



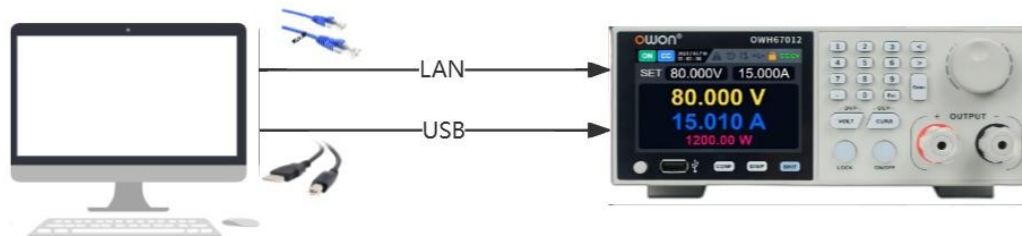
SP Software Help Tool

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1. Connection method

USB serial port or Ethernet is supported by SP series software as below.



1.1 USB series port communication

1.1.1 Driver Installation

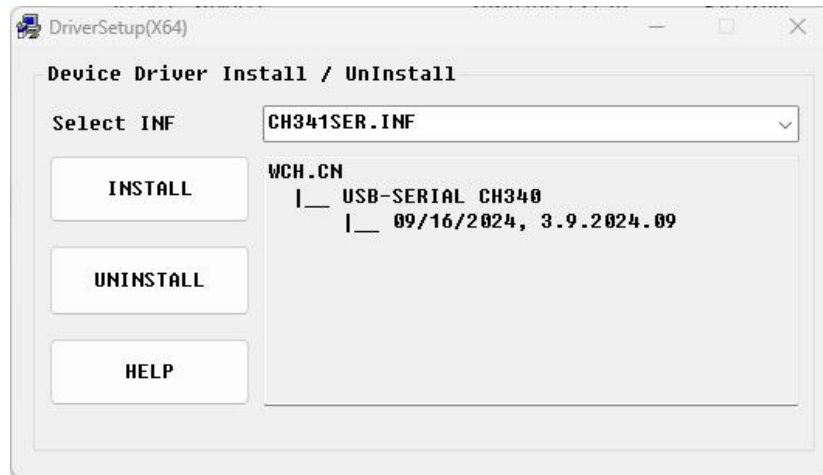
1. Please find the document: ”

OWON-POWER-SP-series-software”.

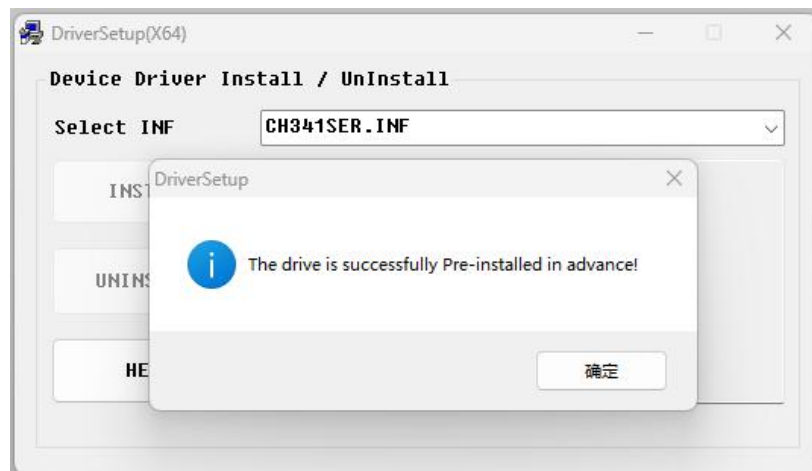
2. Unzip and find the file :” CH340 Driver”, as shown below:

bearer	2024/11/9 17:33
CH340 Driver	2024/11/11 13:00
iconengines	2024/11/9 17:33
imageformats	2024/11/9 17:33
platforms	2024/11/9 17:33
SPE-series-software	2024/11/11 12:58
styles	2024/11/9 17:33
translations	2024/11/9 17:33
translator	2024/11/9 17:33
D3Dcompiler_47.dll	2014/3/11 18:54
libEGL.dll	2020/11/6 17:00
libgcc_s_dw2-1.dll	2018/5/12 9:28
libGLSv2.dll	2020/11/6 17:00
libstdc++-6.dll	2018/5/12 9:28
libwinpthread-1.dll	2018/5/12 9:28
opengl32sw.dll	2016/6/14 21:08

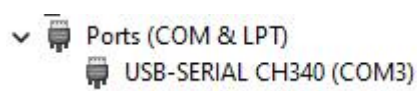
3. Double-click or right-click to unzip the CH341SER.zip package, and run the SETUP.EXE inside to directly install the CH340 driver, as shown below



4. Click Install, wait for the installation to complete, and click "OK", as shown below:



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

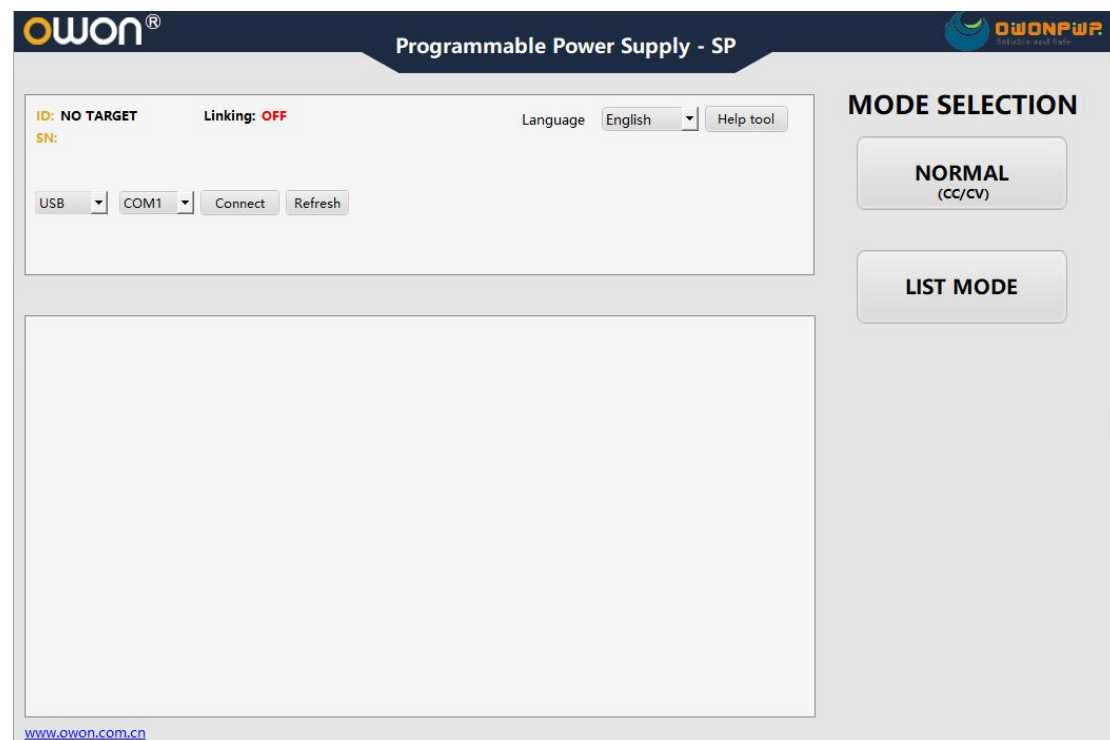


1.1.2 Hardware connection

1. Run “OWON-POWER-SP.exe ” file as below,

 opengl32sw.dll	2016/6/14 21:08
 OWON-POWER-SP-series.exe	2026/6/30 10:57

2.The front page is shown as below:



3.Please select the “USB” and COM, if not available, please click “Refresh”. Then click “connect” button



4. ID and connection status would be shown when connection is successful.



1.2 Ethernet connection

Users can use the SP series software to directly connect and control the SP8x0x product, or they can obtain the IP mode and IP address of the SP8x0x through this software configuration.

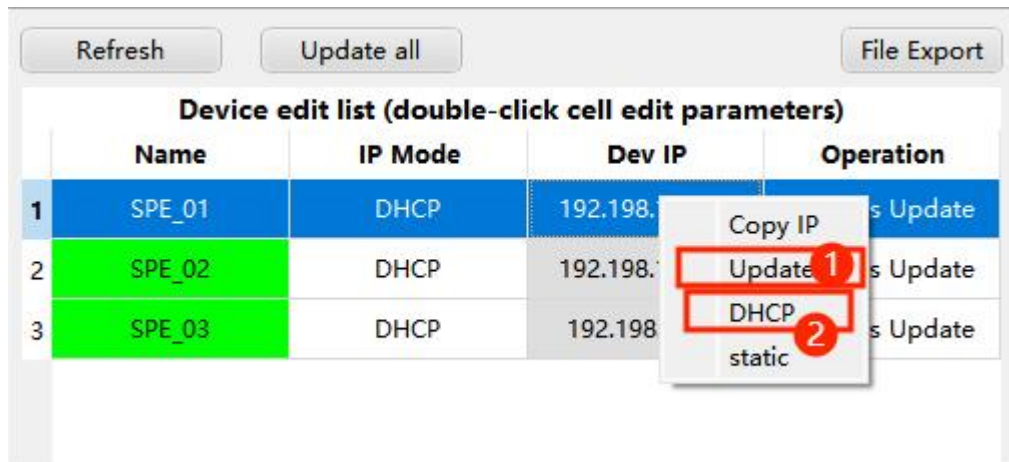
Note: This software supports to change the IP geometer, the port number is fixed 4196

The following introduction to obtain DHCP and static IP address.

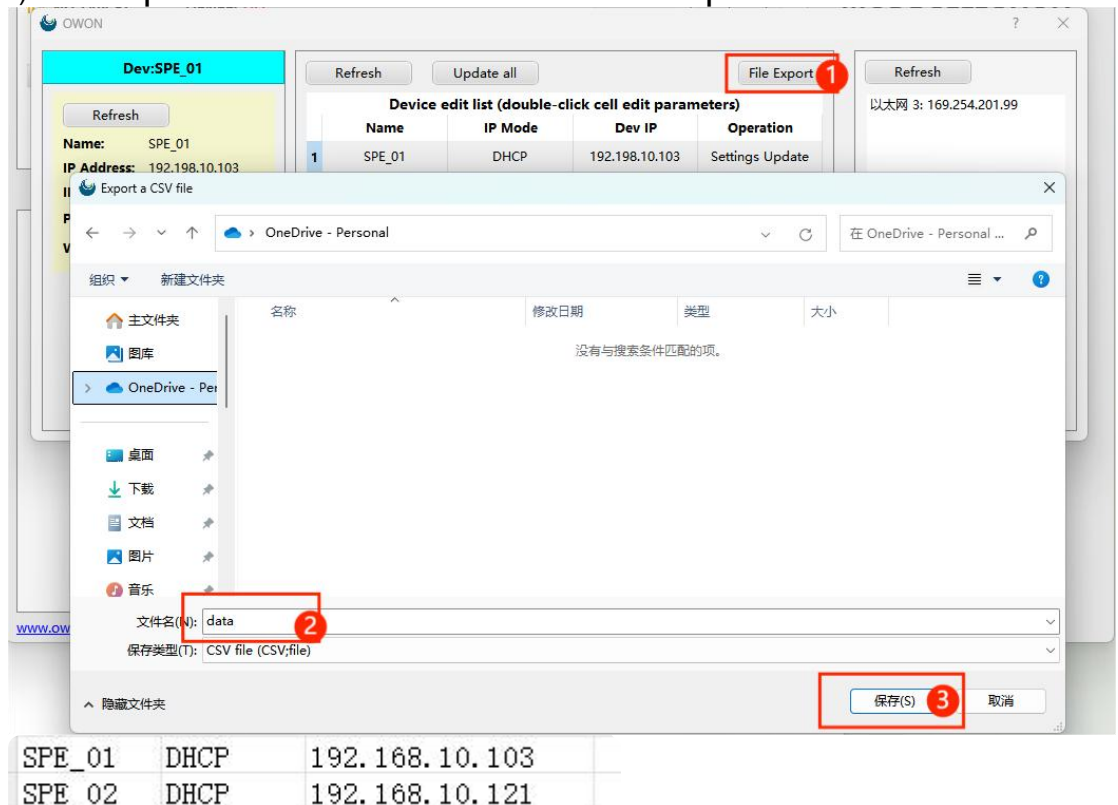
Taking the configuration of DHCP for multiple online devices as an example, the steps for the host computer to configure the SP8x0x device are as follows:

- 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.

	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



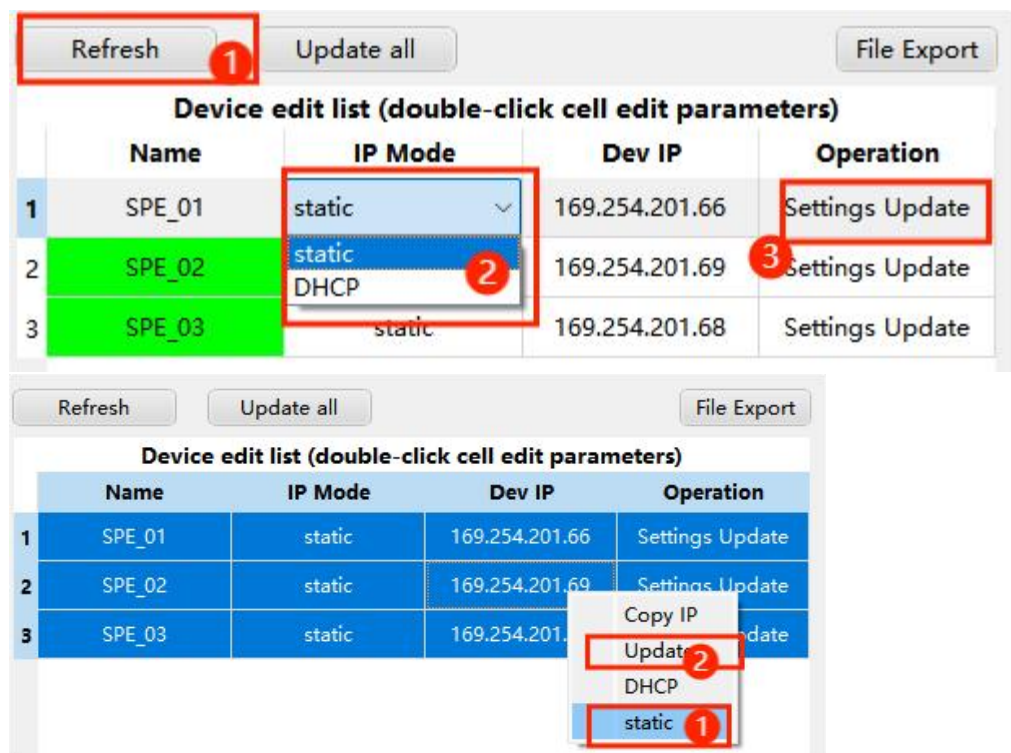
a) Multiple devices' information can be exported in csv file.



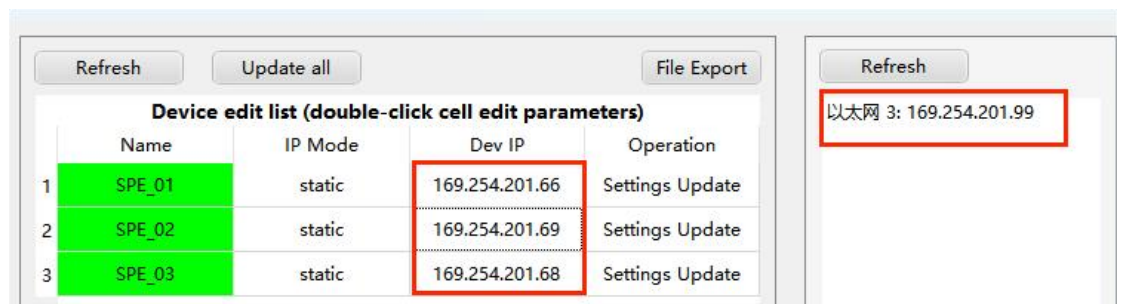
(b)The user system can connect to the new device through the latest device dynamic IP address.

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

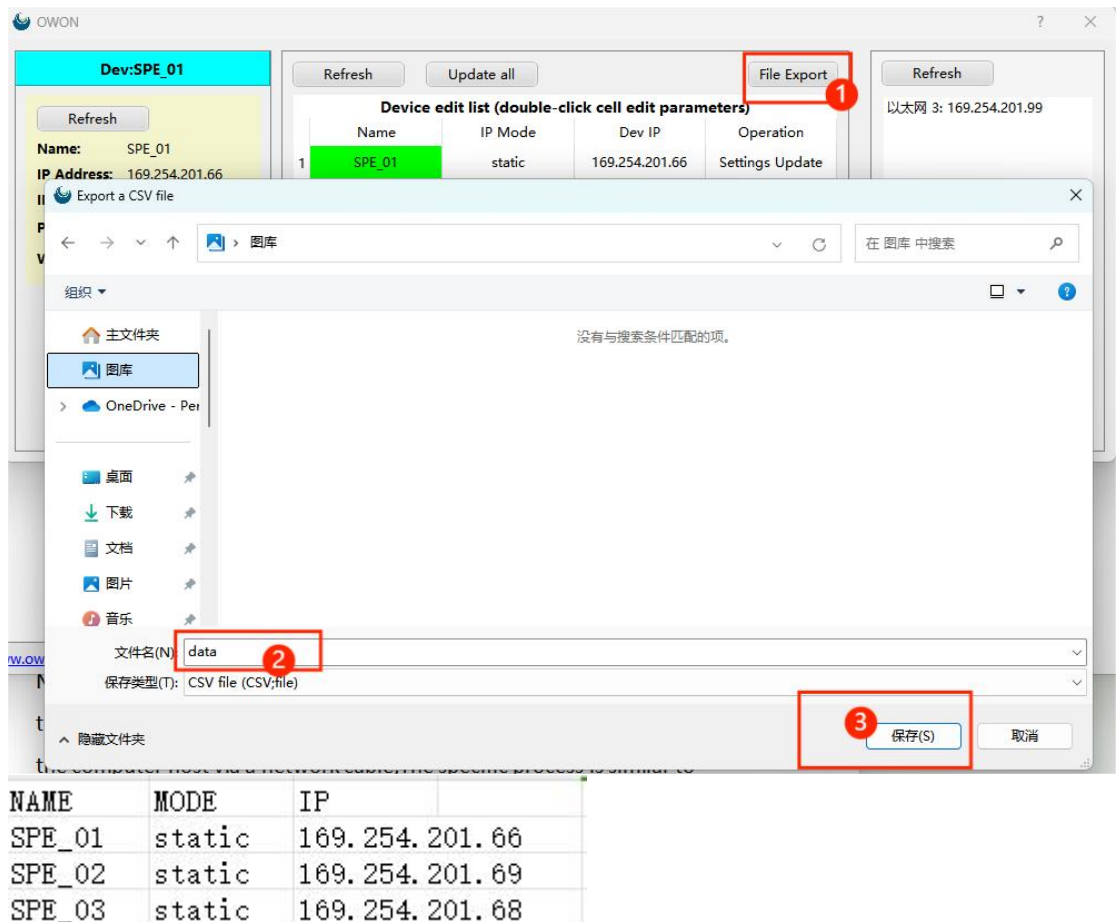
- Connect multiple devices to the router device
- Search the online device list, select all IP modes, edit the configuration to static IP, confirm the change, you can modify a single device, or modify the selected device in batches by right-clicking.



- 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.

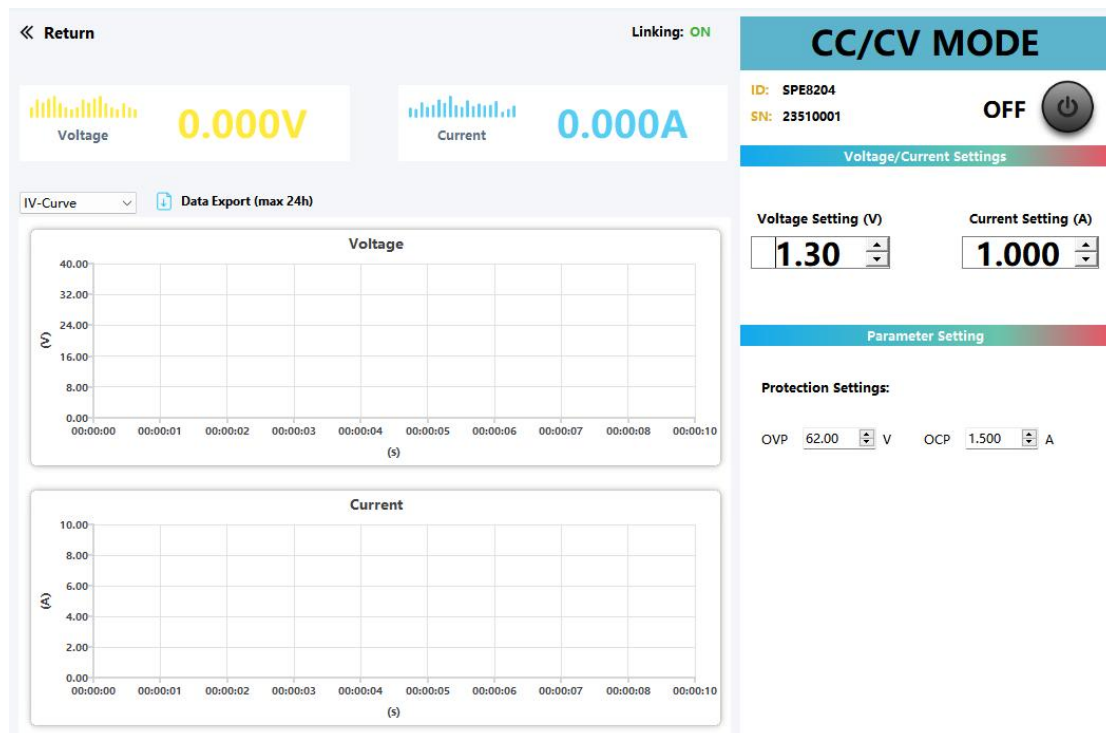


Note: If the user does not have a router device, then can use a computer to configure the device one-to-one, the device is directly connected to the computer host via a network cable, The SPcific process is similar to the multiple device configuration method.

2.SP software operation guide

2.1 CC/CV Mode

User can use USB series /LAN port to remote control SP series product, here is CC/CV MODE main page.



2.1.1 CC/CV operation introduction

1. Parameters input edit box.

User can input the targeted voltage and current setting and OCP, OVP.

Note: the new data in the edit box would take effect only when "Update" button or "Enter" Key is pressed.

Voltage/Current Settings

Voltage Setting (V)

20.00

Current Setting (A)

0.000

Parameter Setting

Protection Settings:

OVP

80.00

 V

OCP

31.000

 A

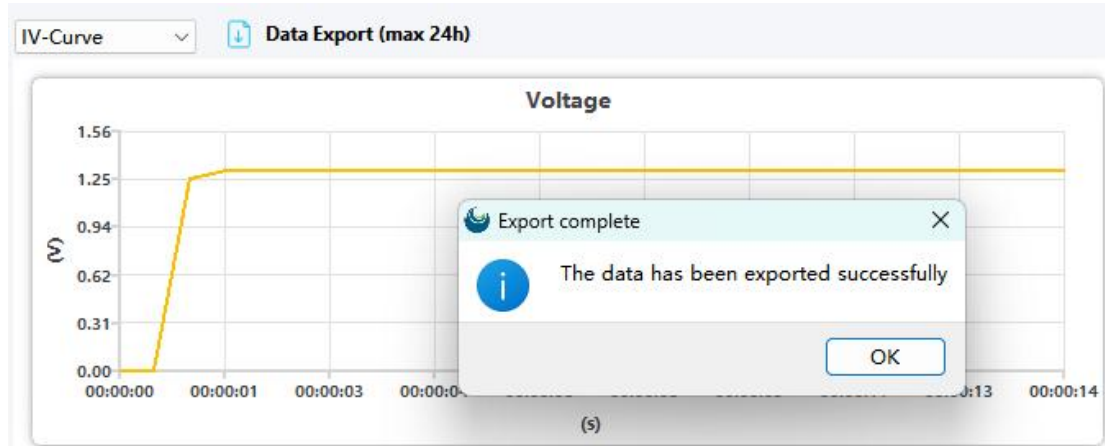
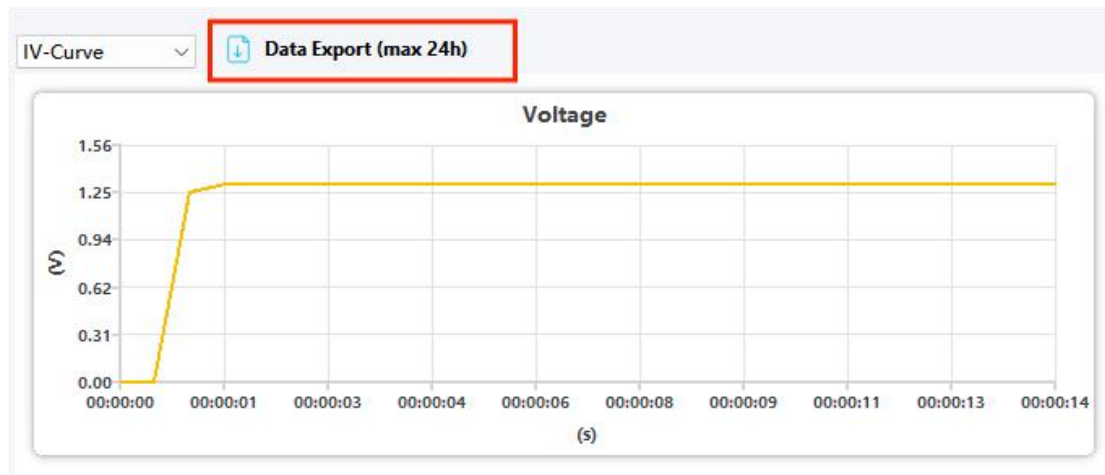
2. Display area.

The output data (Output voltage, Current and Power) can be display in this area in the form of numbers and curves.

When output is turned off, then you can export the data in csv.file.

Note that the data can be recorded up to 24 hours and the data sampling interval is 1 second.

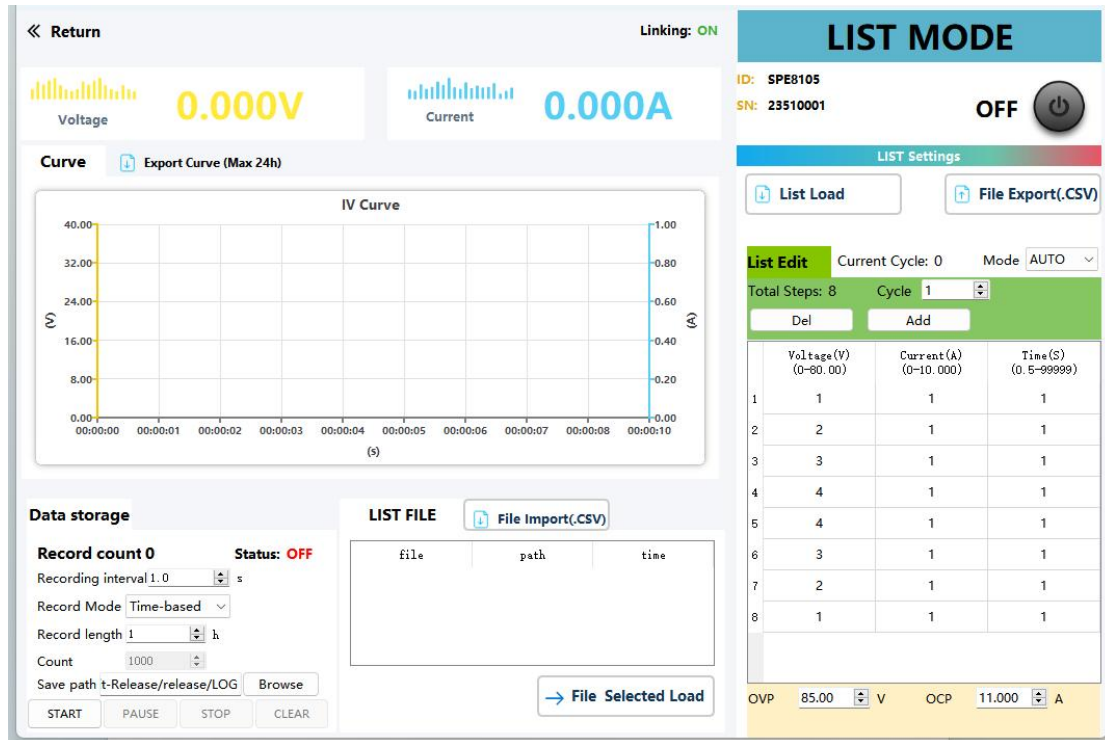




Store No.	Time(hh.mm.ss.zzz)	Volt(V)	Curr(A)
1	00.00.00.000	0	0
2	00.00.01.000	1.03	0.0411
3	00.00.02.000	1.3	0.05
4	00.00.03.000	1.3	0.05
5	00.00.04.000	1.3	0.05
6	00.00.05.000	1.2	0.05

2.2 LIST MODE

After successfully connecting to the instrument, enter the LIST mode to remotely operate the instrument.



2.2.1 LIST MODE -AUTO MODE

1. Select AUTO mode from the "Mode" drop-down box. This mode will automatically execute each parameter in the LIST table.

List Edit Mode **AUTO**

Total Steps: 8 Cycle 1

	Voltage(V) (0-81.00)	Current(A) (0-31.000)	Time(S) (0.5-99999)
1	1	1	1
2	2	1	1
3	3	1	1
4	4	1	1
5	4	1	1
6	3	1	1
7	2	1	1
8	1	1	1

2. The LIST table can be simply edited by "adding" and "deleting" a line. The "total number of steps" always records the current number of steps in the list. The value of the "number of cycles" corresponds to the number of times the instrument executes the entire list.

List Edit Mode **AUTO**

Total Steps: 8 Cycle 1

	Voltage(V) (0-81.00)	Current(A) (0-31.000)	Time(S) (0.5-99999)
1	1	1	1
2	2	1	1
3	3	1	1
4	4	1	1

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

List Edit

Mode AUTO

Total Steps: 8 Cycle 1

Del

Add

	Voltage(V) (0-81.00)	Current(A) (0-31.000)	Time(S) (0.5-99999)
1	1	1	1
2	2	1	1
3	3		1
4	4		1
5	4		1
6	3		1
7	2		1

Del

Copy(Ctrl+C)

Paste(Ctrl+V)

Insert rows above

Insert rows below

Clear file list

4. Click "Load current list" or the power button to load the list data to the instrument.

LIST MODE

ID: SPE8105
SN: 23510001

OFF

LIST Settings

List Edit Current Cycle: 0 Mode: AUTO

Total Steps: 8 Cycle: 0

	Voltage(V) (0-80.00)	Current(A) (0-10.000)	Time(S) (0.5-99999)
1	1	1	1
2	2	1	1
3	3	1	1
4	4	1	1
5	4	1	1
6	3	1	1
7	2	1	1
8	1	1	1

OVP 85.00 V OCP 11.000 A

Data storage

Record count 0 Status: OFF

Recording interval 1.0 s

Record Mode Time-based

Record length 1 h

Count 1000

Save path t-Release/release/LOG

LIST FILE

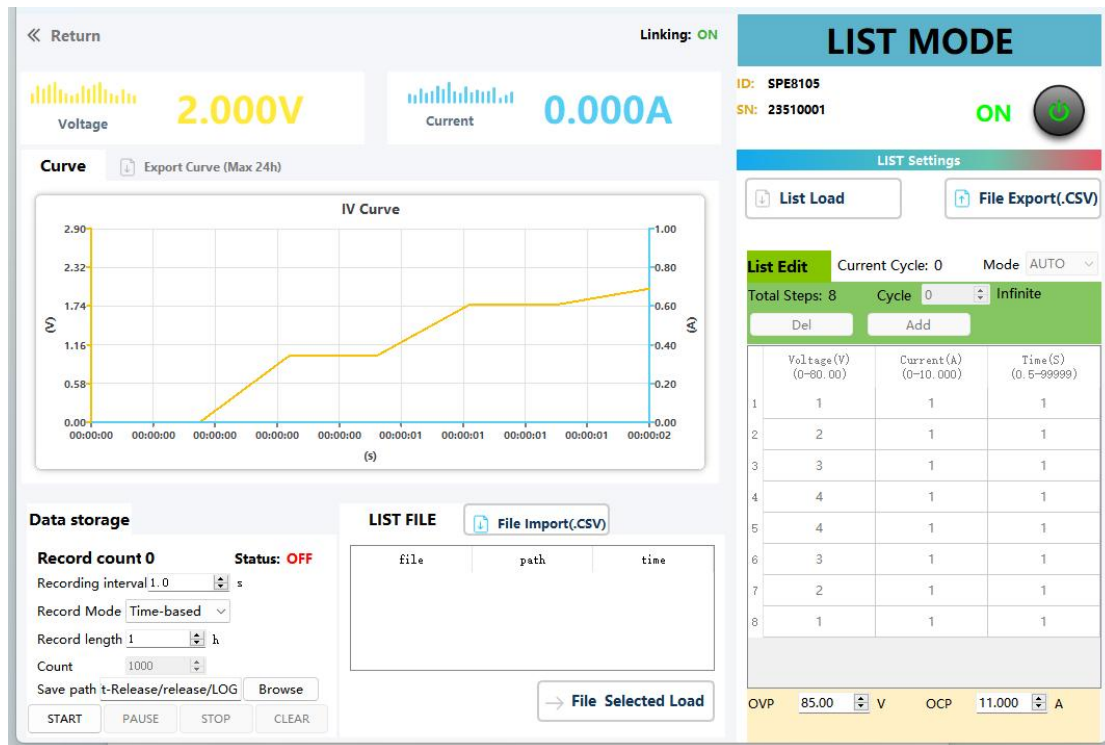
file path time

Curve

IV Curve

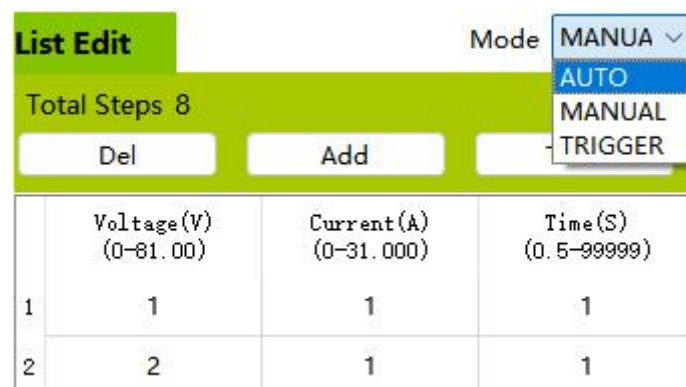
Loading progress 36%

5. Click the power button, and the list will be automatically output after powering on.



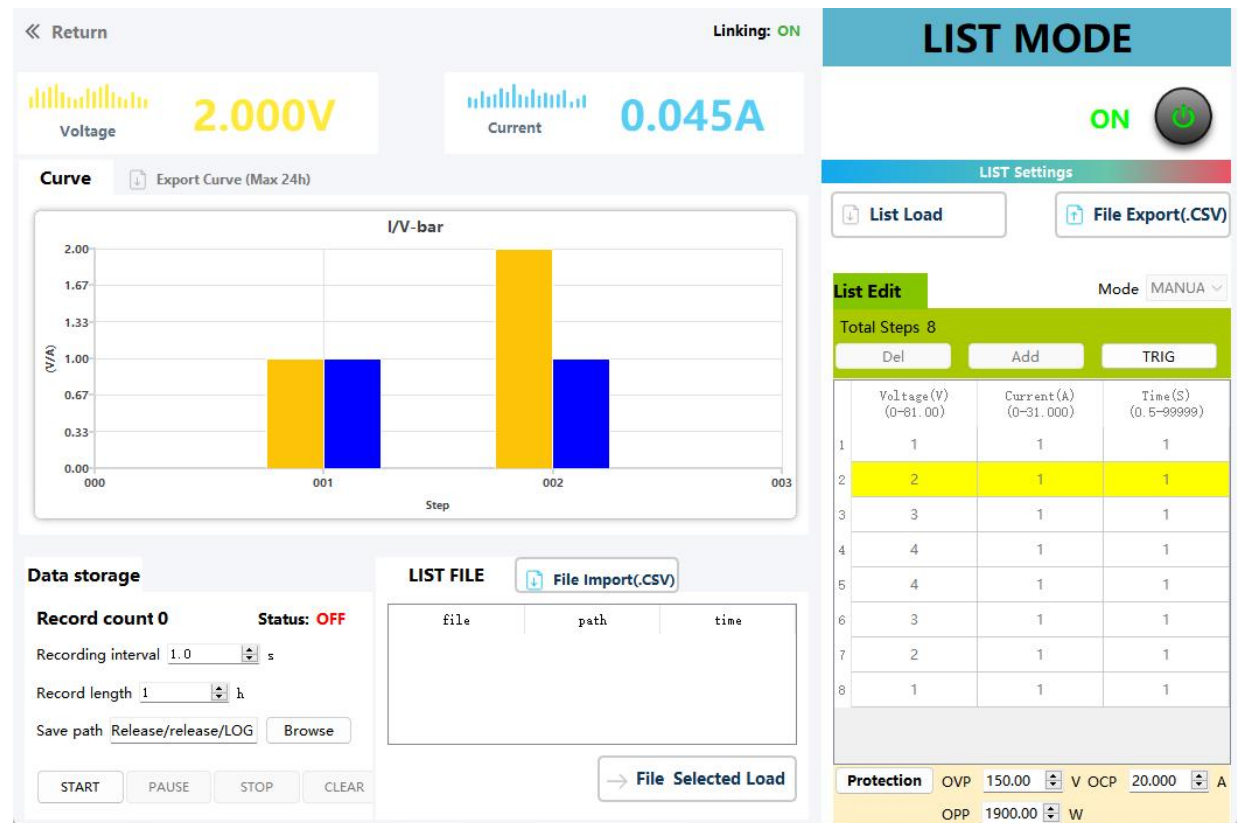
2.2.2 LIST MODE -MANUAL MODE operation introduction

1. Select the MANUAL mode from the "Mode" drop-down box. This mode will execute each parameter in the LIST list by actively pressing the button.



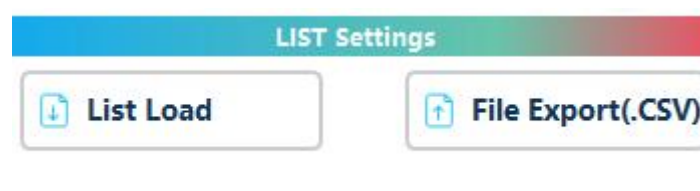
2. The LIST editing method is the same as the AUTO mode

3. Click "Load current list" or the power button to send the list data to the instrument.
4. Press the "TRIG" button once to trigger a LIST step.



2.2.2 LIST MODE file import and export operation

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.



	A	B	C	D	
1	#TotalCounts	10			#TotalCounts,10,,
2	#Cycles	1			#Cycles,1,,
3	#Mode	auto			#Mode,auto,,
4	STEP	VOLT	CURR	TIME	STEP, VOLT, CURR, TIME
5	#1	10	1	3	#1,10,1,3
6	#2	20	1	3	#2,20,1,3
7	#3	30	1	3	#3,30,1,3
8	#4	0	0	1	#4,0,0,1
9	#5	0	0	1	#5,0,0,1
10	#6	10	1	3	#6,10,1,3
11	#7	20	1	3	#7,20,1,3
12	#8	30	1	3	#8,30,1,3
13	#9	0	0	1	#9,0,0,1
14	#10	0	0	1	#10,0,0,1

Table editing instructions:

- The first row: Total step setting A1: #TotalCounts, #TotalCounts is the identification name, B1: Total step number
- The second row: Cycle setting A2: #Cycles, #Cycles is the identification name, B2: Total cycle number
- The third row: Mode setting A3: #Mode, #Mode is the identification name, B2: auto/manual/trigger
- The fourth row: Parameter title
- The fifth row: start setting the first step, the corresponding number of steps, voltage value, current value, duration, the corresponding table B5 is the voltage setting value of STEP1, C5 is the current setting value of STEP1, and D5 is the time setting value of STEP1.
- The sixth row: similar to the fifth row, the number of steps plus 1.

2. After the table editing is completed, load the file into the LIST file list by clicking "Import File" in the software.

LIST FILE

File Import(.CSV)

	file	path	time
1	123.csv	C:/Users/...	2025-07-19T11:...

→ File Selected Load

3. Select the file to be loaded and click "Load Selected File" to further load the data into the LIST editing list.

Return

Linking: ON

Voltage

0.000V

Current

0.000A

Curve

Export Curve (Max 24h)

IV Curve

Data storage

Record count 0

Status: OFF

Recording interval 1.0 s

Record length 1 h

Save path Release/release/LOG Browse

START

PAUSE

STOP

CLEAR

LIST FILE

File Import(.CSV)

	file	path	time
1	123.csv	C:/Users/...	2025-07-19T11:...

→ File Selected Load

LIST MODE

OFF

Power Button

LIST Settings

List Load

File Export(.CSV)

List Edit

Total Steps: 8

Cycle 1

Mode AUTO

Del

Add

	Voltage(V) (0-81.00)	Current(A) (0-31.000)	Time(S) (0.5-99999)
1	1	1	1
2	2	1	1
3	3	1	1
4	4	1	1
5	4	1	1
6	3	1	1
7	2	1	1
8	1	1	1

Protection

OVP 150.00 V

OCV 20.000 A

OPP 1900.00 W

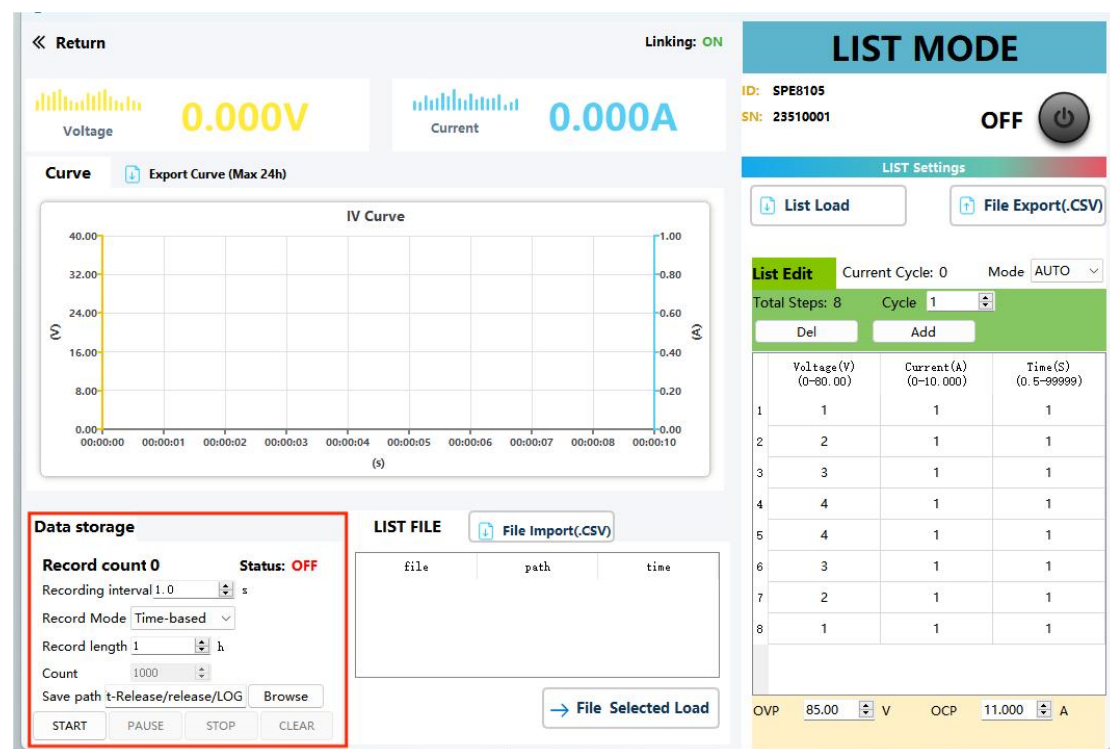
2.2.4 LIST interface data recording operation instructions

1. Function overview

The data recording function allows you to save the voltage and current data collected by the device in CSV format independently. This function can run stably whether or not the chart is viewed, and you only need simple Settings to enable automatic data recording.

2. Description of the operation interface

The following is the layout description of the data recording interface (please refer to the schematic diagram):



The data recording function in the LIST interface supports two flexible recording modes. You can choose the appropriate mode for data acquisition based on actual needs:

1. Time-based Mode

Principle: Uses a fixed duration as the recording cycle. The current recording automatically ends when the set duration is reached.

Application Scenarios: Suitable for periodic data acquisition (e.g., 24-hour environmental monitoring, 72-hour device stability testing) or situations requiring strict time-window data archiving.

Parameter Settings:

Enter the target duration in the "Data Recording Length" field (unit: hours, supports a range of 1~999 hours).

The system will start timing from the beginning of the recording. When the cumulative duration reaches the set value, the current file recording will automatically stop.

2. Count-based Mode

Principle: Uses a fixed number of records as the switching condition. When the set number of records is reached, a new file is automatically created to continue recording data.

Application Scenarios: Suitable for scenarios where the data volume per file needs to be controlled (e.g., each file stores a maximum of 1000 records) or when data needs to be archived in segments based on the number of data events (e.g., splitting data every 1000 experiments).

Parameter Settings:

Enter the target number of records in the "Data Rolling Count" field (e.g., 1000 records).

The system will continuously count the number of records in the current file. When the count reaches the set value, the current file is automatically closed, and a new file is created to continue recording, ensuring controllable data volume per single file.

3. Common Parameters and Operation Instructions

Data Recording Interval: Set the time interval between two data recordings (unit: seconds, supports a range of 0.5~9999 seconds) to control the data acquisition frequency.

Save Path: Use the "Browse" button to select the storage directory for log files (default path: t-Release/release/LOG). Files will be named in the format YYYYMMDD_HHMMSS.csv.

Operation Buttons:

Start Recording: Initiates data acquisition. The button changes to "Pause Recording" or "Resume Recording" depending on the current status.

Pause Recording: Temporarily interrupts data acquisition, which can later be resumed with "Resume Recording".

Stop Recording: Terminates the current acquisition task, closes the file, and saves the data.

Clear Recording: Only available in the "Start" or "Pause" state. Resets the record count and clears the content of the current file (while preserving the header).

4. Data File Format

Store No.	Date	Time	Volt (V)	Curr (A)
0	2026/3/10	10. 47. 10. 604	2. 997	0
1	2026/3/10	10. 47. 11. 098	2. 997	0
2	2026/3/10	10. 47. 11. 591	3. 993	0