



OEL Software Help

catalogs

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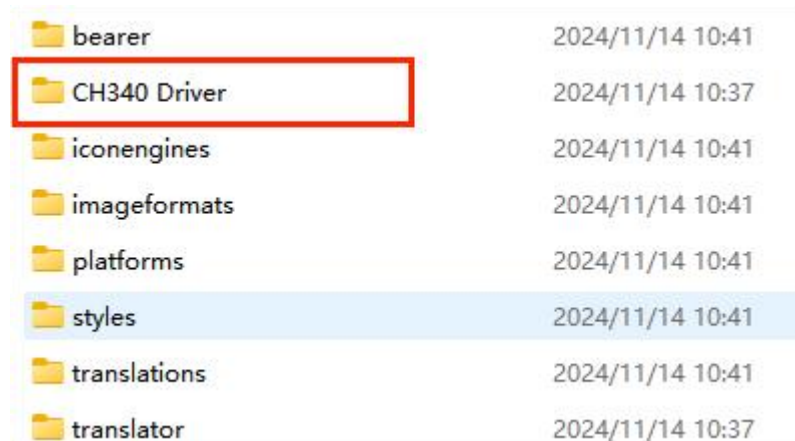
1. Connection method

The connection between the OEL series host computer software and the OEL series machine can support connection via serial port.

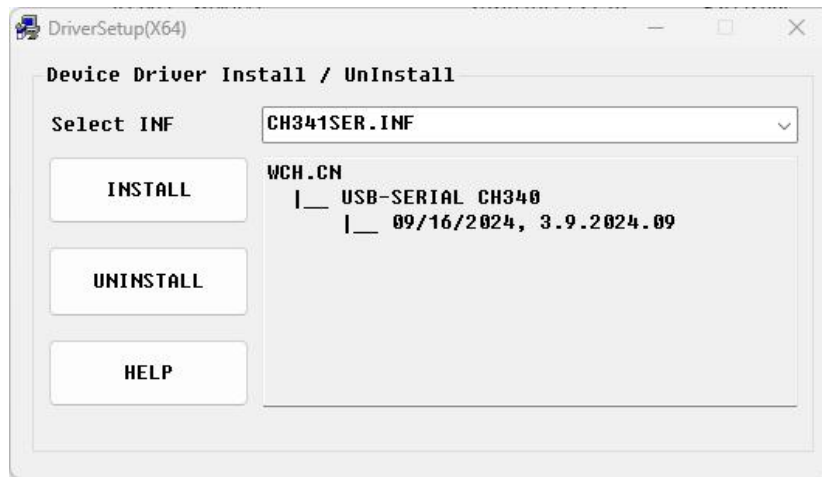
1.1 Communication method using serial port connection

1.1.1 Installation of drivers

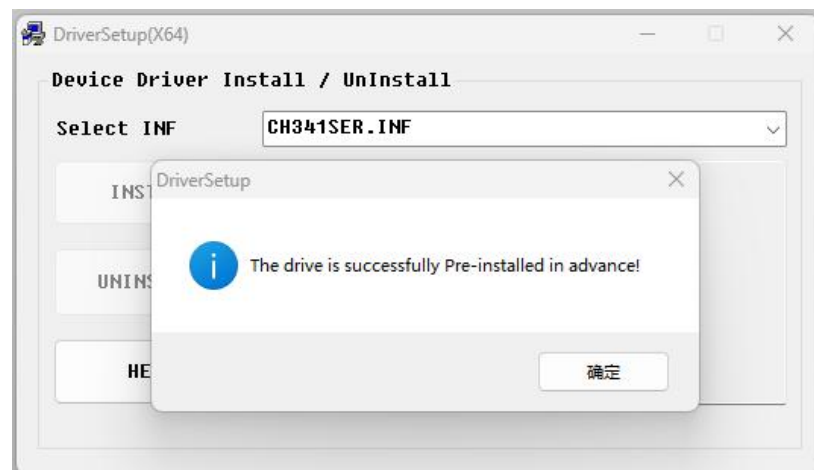
1. Please get the upper computer software zip package "OWON-OEL-series-software" in the attached CD-ROM.
2. Directly unzip the file, select the "CH340 Driver" subdirectory under the directory generated by unzipping and open it, as shown below:



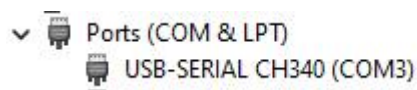
3. Double-click or right mouse button to decompress the CH341SER.zip archive, run SETUP.EXE inside to install the CH340 driver directly, as shown below:



4. Click Install, wait a moment to install the completion, click "OK", the following chart:



5. Return to the computer, click Device Manager, check the COM port number and driver, as shown below:

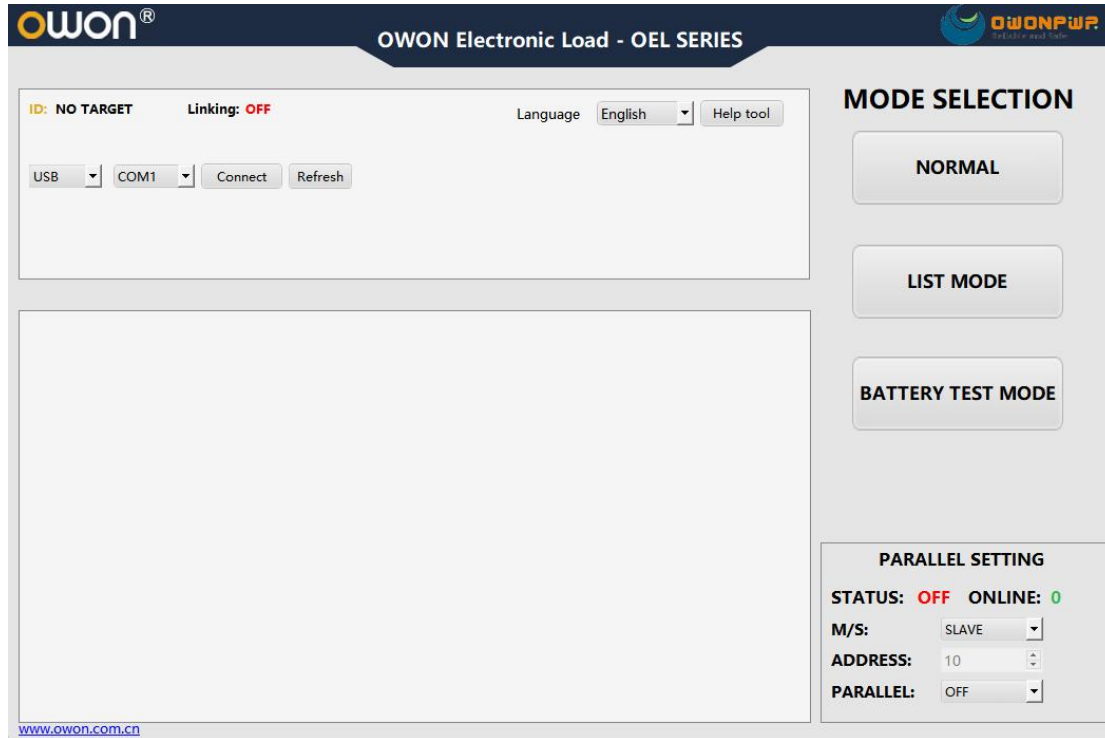


1.1.2 Connecting equipment

1. Double-click the right mouse button to open the "OWON-POWER-OEL.exe" file, as shown below:

 OWON-OEL-series.exe	2024/11/16 11:50	应用程序	6,824 KB
 Qt5Charts.dll	2020/11/6 18:01	应用程序扩展	2,467 KB

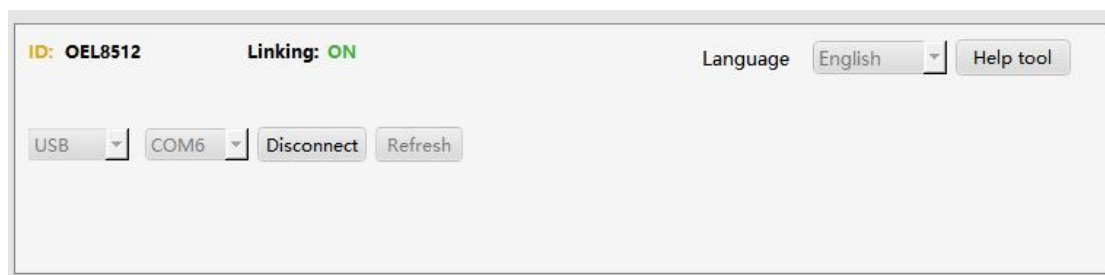
2. Enter the main interface of the software interface, as shown below.



3. Click the drop-down box to select "USB".

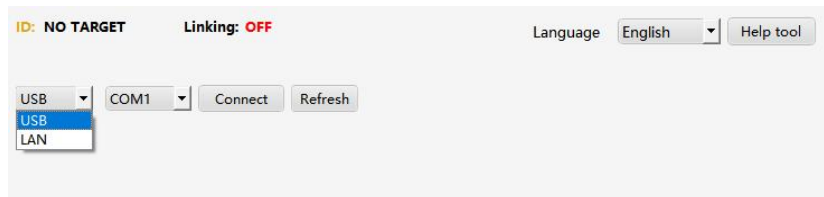


4. Click the "Connect" button to connect the device, the ID of the instrument and the connection status will be displayed after successful connection.



1.2 Ethernet connection

Users can use the OEL series software to directly connect and control the OEL85 product, or they can obtain the IP mode and IP address of the OEL85 through this software configuration.



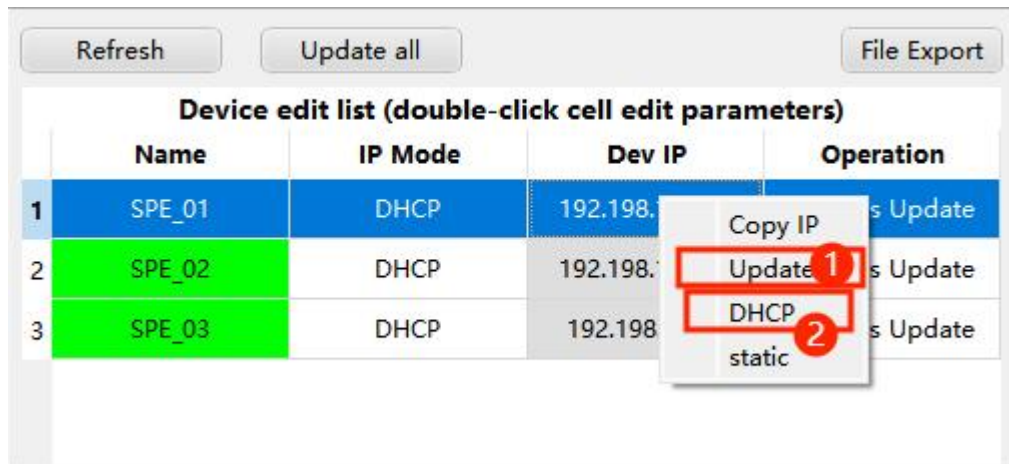
The following introduction to obtain DHCP and static IP address.

Taking the configuration of DHCP for multiple online devices as an example, the steps for the host computer to configure the OEL85 device are as follows:

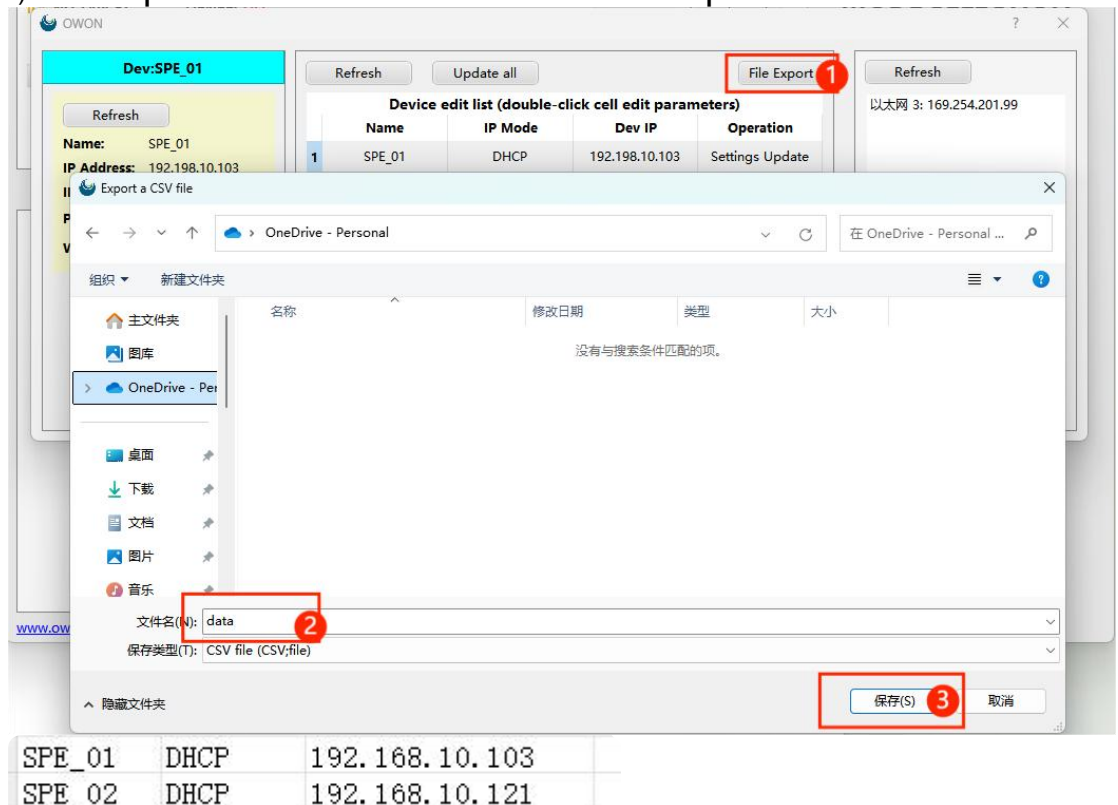
- a) Connect multiple devices to the router device(the device is connected to the router via a network cable)
- b) Search the online device list, select all IP modes, edit the configuration to DHCP, confirm the modification, you can modify a single device, or modify the selected device in batches by right-clicking.

The screenshot shows a table titled 'Device edit list (double-click cell edit parameters)'. The table has four columns: 'Name', 'IP Mode', 'Dev IP', and 'Operation'. There are three rows of data. The first row has 'SPE_01' in the Name column, 'DHCP' in the IP Mode column, '192.198.10.103' in the Dev IP column, and 'Settings Update' in the Operation column. The second row has 'SPE_02' in the Name column, 'static' in the IP Mode column, '192.198.10.121' in the Dev IP column, and 'Settings Update' in the Operation column. The third row has 'SPE_03' in the Name column, 'DHCP' in the IP Mode column, '192.198.10.13' in the Dev IP column, and 'Settings Update' in the Operation column. The 'IP Mode' column for the first two rows is highlighted with a red box and a red circle with the number '1'. The 'Operation' column for the first two rows is highlighted with a red box and a red circle with the number '2'. Above the table are buttons for 'Refresh', 'Update all', and 'File Export'.

	Name	IP Mode	Dev IP	Operation
1	SPE_01	DHCP	192.198.10.103	Settings Update
2	SPE_02	static	192.198.10.121	Settings Update
3	SPE_03	DHCP	192.198.10.13	Settings Update



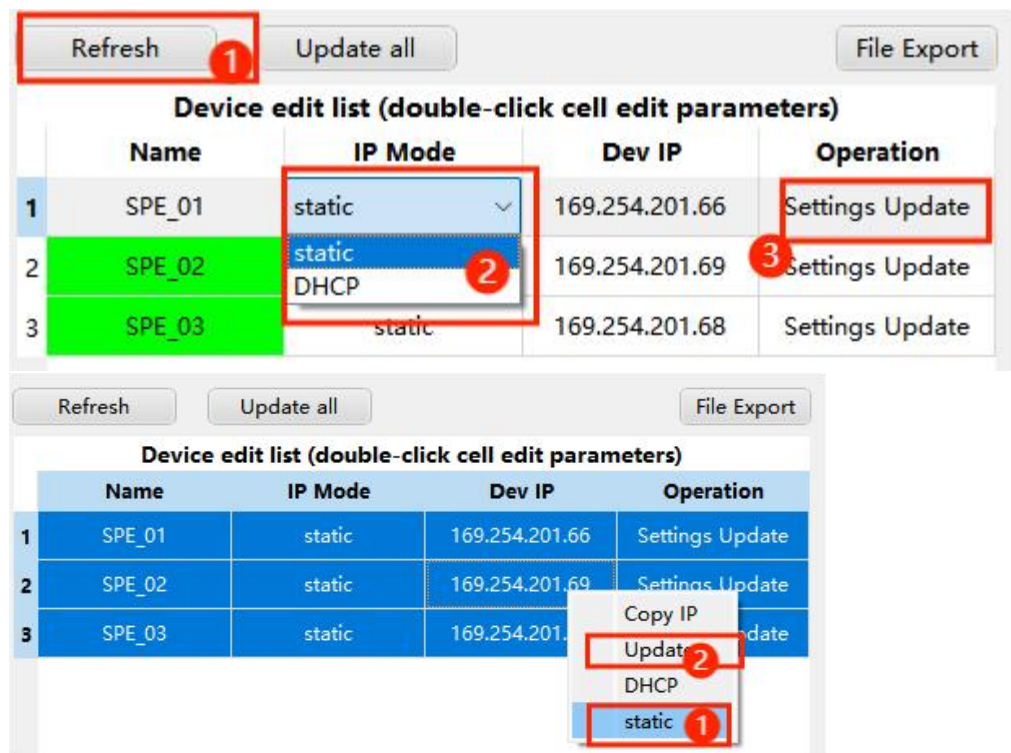
a) Multiple devices' information can be exported in csv file.



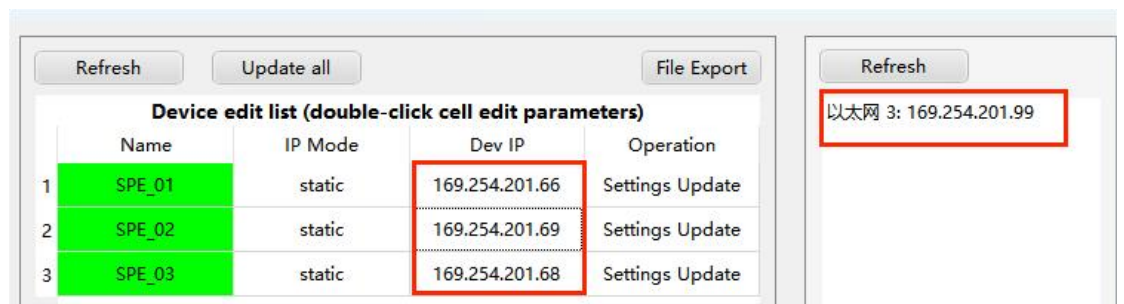
(b)The user system can connect to the new device through the latest device dynamic IP address.

Configuring a static IP address is similar to configuring a dynamic IP address.

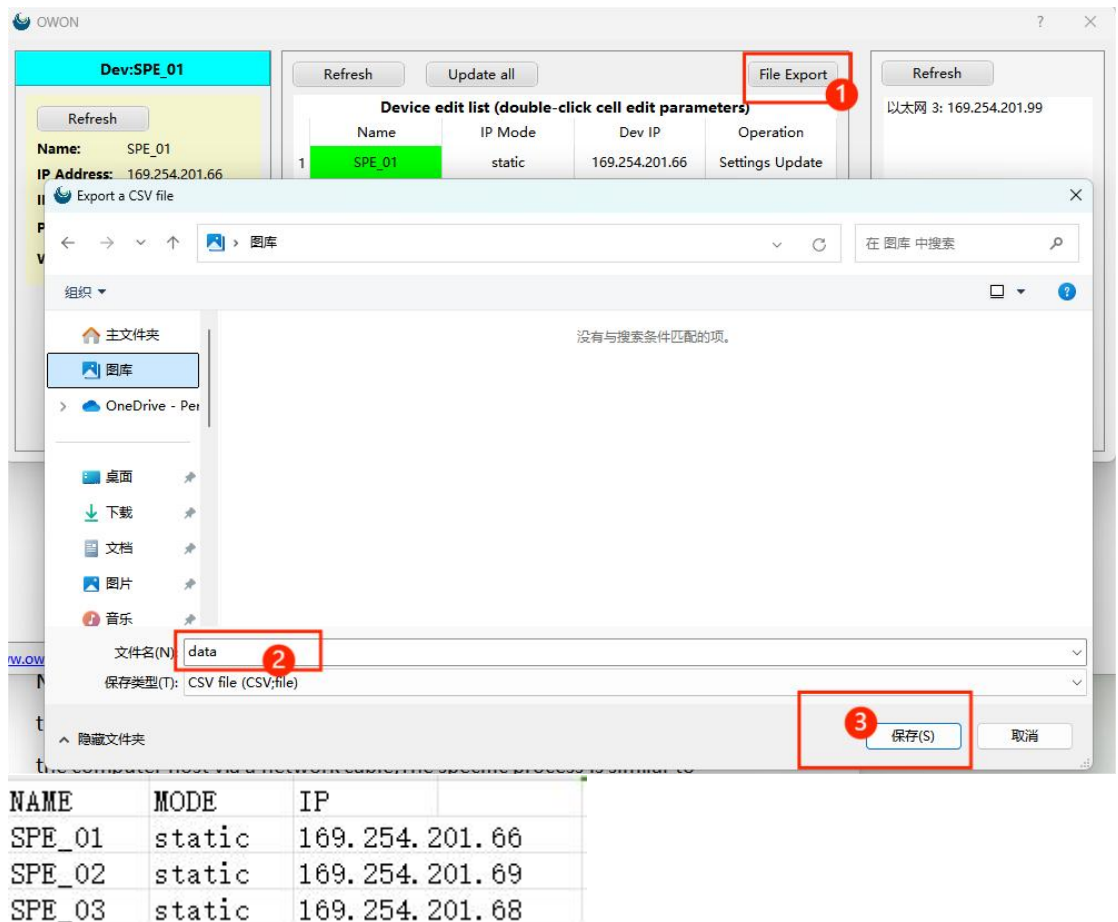
- Connect multiple devices to the router device
- Search the online device list, select all IP modes, edit the configuration to static IP, confirm the change, you can modify a single device, or modify the selected device in batches by right-clicking.



- c) Edit the IP address at the same time and change the device's IP address to the same network segment as the host Ethernet IP address



- d) Multiple devices' information can be exported in csv file.



Note: If the user does not have a router device, then can use a computer to configure the device one-to-one, the device is directly connected to the computer host via a network cable, The OELcific process is similar to the multiple device configuration method.

2.OEL instrument control mode interface operation description

2.1 CC/CV/CR/CP/Dynamic mode

After connecting the instrument successfully, enter the mode setting to operate the instrument remotely. When entering the interface, the software will synchronize the relevant mode settings of the current instrument.



2.1.1 CC/CV/CR/CP/Dynamic interface operating instructions

1. By clicking on different mode tabs, you can enter different modes, for example, CC mode, at this time, you can set the parameters of CC mode, and click on "Update Settings" to send all the parameters of CC at the same time. To modify a single setting parameter, such as "constant current", enter the value and press "Enter" on the keyboard.

CC

SHORT OFF

CC CV CR CP CCD

CC(A) 0.000

SR_RISE(A/ms) 2.00

SR_FALL(A/ms) 2.00

2. Through the setting box of modifying other parameters, you can modify the settings of the lower computer instrument, and click "Update Settings" to send other setting parameters at the same time. To modify a single setting parameter such as "OVP", enter the value and press "Enter" on the keyboard.

System&Protection Settings

Update

OVP 100.00 V

OCP 44.000 A

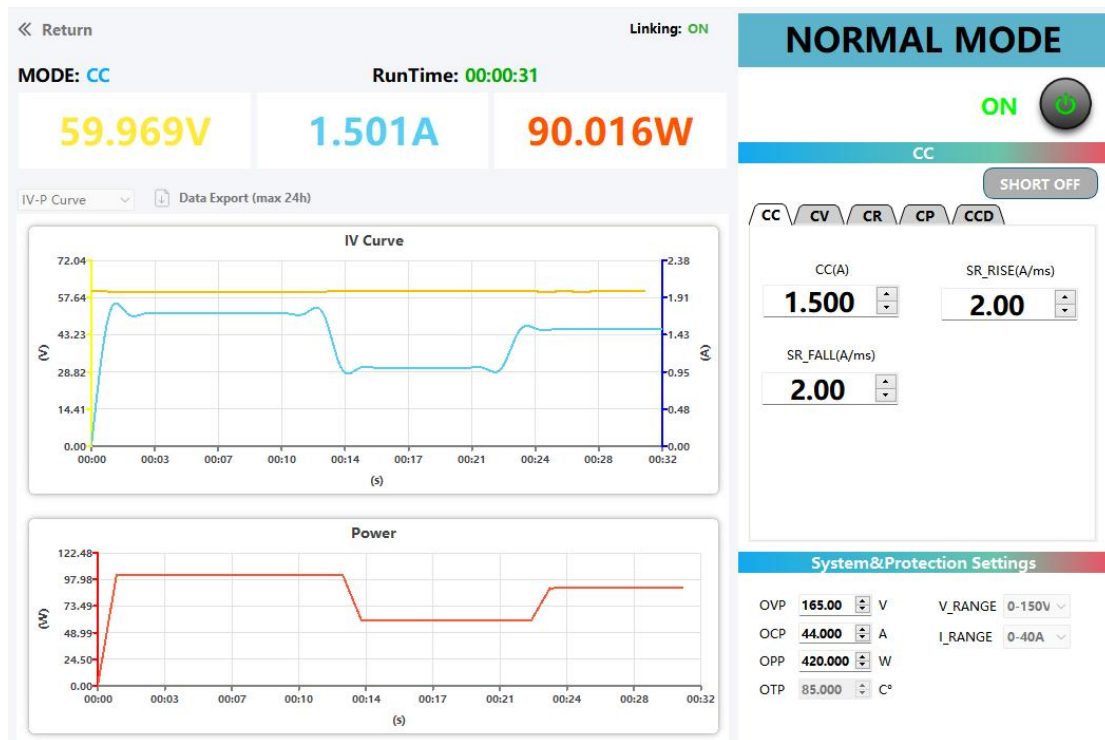
OPP 440.000 W

OTP 85.000 C°

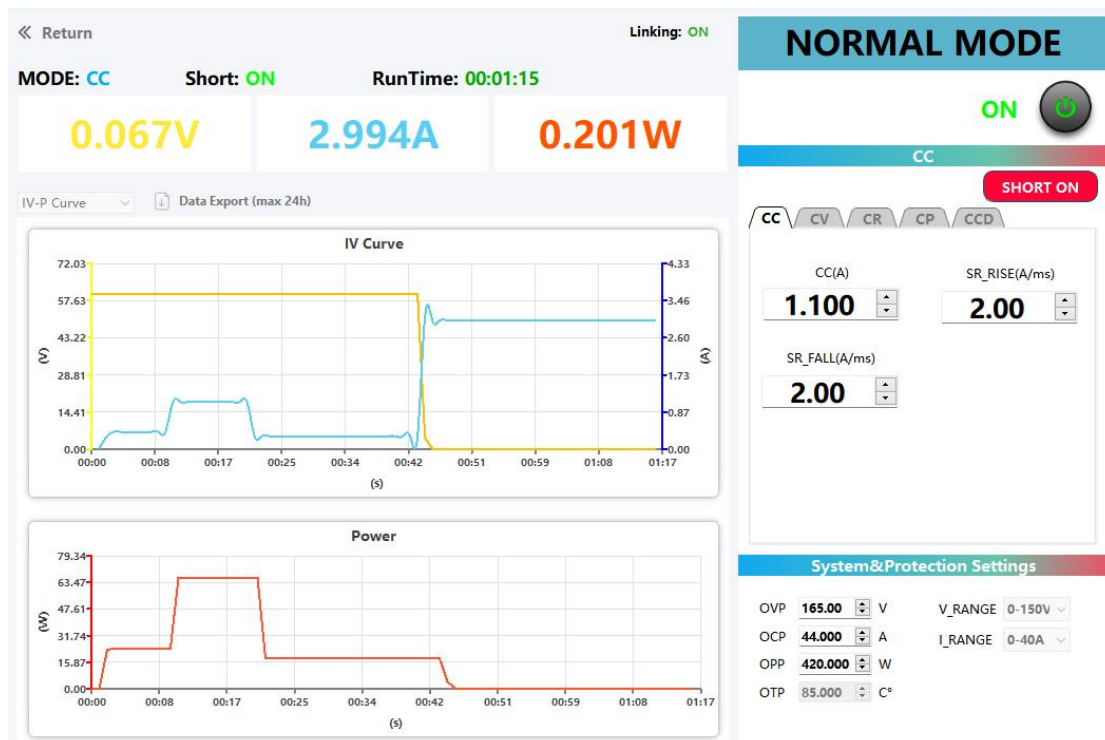
V_RANGE 0-150V

I_RANGE 0-40A

3. Click the "OFF" button to turn on the instrument after the modification is completed, and the instrument will be turned on. During the power-on period, you can adjust the setting parameters of the current mode and make real-time modifications to the instrument.



4. Turn on the "short-circuit enable" button to turn on the instrument in short-circuit mode.



5. After closing the output, you can click the "Export Data" button to export the voltage/current/power data to a CSV file, which can be opened by Excel or text.



2.1.2 ACDC mode switching operation instructions

1. Recognize OEL86 series, DCAC mode can be set, other models can not be set.

2. Use the "AC/DC" option to set the AC/DC mode of the local instrument.

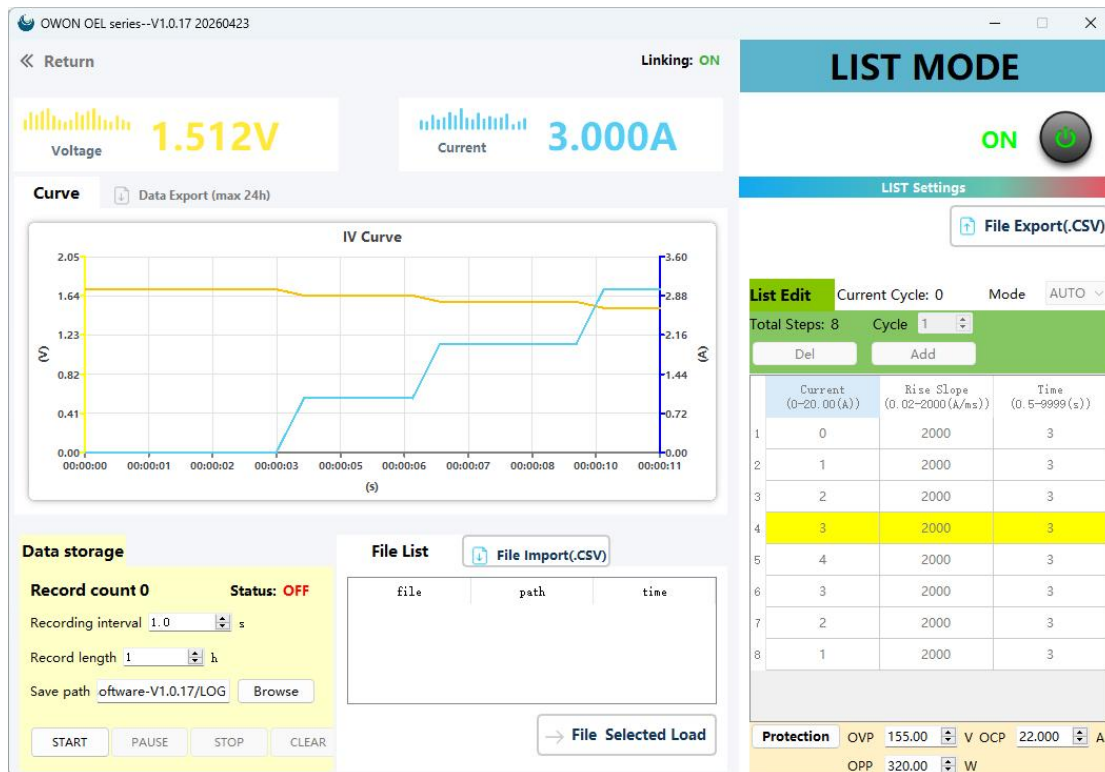


3.AC Mode Limitation Table:

CC MODE	YES
CV MODE	NO
CR MODE	YES
CP MODE	YES
CCD MODE	NO
LIST MODE	YES
BATTERY TEST MODE	NO
SHORT	NO

2.2LIST MODE

After the connection of the instrument is successful, enter LIST mode to remotely operate the instrument.



2.2.1 AUTO mode operation instructions on the LIST interface

1. Select AUTO mode through the "Mode" drop-down box, which will automatically execute each parameter in the LIST list

List Edit		Current Cycle: 0	Mode AUTO
Total Steps: 8		Cycle 1	AUTO
Del Add			
	Current (0-40.00(A))	Rise Slope (0.02-2000(A/ms))	Time (0.5-9999(s))
1	0	2000	1
2	1	2000	1
3	2	2000	1
4	3	2000	1
5	4	2000	1
6	3	2000	1

2. You can perform simple operations on the LIST list by "adding" and "deleting" a line. The total steps always record the current

steps of the list, and the value of the cycle number corresponds to the number of times the instrument performs the whole list.

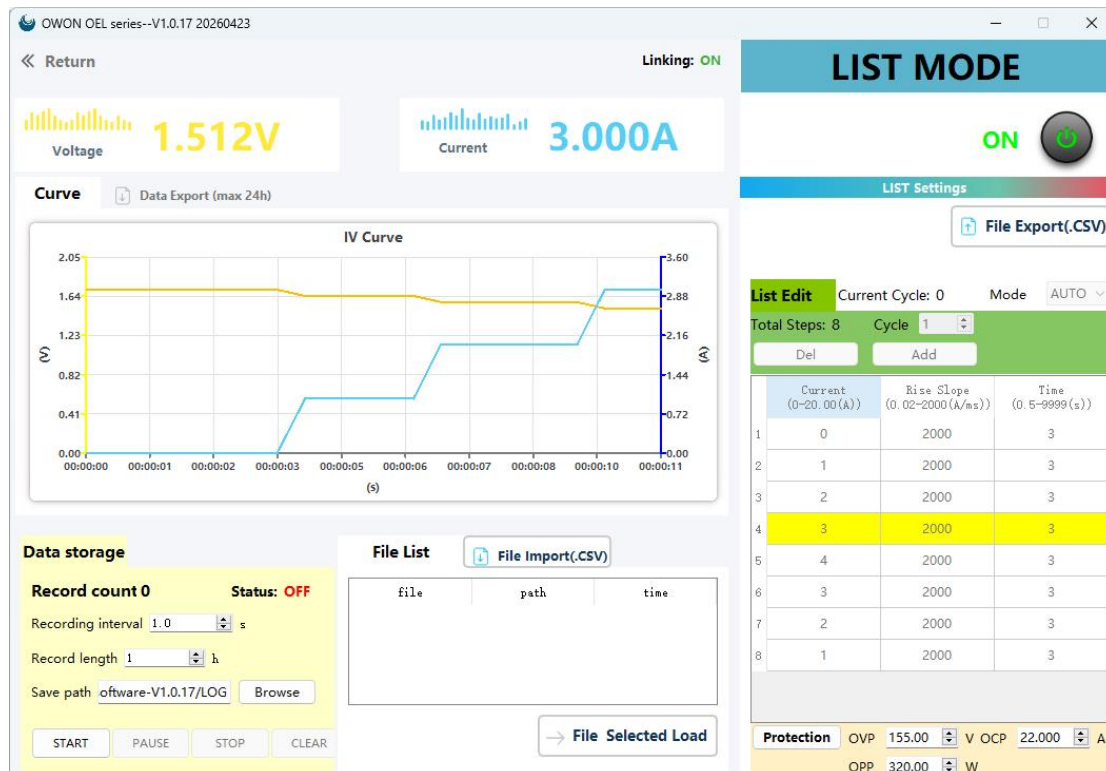
Total Steps: 8		Cycle	1
Del		Add	
	Current (0-40.00(A))	Rise Slope (0.02-2000(A/ms))	Time (0.5-9999(s))
1	0	2000	1
2	1	2000	1
3	2	2000	1
4	3	2000	1
5	4	2000	1
6	3	2000	1
7	2	2000	1
8	1	2000	1

3. You can quickly edit the LIST list by right-clicking with the mouse. If you select multiple lines, press the Ctrl+C shortcut key to copy the selected lines, and then press Ctrl+V to re-paste the selected lines into the LIST

Total Steps: 8		Cycle	1
Del		Add	
	Current (0-40.00(A))	Rise Slope (0.02-2000(A/ms))	Time (0.5-9999(s))
1	0	2000	1
2	1	2000	1
3	2	2000	1
4			1
5			1
6			1
7			1
8	1	2000	1

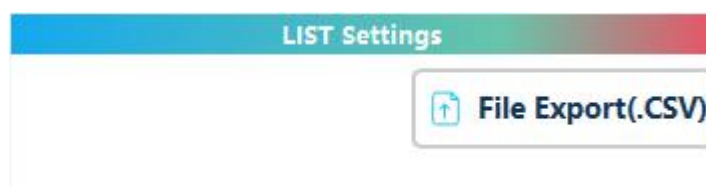
Del
Copy(Ctrl+C)
Paste(Ctrl+V)
Insert rows above
Insert rows below
Clear file list

4. Click the power button, and the list is automatically output after startup



2.2.2 Import and export operation instructions of LIST interface files

1. Click "Export File" to export the current data in CSV file format. Users can use notepad/Microsoft Office Excel or other similar software to edit the CSV file.



#TotalCounts	8		
#Cycles	1		
#Mode	auto		
STEP	CURR (A)	SLOPE (A/ms)	TIME (s)
#1	0	2000	1
#2	1	2000	1
#3	2	2000	1
#4	3	2000	1
#5	4	2000	1
#6	3	2000	1
#7	2	2000	1
#8	1	2000	1

Table Editor's Note:

- Line 1: Total steps set A1: #TotalCounts, #TotalCounts is the identification name, B1: total steps
 - Line 2: Cycle Settings A2: #Cycles, where #Cycles is the identification name and B2: total number of cycles
 - The third line is mode setting A3: #Mode, where #Mode is the identification name, and B2: auto
 - Line 4: Parameter title
 - Line 5: Start setting the first step, corresponding steps, voltage value, current value and duration respectively. Table B5 corresponds to the current setting value of STEP1, C5 corresponds to the slope setting value of STEP1, and D5 corresponds to the time setting value of STEP1.
 - Line 6: Similar to line 5, the number of steps is increased by 1.
2. After the table is edited, click "Import File" in the software to load the file into the LIST file list.

File List


File Import(.CSV)

file	path	time


File Selected Load

3. Select the file to be loaded, click "Load selected File", and further load the data into the LIST edit list.

File List


File Import(.CSV)

	file	path	time
1	123.csv	C:/Users/...	2026-06-22T19:...


File Selected Load

List Edit

Current Cycle: 1

Mode AUTO

Total Steps: 8
Cycle 1

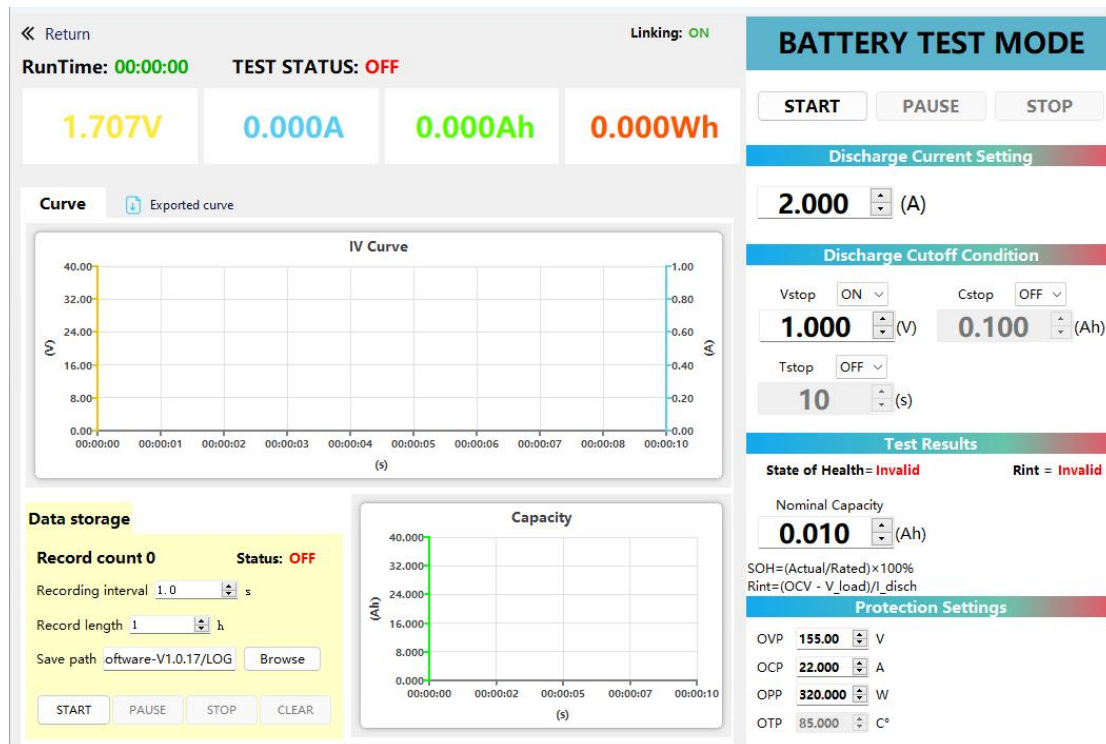
Del Add

	Current (0-40.00(A))	Rise Slope (0.02-2000(A/ms))	Time (0.5-9999(s))
1	0	2000	1
2	1	2000	1
3	2	2000	1
4	3	2000	1
5	4	2000	1
6	3	2000	1
7	2	2000	1
8	1	2000	1

Protection

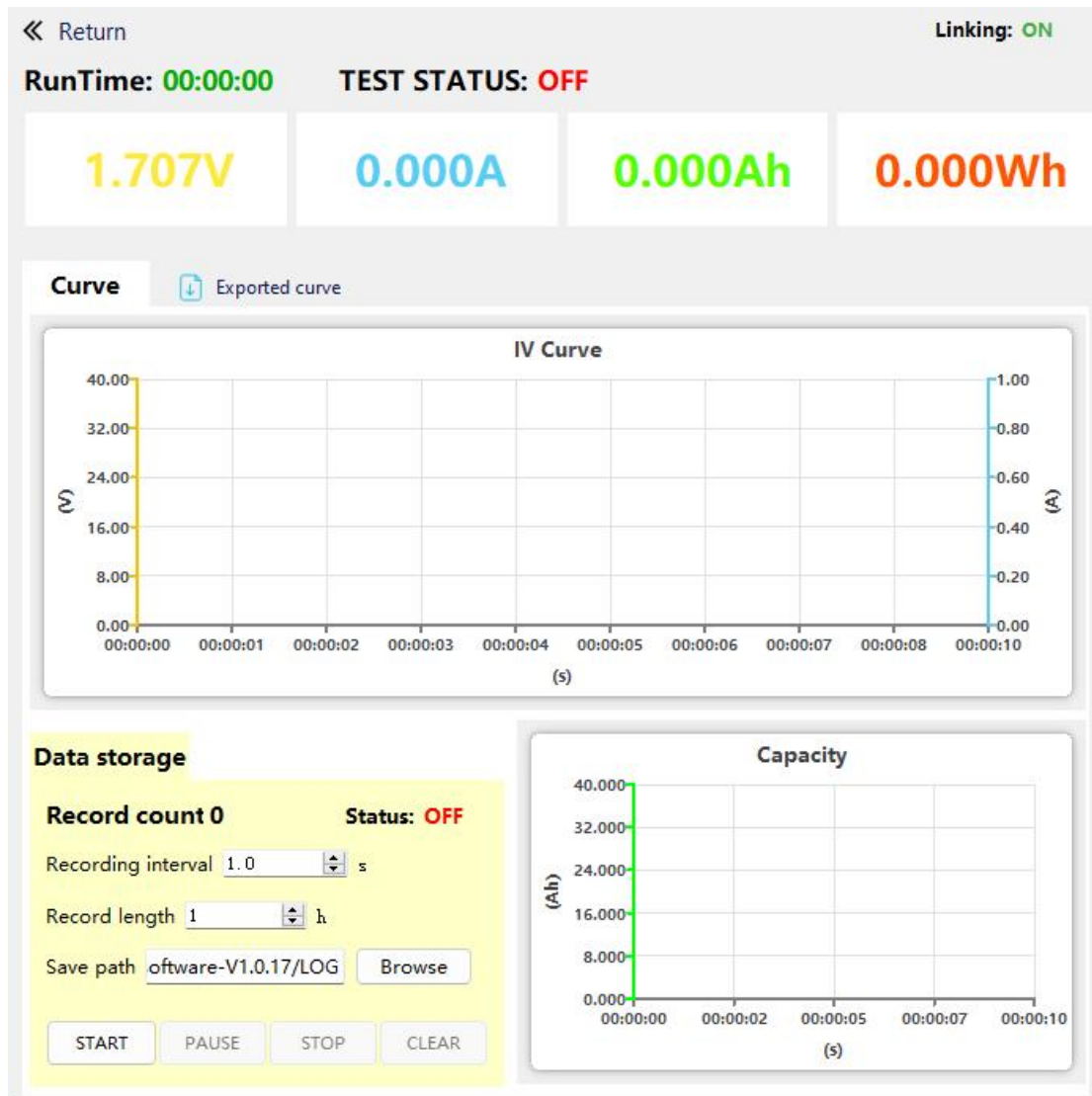
OVP 615.00 V OCP 44.000 A
OPP 420.00 W

2.3 Battery test mode



2.3.1 Interface layout

1. Output area (real-time data/dynamic curves)



Display parameters	Example value	explain
voltage	8.952V	Current battery voltage
current	0.000A	Current discharge current
capacity	0.000Ah	Discharged capacity
Watt(energy)	0.000Wh	Energy has been consumed
discharge time	00:00:00	Current test runtime duration
test mode	have not started	Run/Pause/Complete

Dynamic curve:

IV Curve: real-time voltage-current variation curve (dual axis chart, voltage/current are distinguished by different colors).

Capacity: capacity curve (horizontal axis time, vertical axis capacity).

3. Set the area

Discharge Current Setting

1.900 (A)

Discharge Utoff Condition

Vstop OFF 5.000 (V) Cstop OFF 0.500 (Ah)

Tstop ON 10 (s)

Discharge Test Results

State of Health= Invalid Ri = Invalid

Nominal Capacity

0.010 (Ah)

SOH=(Actual/Rated)×100%

Ri=(OCV - V_load)/I_disch

(1) Discharge Settings

Discharge current: input box 1.900 (A), manually set the discharge current value.

(2) cut-off condition

Condition type	Switch status	parameter setting
cutoff voltage	ON/OFF	5.000 (V)
battery capacity	ON/OFF	0.500 (Ah)
discharge time	ON/OFF	0.000 (s)

Parameter setting constraints: When the cut-off condition is not enabled, the corresponding parameter input box is prohibited from editing (gray disabled state).

(3) test result

- Battery health (SOH):

$$\text{SOH} = (\text{actual capacity} / \text{nominal capacity of the battery}) \times 100\%$$
 Nominal battery capacity: 0.010 (Ah)
 Result example: Battery health (SOH) =100%
- Estimation of battery internal resistance:

$$\text{Internal resistance} = (\text{no-load voltage-constant discharge voltage}) / \text{discharge current}$$

2.3.2 Operation logic description

1. Test process

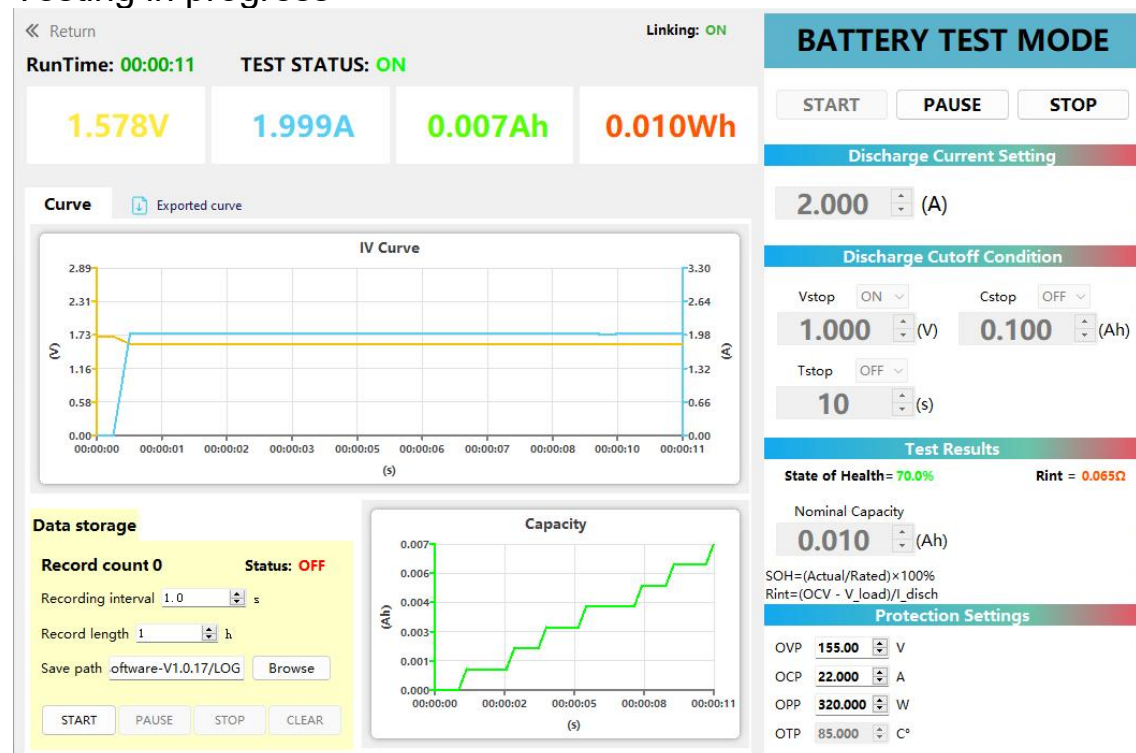
step	operate	system response
1	Enter battery test mode	Sync current panel parameters (discharge current/cutting condition/protection value)
2	Click Start Test	Detection stop condition: if all are not enabled, pop window alarm; otherwise, power distribution command is issued
3	Testing in progress	Refresh voltage, current, capacity, watt-hour, and discharge time data in real time and update the IV/Capacity curve
4	Click to pause the test	Pause discharge, allow parameter adjustment (current/cutting conditions), and pause data
5	Click to terminate the test	Force a test to end

2. Key status control

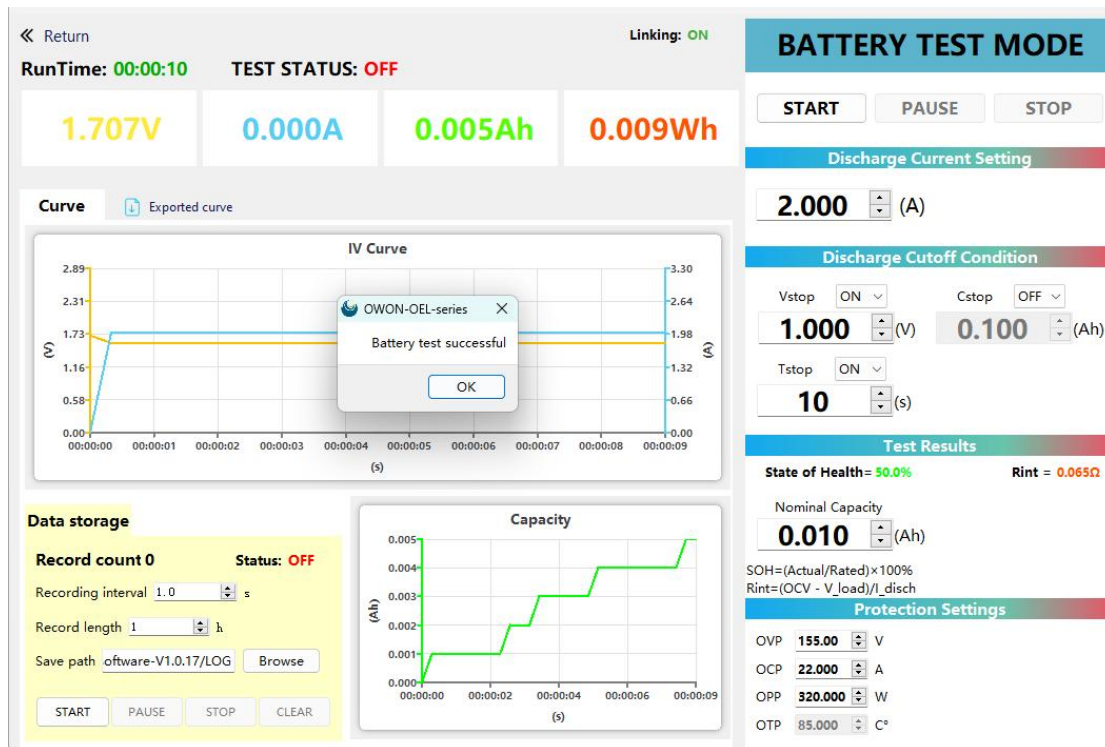
testing stage	Start testing	Test suspension	Terminate the test
have not started	Can be	forbidden	Can be

	clicked		clicked
Testing in progress	forbidden	Can be clicked	forbidden
suOELnd	Can be clicked	forbidden	Can be clicked

Testing in progress



3. The test was completed



- When any of the cutoff conditions (voltage/capacity/time) is reached, the test will be stopped automatically.
- The pop-up result window shows:
 - (1) Success/failure (e.g. triggering a protection mechanism).
 - (2) Finally, the calculation results of SOH value and internal resistance are obtained.