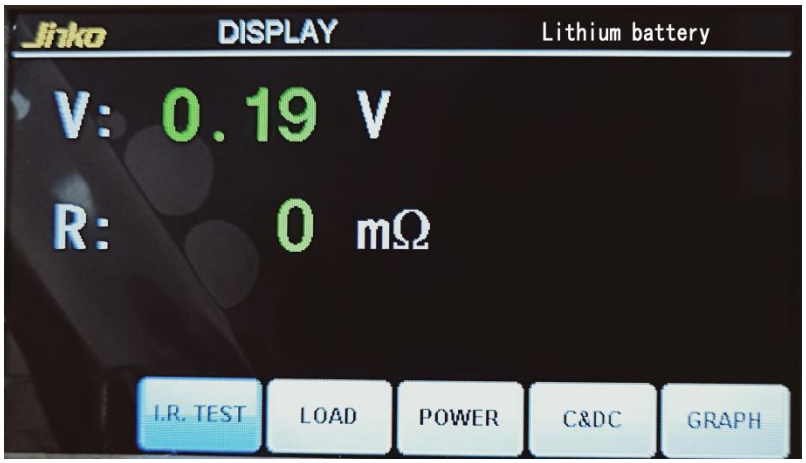
(a) Lithium battery
(b) Nickel metal hydride battery
(c) Nickel cadmium battery
(d) Small lead acid battery
(e) Lithium manganese battery

JK5530 system setting display

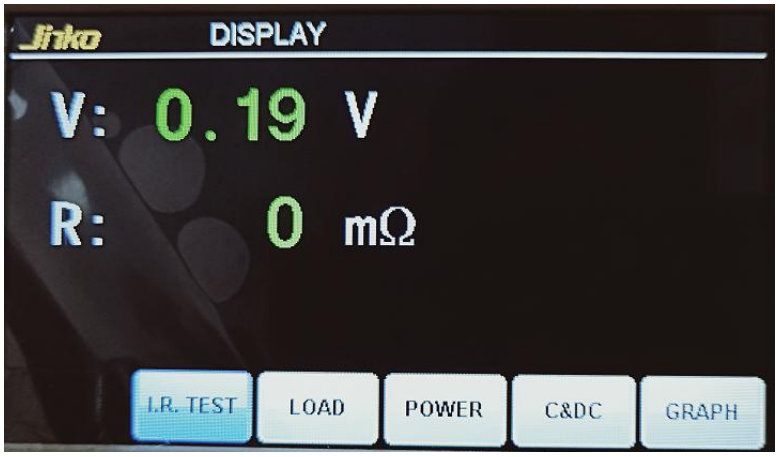


JK5530B system setting display

Battery test status shows, select battery type lithium battery as an example.
The test results are shown as shown in the diagram



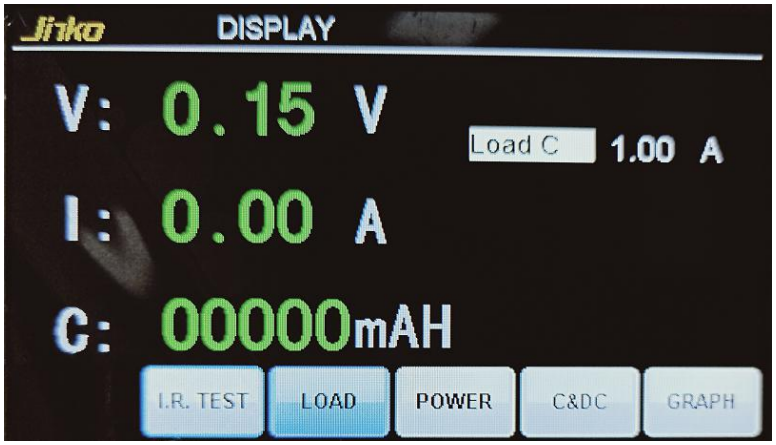
If the battery is not lithium battery, the test results are shown in the figure.



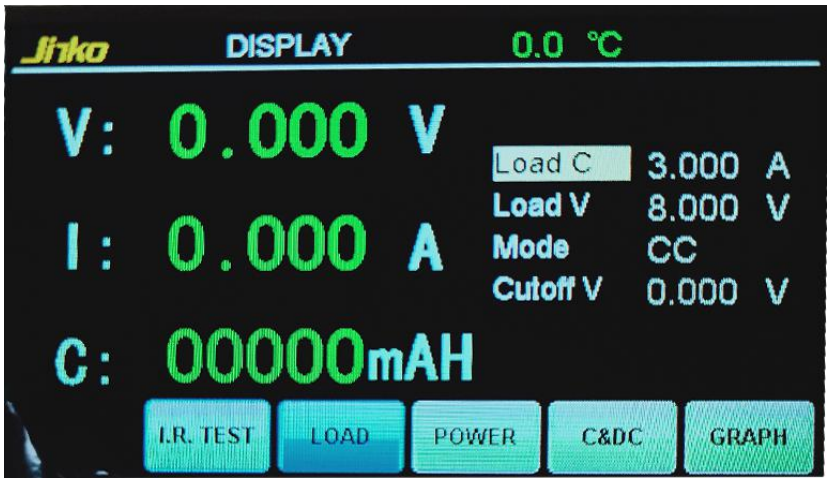
Program control load test mode display interface

As shown in the picture.

JK5530



JK5530B



Set the output voltage, move to the output voltage according to the up and down key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting.

The maximum set value of the load current is 15A

After setting the value, press the start button to start the test.

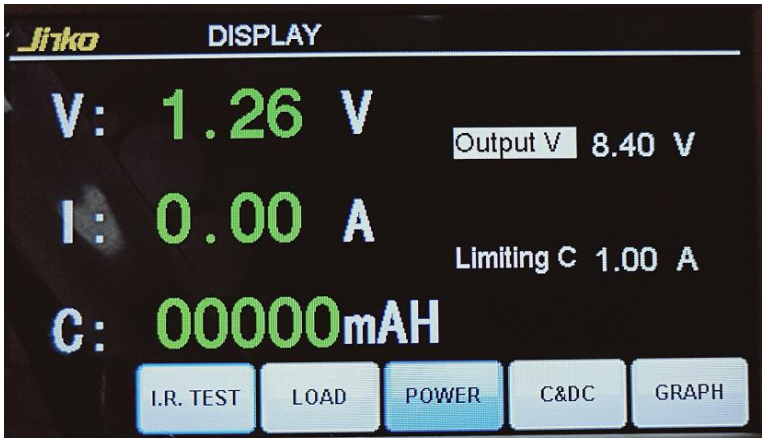
(the following functions are limited to JK5530B)

CV mode selection:when the overcurrent value is more than 2.5 times the actual working current value or the overcurrent value is more than 10A,Select this mode. This mode is fast test, but some batteries may not support this mode.The test overcurrent value is 0, the CC mode is recommended.

CC mode selection: otherwise, choose this mode.

Test mode display interface of programmable power supply

As shown in the picture.



The page can set the output voltage and limit the current

Set the output voltage, move to the output voltage according to the up and down key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting. Limit the current setting step with the above method.

The maximum output voltage is 25V, and the maximum value of the limiting current is 5A. After setting the value, press the start button to start the test.

Charge discharge display interface

As shown in the picture.

Charging mode of instrument: constant voltage charging

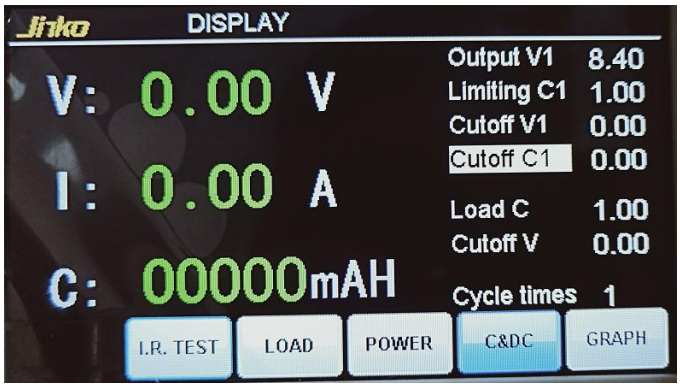
When charging and discharging, the information of charging parameters is set according to the characteristics of the battery under test.

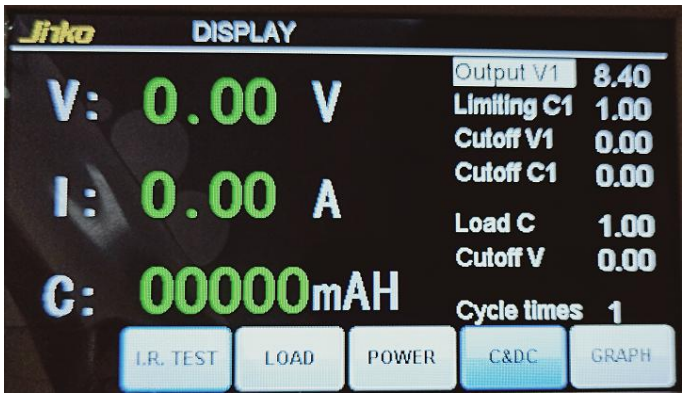
Set the output voltage, move to the output voltage according to the up and down key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting.

Interpretation of various parameters:

Output voltage: the output voltage of the instrument to the battery during charging.
Limiting current: maximum charging current
Cut-off voltage: the instrument stops charging the battery when the battery charge voltage reaches the set cut-off voltage.
Cut-off current: charging cut-off current, charging current equal to or less than the cut-off current set, the instrument stops charging the battery.

Users can choose step by step charging, up to three steps. In the above four parameters, press the left and right keys to switch the parameter settings of each step.
For example, the second and third step display interface





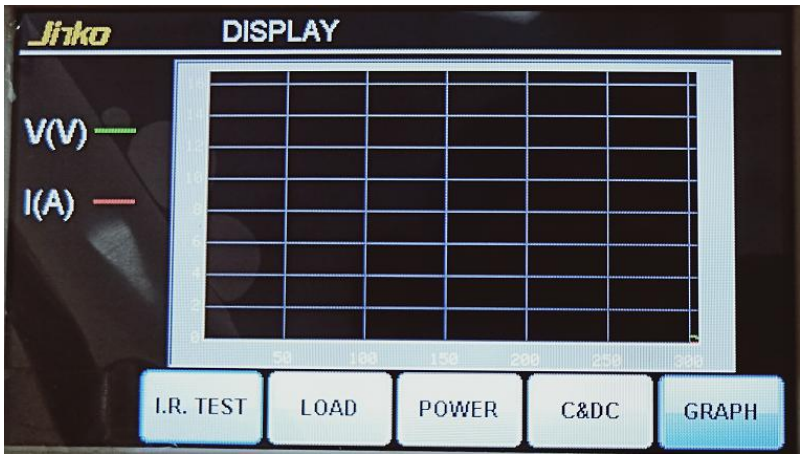
If step by step charging is needed, it is suggested that the user first use the high current, the second step uses the small current, and the third step uses the trickle flow.

Discharge mode
Load current: the instrument discharges the battery with this current.
Cut-off voltage: during discharge, when the battery voltage is equal to or lower than the cut-off voltage set, the discharge of the battery is stopped.
Cycle times: during testing, the capacity is updated in real time. Each charge

and discharge is a cycle. When the nnumber of cycles reaches the set times, the average capacity of the battery is calculated.
After setting the value, press the start button to start the test.

Curve display interface

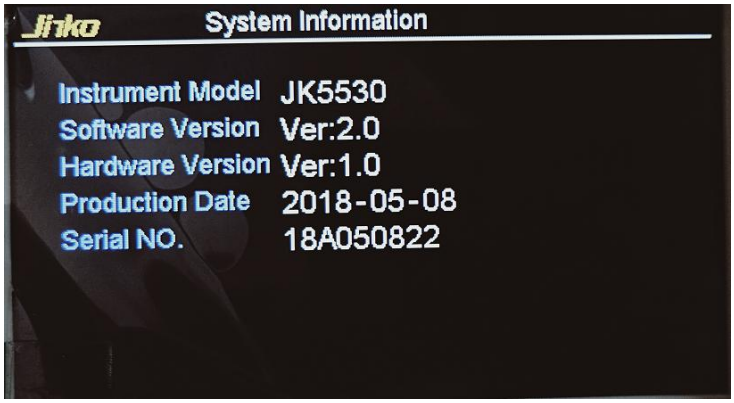
As shown in the picture：



Curve display interface,Display the value of the voltage and current

System information interface

As shown in the picture：



The information contained in the system information interface is:

Instrument model

Software version

Hardware version

Date of manufacture

Instrument number

The JK5530 battery comprehensive tester consists of the following functions.

1, static parameter test

2, battery capacity test

3, battery charging function

4, battery separate discharge function

5, program controlled DC power supply

6, program controlled electronic load

7, measurement of voltage and internal resistance

Press the up and down function keys to select the test functions needed at present and press the confirmation button to enter the selected function.

Static parameter measurement mode of battery

In the static parameter setting interface

1. the battery capacity selection, can set the capacity of the battery, in the back of the test, the instrument based on the capacity to automatically select the appropriate current to measure.
2. battery charging measurement, function key selection test.
3. battery discharge measurement, function key selection test.
4. the battery overcurrent protection measurement, when the current battery type is lithium battery,Enter the settings by setting the key.
5. the lower limit of battery voltage is chosen, and the lower limit is set by setting the key.

After all the parameters are set up, press the confirmation button. If the threshold voltage is 0, the machine will start automatically.Begin to test the selected items according to the fixed process.If the threshold voltage is not 0, you need to manually press the start button to test the process as follows.

Note: after the manual test is completed, if the user needs to repeat the test for the same battery, it does not need to disconnect the fixture. Just press the boot key to clear the last test data to start the next test; the automatic test mode user loosens the fixture and detects the battery has disconnected. The last test data will be removed automatically. You can start the next test.

1.Test voltage, and determine whether to meet the set range, such as the current lithium battery, the test voltage is low, automatically try to wake up the battery through a short charge, and then test it.

2.Test internal resistance,And determine whether to meet the set range.

3.Test discharge function,Set the battery capacity of the 0.5C current discharge,If the voltage drop is within 10% of the battery voltage, it is qualified.

4.Test over current protection function, increase the load current to the battery, judge whether the battery is out of power protection, and record the maximum current before protection, and judge whether to meet the requirement of setting range, this function is optional,

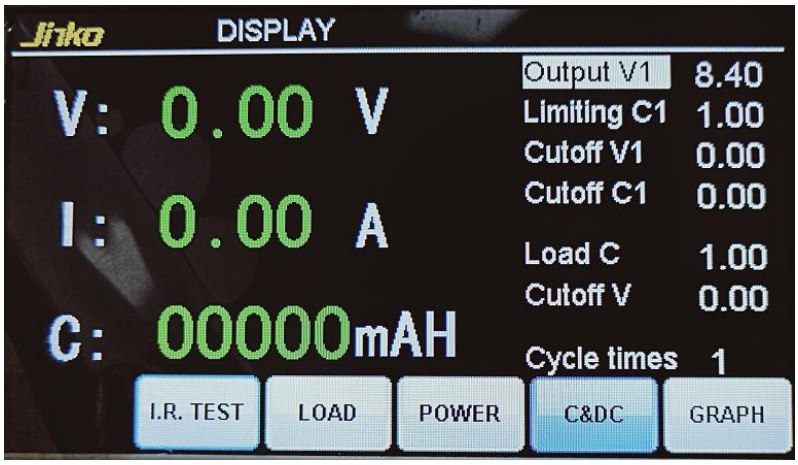
5.Test charging function to set the maximum charging voltage of the battery, such as charging current greater than 0.5C, then meet the test requirements. this function is optional,

6.Test the short-circuit protection function, use the large current MOSFET to directly short-circuit the battery ends, and see whether the battery is disconnected during the specified short-circuit protection time.If it can be disconnected and can be automatically restored by charging or open circuit, it is judged that the battery is qualified, and this function is optional.

Battery capacity testing function mode

The fourth function of the main menu is battery capacity measurement. After selecting the test function, enter the battery capacity settings menu.

JK5530 As shown in the picture.



JK5530B

Choose whether or not to have overcharged and overdischarge tests

The above parameter settings are similar to the previous parameter settings. You can refer to the previous function description.

Choose whether to discharge nickel cadmium battery before charging

When the predischarge function is allowed, the battery will be discharged to the non electric state before the battery is charged, and then the charging process will be started,

which can eliminate the memory effect of Ni Cd battery, and make the subsequent capacity measurement more accurate.

After pressing the trigger button, start the capacity test and complete a capacity test according to the following process.

Capacity testing process：

First set the output voltage, limit current, cut-off voltage, cut-off current, load current, cut-off voltage, cycle number of times, after the completion, start the test according to the start key.

Charging and discharging mode is to start charging first. After charging, it will automatically turn into load current and enter the discharge mode.When the battery voltage is less than the cut-off voltage of the discharge, it means the end of the discharge.

The battery capacity is calculated according to the discharge time and the load current.

Full of electricity The end of the discharge is a cycle.

The above description of the number of cycles is 1 times.If the number of cycles is multiple times, the average battery capacity is taken.

The above process,During the charging process, the accumulative charge of electricity.In the process of discharge, the accumulative discharge of electricity,， After the discharge is over, the discharge capacity shown is the battery capacity of the battery in this mode.The main point to be noticed is that by default, the battery charge current and discharge current are 1C of the battery capacity. When a small charge and discharge current is needed, the battery capacity can be set to a smaller parameter. When a larger charge current is needed, the battery capacity can be set to a larger number .In 1C mode, a complete capacity test may take 3~ 4 hours. If set to a relatively small value, the time will be extended accordingly.

During the test, you can press the confirmation key at any time to suspend the current run, press the confirmation key again to continue, and press the cancel key to stop the test and return to the setup mode.

Charging operation mode

In this mode, the battery can be charged separately, the setting method and the display mode refer to the above capacity test. When it is confirmed, the battery is charged, and the whole process is finished after the charge is finished.

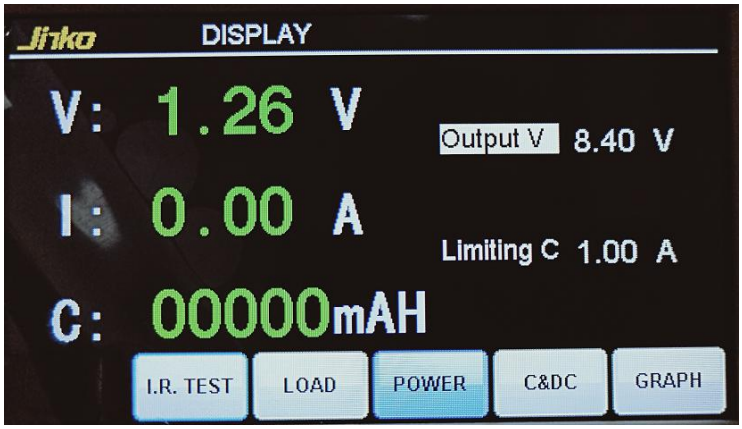
Discharging operation mode

In this mode, the battery can be discharged separately, the setting method and the display mode refer to the above capacity test. After confirmation, the battery is discharged, and the whole process is finished after the discharge is completed.

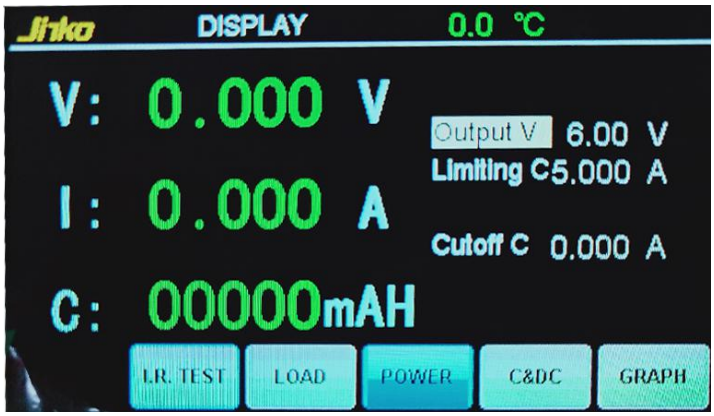
Program controlled DC power mode

Select the mode and press the confirmation button to enter the DC power mode directly. As shown in the picture.

JK5530 power diplay interface



JK5530B power diplay interface



When you first enter the power mode, the default is the shutdown state. Press the confirmation button to turn on the power output, then press the confirmation button again to turn off the output.

1. O Nindicates the current boot mode,ON is the boot mode.

2. output voltage =1.00V，which means the setting voltage is 1.00V

3. limit current =1.00A，which means the maximum output current is 1A .

4. V =0.00V，indicating that the output at this time is 0.00V

5. I =0.00A，indicating that the output current at this time is 0.00A

6.C=0000mAH，indicating Test the capacity that has been filled at this time

Press the up arrow or down button to select the current adjustment voltage or current output item.

Press the numeric key and confirm key to adjust the current item value.

Operation mode,When the parameters are set up, start the test by the trigger key

Press the confirmation key to exit the power mode.

Program controlled electronic load function

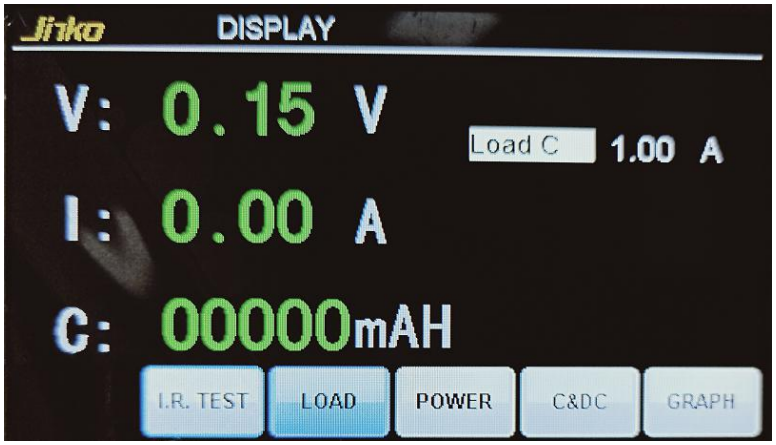
Select the mode and enter the electronic load function.The electronic load can be used as the load of battery discharge, or as the load of switching power supply or charger.It can be conveniently set to operate with constant current discharge.It can be used to measure the discharge capacity of the battery very intuitively.The maximum can be set to 10A discharge,The constant power of the battery can be observed.For instance, simulation an

electrical appliance In the case of power consumption 10W, test battery working time and so on.It can also be used to measure the maximum current that the battery can output under the condition of maintaining a certain voltage, which is a very useful functional option in the battery measurement process.

After selecting the function of the electronic load,

As shown in the picture：

JK5530



JK5530

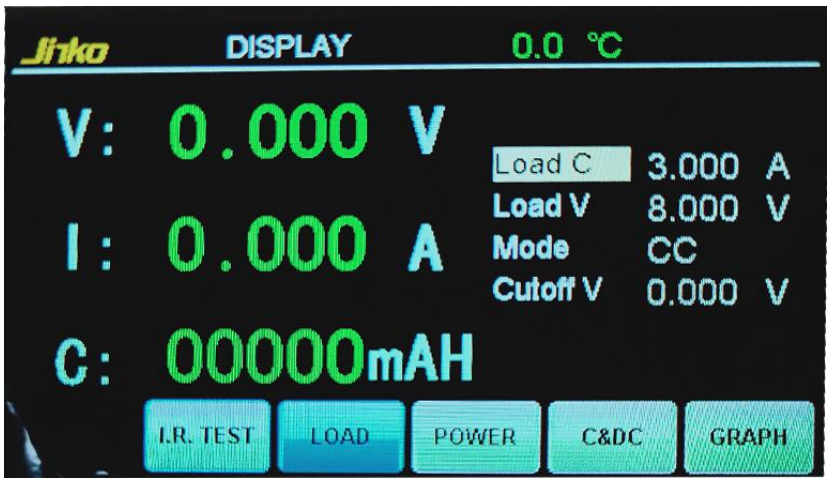
Set the load current, move to the load current according to the upper and lower key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting.

Currently running in the electronic load mode, it indicates that the current electronic load mode is constant current mode CC.

There are 1 working modes in the electronic load of this instrument.

CC，Constant current mode, the instrument automatically adjusts the working current to keep the working current constant.

JK5530B



JK5530B

Set the load current, move to the load current according to the upper and lower key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting.

Set the load voltage, move to the load voltage according to the upper and lower key cursor, press the confirmation key, the cursor will move to the digital area, then press the digital key to set the input value, and press the confirmation key to complete the setting.

Set the load mode, move the cursor to the load mode by pressing the up and down keys, and switch between CC and CV after pressing the confirmation button.
Currently running in the electronic load mode, it indicates that the current electronic load mode is constant current mode CC.

There are two kinds of working modes in the electronic load of this instrument
CC，Constant current mode, the instrument automatically adjusts the working current to keep the working current constant.
CV，Constant voltage mode, the instrument automatically adjusts the working voltage to keep the working voltage constant.

The cut-off voltage is 0.5V,When the working voltage drops to the cut-off voltage, the

instrument automatically cuts off the working current.To prevent the occurrence of excessive discharge, when the electronic load is discharged to the battery.the setting function only works in the CC mode.

V =0.05V,Indicate the voltage measured now is0.05V

Io =0.00A,Indicate the voltage measured now is 0.A，

Note: This is zero error, which can be eliminated or ignored.

C=0000mAH,The capacity that the test has been released at this time.

Actual operation description

1.According to program controlled load button, enter program controlled load display interface.

2.Press the up arrow or down button to select the current current (voltage) output item.

3.Press the numeric key and confirm key to adjust the setting value of the current item.

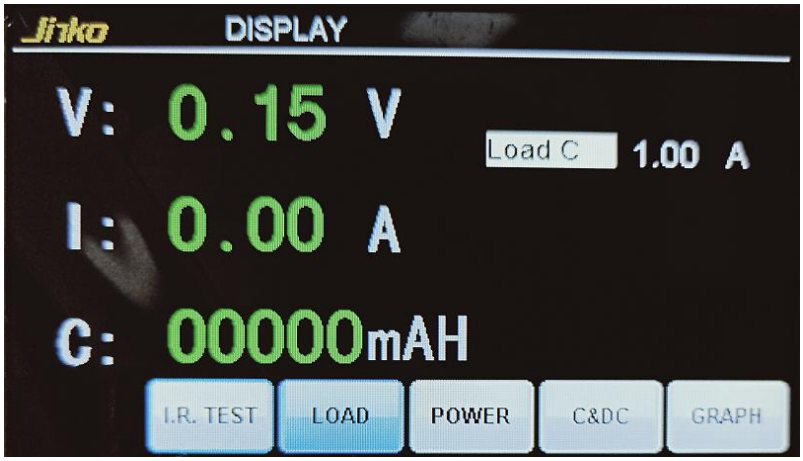
4.Operation mode,When the parameters are set up, start the test by the trigger key

5.Press the confirmation button to exit the current electronic load mode.

Voltage and internal resistance meter mode

Choosing this function, the instrument actually works in the mode of voltage, internal resistance meter and resistance meter, and continuously displays these parameters of the current test battery.

As shown in the picture：



The meaning of the picture instructions is,

1.Battery voltage is 0.00V

2.Load current: set according to the voltage value（Maximum 50W）

Such as voltage indication +/-，Represent the battery inversely connect

If internal resistance or identification of battery indication is OVER, it means beyond the measurement range or open circuit state.Press the cancel key to exit the current test, Other keys are not valid.

Instrument characteristic index

Application environment of instrument.

1.Temperature, 0~ 40℃

2.Use height, use within 2Km above sea level

3.Relative humidity, 40~ 80% humidity

Measurement range

1.Range of battery voltage measurement,0~ 36V,Minimum resolution 10mV(JK5530),

0~62V, Minimum resolution 1mV(JK5530B)

2.Current measurement range,0~ 10A Minimum resolution 1mA

3.Range of internal resistance measurement:

0~ 999 mΩ , Minimum resolution 1mΩ (JK5530),

0~ 1999 mΩ , Minimum resolution 1mΩ (JK5530B)

4.Identification resistance measuring range,0.1~ 999.9KΩ Minimum resolution 0.1KΩ

5.Capacity measurement range,0~ 10000m AH Minimum resolution 1mAH

Test speed

1. Static test, test all functions, 1.1~ 2 seconds

2. Capacity test, 1C current charge and discharge, 3~ 4 hours

Measurement precision

1.Voltage measurement accuracy,±（Result*0.1%+3mV）（Voltage 0~36V）

±（Result*0.1%+30mV）（Voltage 37~60V），

2.The accuracy of current measurement, ±（Result*0.2%+30mA）（current 0~10A）

±（Result*0.5%+30mA）（current 11~30A）

3.The accuracy of internal resistance measurement, ±（Result*1%+1mΩ）

4.Identification of resistance measurement accuracy, 10KΩ±1%

5.The measurement accuracy of battery capacity, 10AH±2% ，100AH：±2%

Internal numerical control voltage source index

1.Output maximum voltage,20V

2.The output maximum current, 2A

3.Ripple voltage, <20m V

4.Load adjustment rate, <10%

5.Response time, 1S

Internal numerical control electronic load index

1.maximum voltage 20V

2.maximum current ,2A,continuity,10A ,10 seconds,

3.maximum power,40W,continuity,80W,10 seconds,

Power supply voltage,220V ±10% 50H z

Power consumption, maximum: 50W

Instrument weight : 4.1K g

Instrument size, L (300mm)×W (300mm)×H(100mm)

Outer packing size,L(360mm)×W(360mm)×H(160mm）

The weight of outer packing, 4.4K g

Warranty Ordinance

1.The instruments sold by our company are guaranteed free of charge for 2 years under the condition of non-artificial damage.

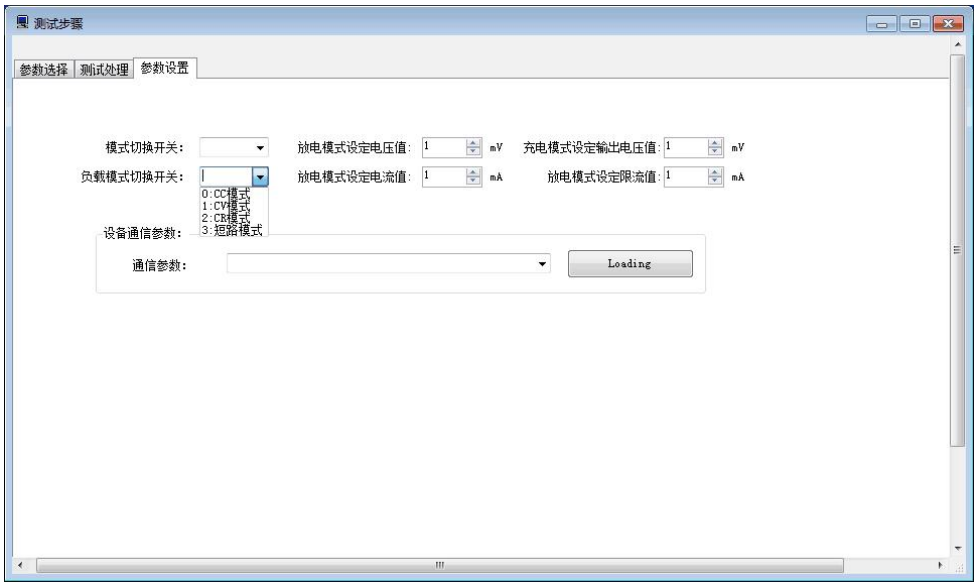
2.The warranty must be based on the warranty card, the certificate of conformity and the original sales certificate.

3.During the warranty period, if it is necessary to return to the company for maintenance, the user shall bear the freight to the company for repairs. After repairs, the company shall be responsible for the freight to the company .

4.Our company is responsible for lifelong free maintenance of equipment beyond the warranty period, but users need to bear the cost of parts.

5.The equipment sold by our company is not allowed to be disassembled, refitted or upgraded by users without authorization, otherwise it will automatically lose its warranty qualification.

Upper Computer Software



Users need to select the load mode of overcurrent testing in this interface and start testing (only CC, CV mode is supported)