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PROFESSIONAL INNOVATIVE BRANDING SERVICE

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High Power DC Power Supply Control Panel User Manual ➤



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■ 中文:起始页 39

Part NO. 18950-755-00

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Preface

1.1 Introductions

This monitoring software can be used to set or display the output of APM SP-3U/6U series DC power supply. The remote control mode has the same functions as the local control mode. Before using the remote control mode please make sure that the communication cable is connected properly.

1.2 Applicable Models

Output Voltage	3U			6U		
	6000W	12000W	18000W	24000W	30000W	36000W
80VDC	200A	400A	600A	800A	1000A	1200A
165VDC	-	180A	-	360A	-	540A
250VDC	-	-	180A	-	-	-
360VDC	42.5A	85A	127.5A	170A	212.5A	255A
500VDC	32A	64A	96A	128A	160A	192A
750VDC	21A	42A	63A	84A	105A	126A
1000VDC	-	32 A	-	64A	-	96A
1500VDC	-	21A	32A	42A	-	63A
2250VDC	-	-	21A	-	-	-

1.3 Communication Interface

- RS232
- RS485
- USB
- LAN
- GPIB
- CAN

1.4 Computer Requirements

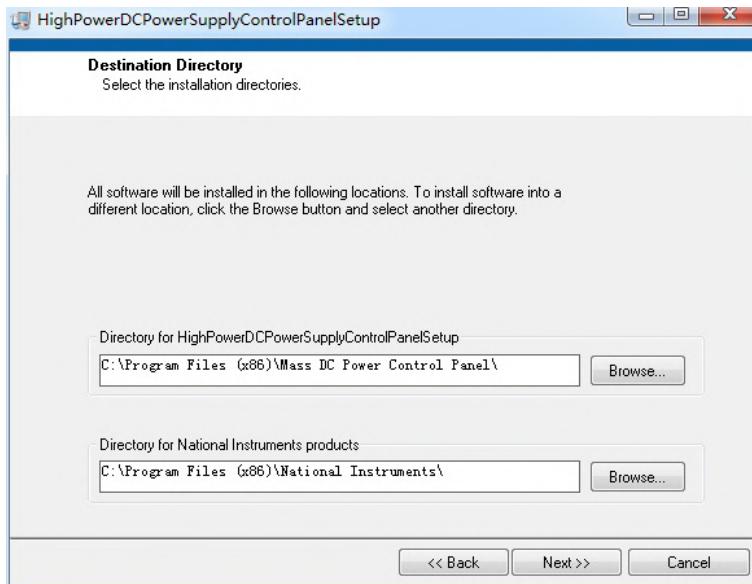
- Intel CPU 1GHz or above
- Operating system: windows 7 SP1 x86, x64
 - windows 8.1 x86, x64
 - windows 10 x86, x64
- Storage Disks: 16GB or above
- RAM: 2GB, 4GB for 64bits operating system
- VGA or SVGA video card and a color monitor
- PS2 Mouse

Version PA, updated February 2021

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Software Installation

Visit our website en.apmtech.cn to download the software. Double click on the setup file to install the monitoring software. Click the "Next" button to install the application follow the default location or you can change the location by clicking the "Browse" button and select another directory.



Then always click on the "Next" button to finish the installation. A shortcut to the application will be displayed on the desktop.

3

Software Uninstallation

Click to open "Control Panel"-- click to open "Programs"-- click to open "Programs and Features"-- click to open "Uninstall a program", right click on the "HighPowerDCPowerSupplyControlPanelSetup" and choose "Uninstall" to remove it.



4

Instruction

Please click on the "Install" button to install the language when open the software first time. Click on the X on the top right corner to close the page after installing the language.



4.1 Login Interface



This application supports RS232/RS485/USB/GPIB/LAN/CAN communication modes.

4.1.1 RS232 Communication Mode

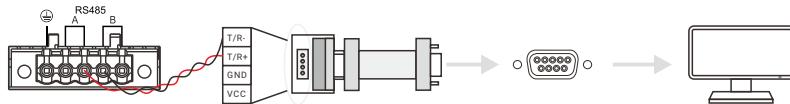
Check RS232 option first. And make sure that the communication parameters is the same as that in the menu of the DC power supply.

Click on the "SEARCH" button to search the unit which is connected to the computer. Select the unit by clicking the check-box before the channel number. Then click on the "OK" button to turn to the Basic Mode page.



4.1.2 RS485 Communication Mode

Refer to the diagram below for RS485 communication connection.



Check RS485 option first. And make sure that the communication parameters is the same as that in the menu of the DC power supply.

Click on the "SEARCH" button to search the unit which is connected to the computer. Select the unit by clicking the check-box before the channel number. Then click on the "OK" button to turn to the Basic Mode interface.

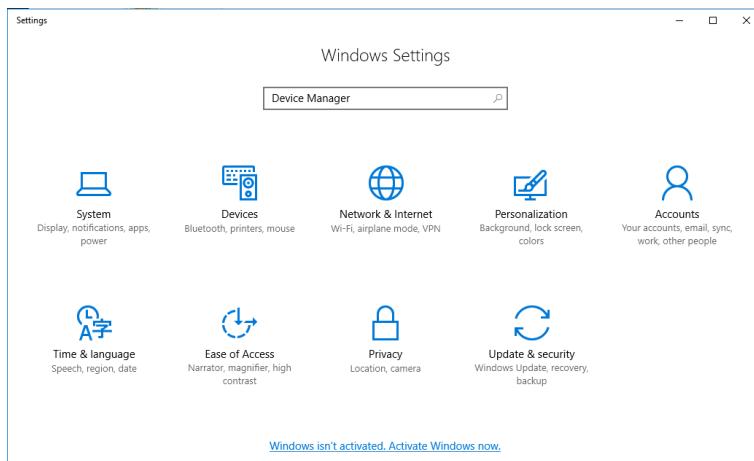


4.1.3 USB Communication Mode

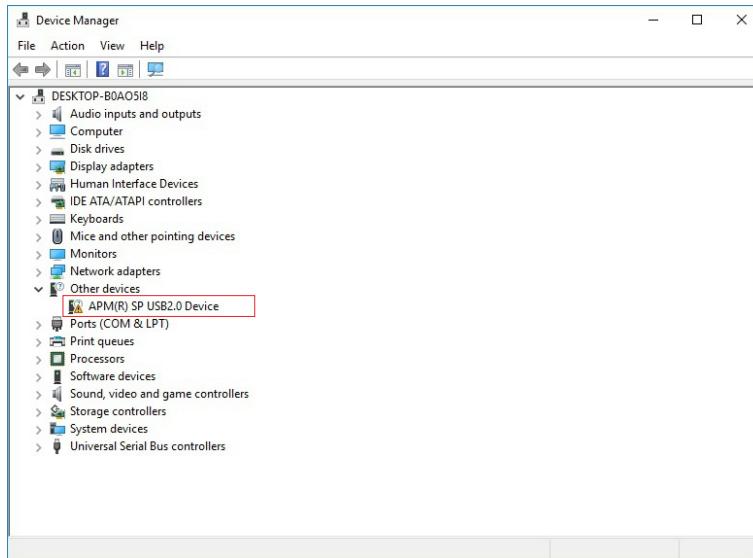
4.1.3.1 USB Driver Installation

Before installing the USB driver, make sure the DC power supply is on and found by the PC or laptop connected to it using a USB device cable. This will confirm that the connection is correct.

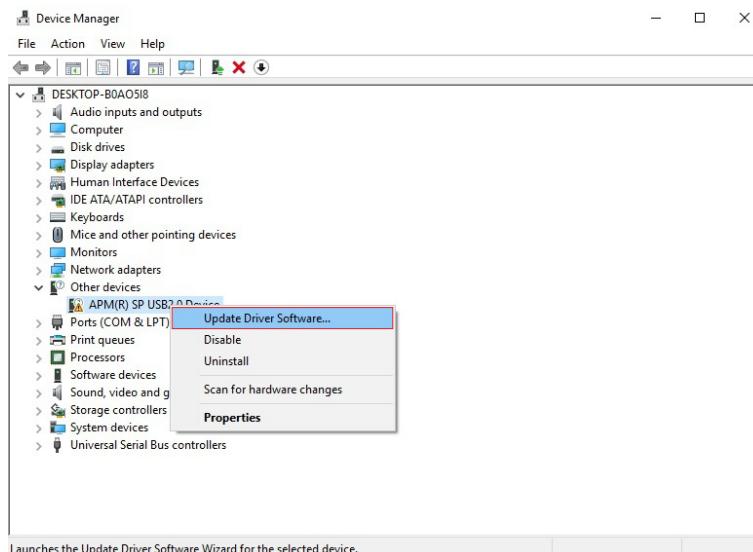
To open the Device manager, open Windows, Settings and use the search box to locate “Device Manager”.



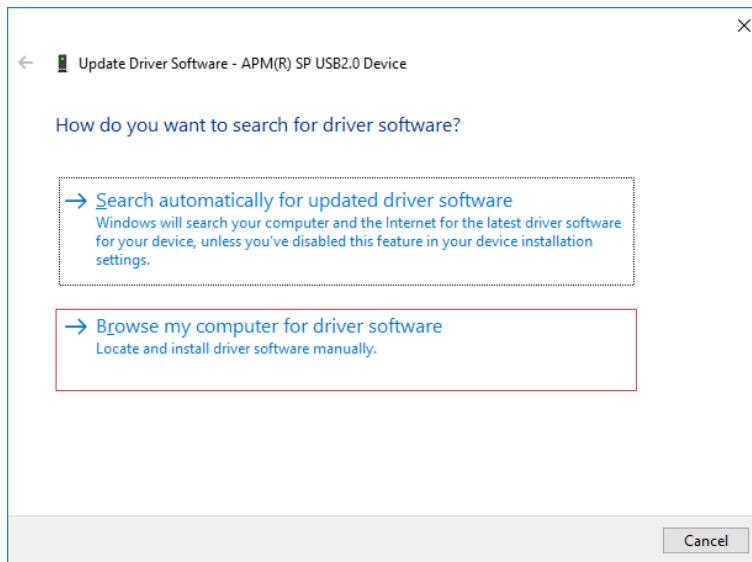
Open the device manager as shown below. Locate the “APM (R) SP USB2.0 Device” under the “Other Devices” category.



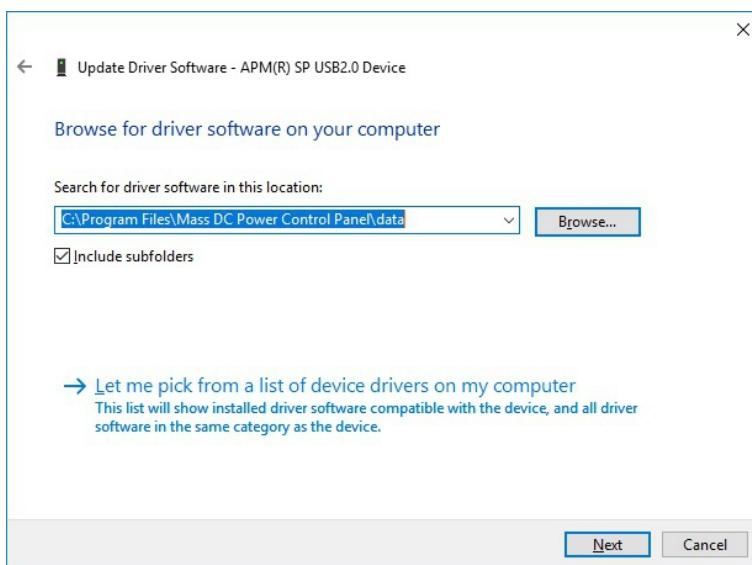
Right mouse click and choose “Update Driver Software...” as shown below.



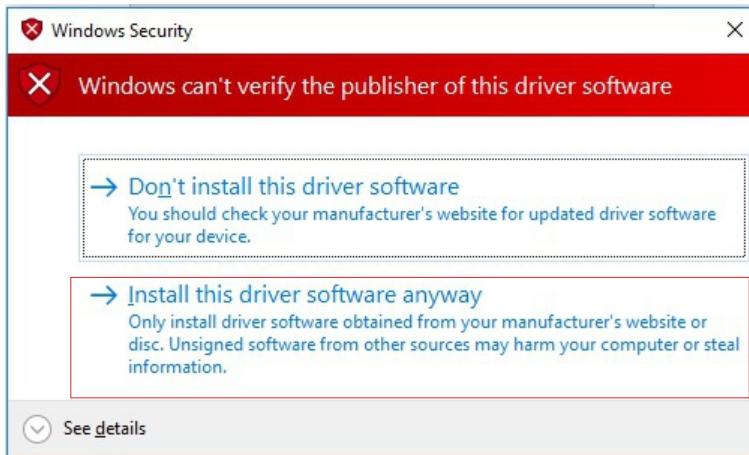
When prompted, select the Browse for driver entry as shown below.



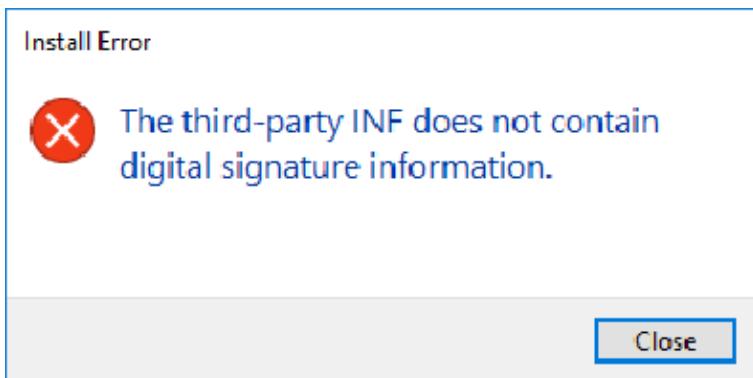
The USB driver can be found in the data folder of the software installation path.



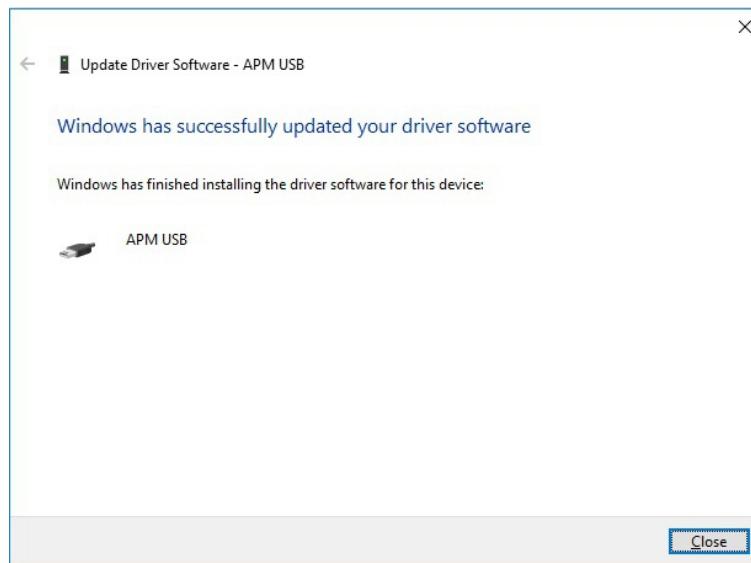
A warning will appear regarding the driver software publisher verification. Select the second entry “Install this driver software anyway”.



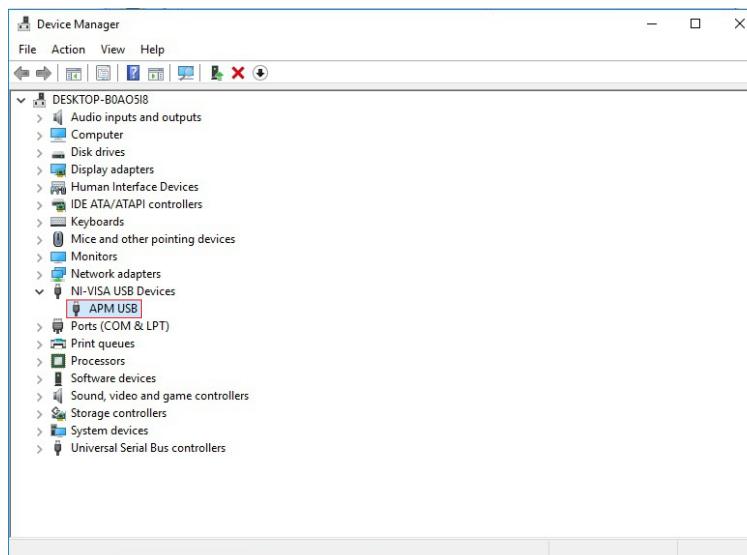
If instead of the dialog box shown above, you encounter an “Install Error” like the one shown here, you will need to disable your digital authentication mode in Windows 10 first.



Wait for the driver installation to finish. The dialog shown below should appear when done.



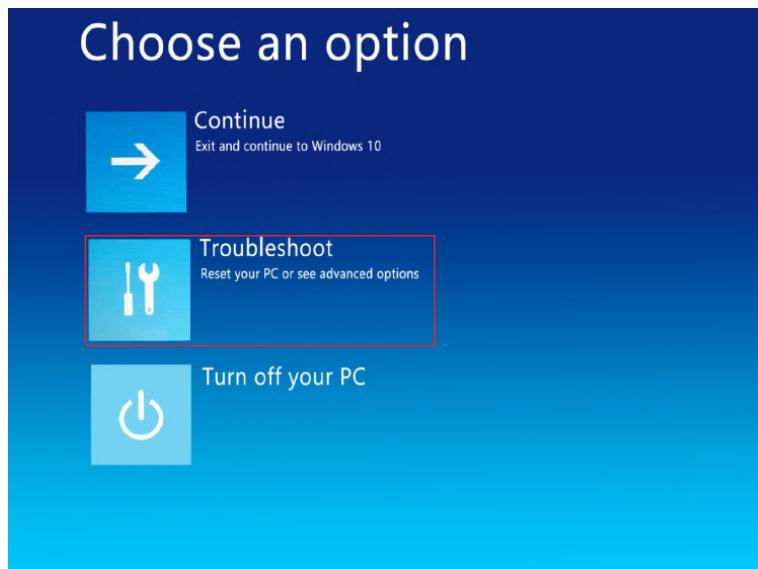
The USB driver should now be visible in the Device Manager.



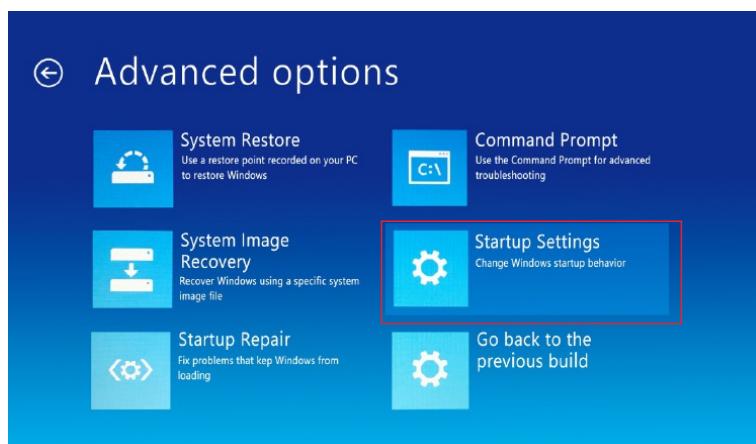
4.1.3.2 Disabling Driver Signature Enforcement in Windows 10

If your Windows PC is configured for Driver signature enforcement, it will be necessary to temporarily disable this OS features to allow the USB driver installation. One way to do so is to use the Advanced Boot Menu. Follow these steps to do so.

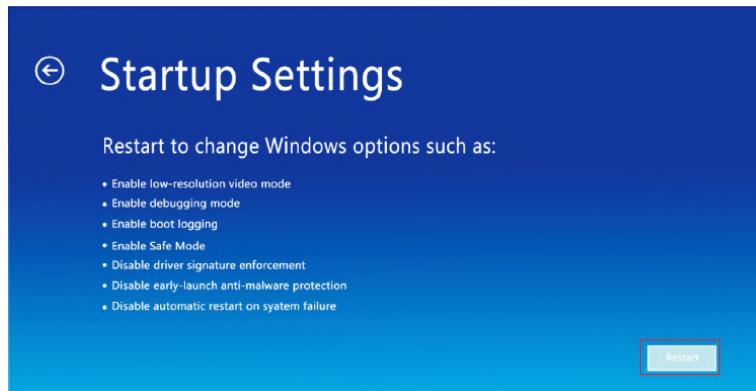
1. Hold down the Shift key while choosing the “Restart” option in Windows. Your computer will restart with Advanced Options. From the list of options displayed, select the “Troubleshoot” tile.



2. Next, select “Advanced options” and hit the “Startup Settings” tile.



3. Next, select the “Restart” button to restart your PC on the Startup Settings screen.



4. You will see the following screen on restart. Press the number “7” keyboard key to activate the “Disable driver signature enforcement” option.



5. Once done, your PC will reboot with driver signature enforcement disabled, and you will be able to install unsigned drivers.

4.1.3.3 USB Communication Instruction

Check USB option first. Click on the "SEARCH" button to search the unit which is connected to the computer. Select the unit by clicking the check-box before the channel number. Then click on the "OK" button to turn to the Basic Mode interface.



4.1.4 GPIB Communication Mode

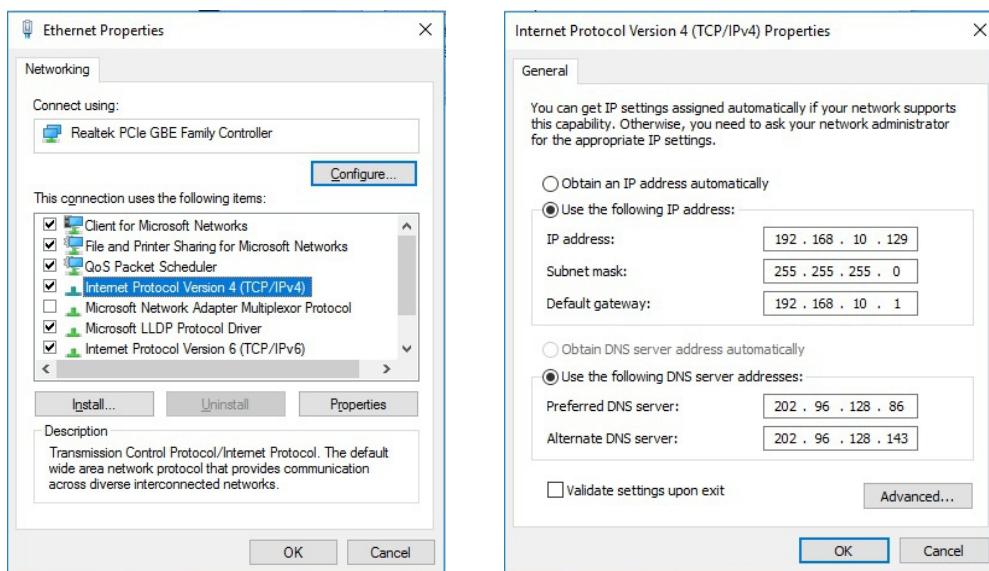
Check GPIB option first. Click on the "SEARCH" button to search the unit which is connected to the computer. Select the unit by clicking the check-box before the channel number. Then click on the "OK" button to turn to the Basic Mode interface.



4.1.5 LAN Communication Mode

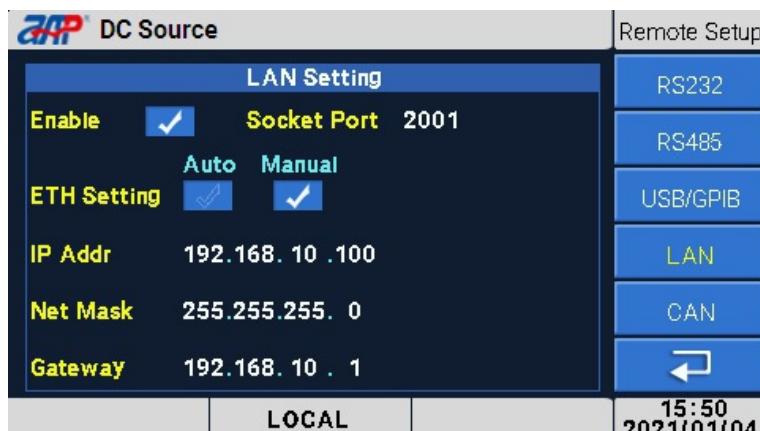
4.1.5.1 Setting a Static IP Address

Click to open the program “Open Network and Sharing Center” -- open “Local Area Connection” -- choose and double click “Internet Protocol Version 4 (TCP/IPv4)” to get the IP setting of the PC.



Note: Only the IP address of the unit and the PC are in the same network segment, then it's available to control the unit.

Use the numeric keys on the front panel to set the Ethernet parameters of the unit.



4.1.5.2 LAN Communication Instruction

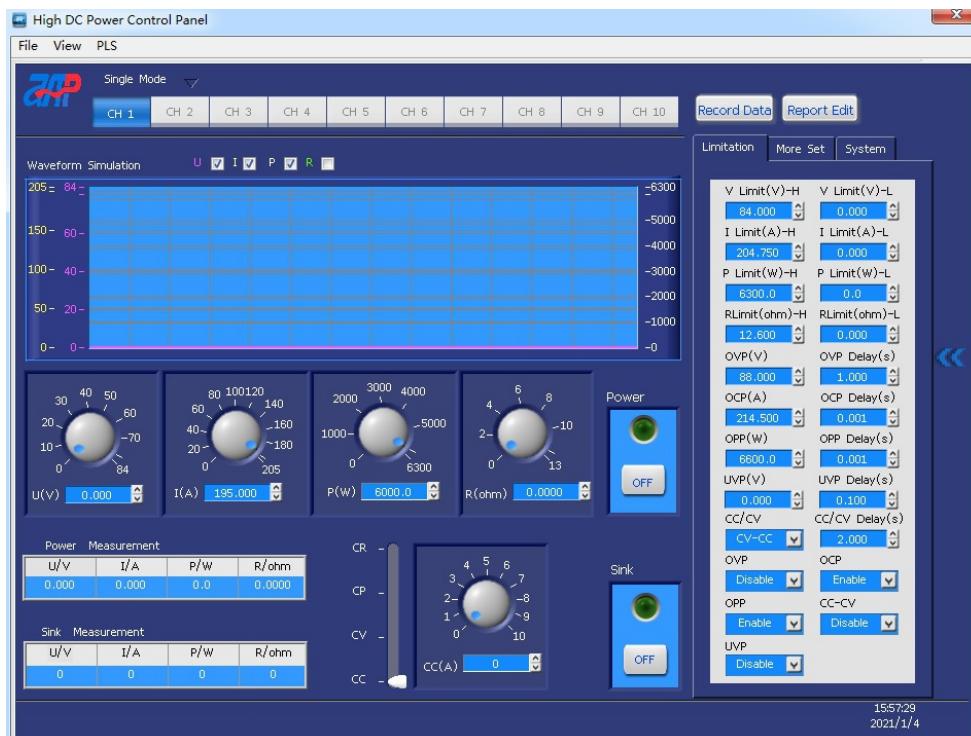
Check LAN option first. Click on the "SEARCH" button to search the unit which is connected to the computer. Select the unit by clicking the check-box before the channel number. Then click on the "OK" button to turn to the Basic Mode interface.



4.1.6 CAN Communication Instruction

Not yet available.

5 Basic Mode



5.1 Status Bar

File	View	PLS
Exit	System Information	List Mode
	Warning Log	Program Mode
	Back	Step Mode

Exit: Close the software.

System Information: Unit information.

Warning Log: Alarm history.

Back: Back to Login page.

List mode/Program Mode/Step Mode: Waveform create function.

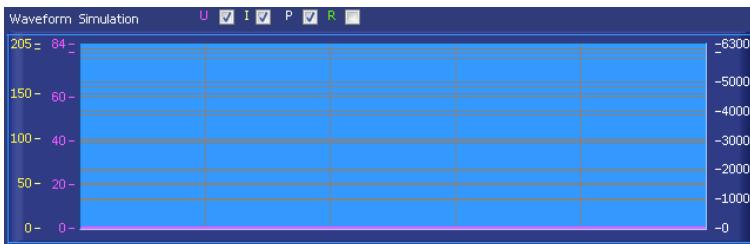
5.2 Channel Selection



Select the desired control channel in multi mode. Not yet available.

5.3 Waveform Simulation Field

Can real time display the Voltage, Current, Power and Resistance output waveform after selected.



5.4 Power Mode Parameters Setting Field



This part provides three ways to set the parameters.

1. Rotate the knob for a rough setting.
2. Enter the desired values directly.
3. Use the up and down arrows to change the settings.

5.5 Power ON/OFF

DC power supply power ON/OFF switch.



5.6 Measurement for Power and Sink Mode

Real time display the measurement of Power or Sink mode.

Power Measurement			
U/V	I/A	P/W	R/ohm
0.000	0.000	0.0	0.0000

Sink Measurement			
U/V	I/A	P/W	R/ohm
0	0	0	0

5.7 Sink Mode Parameters Setting Field

This Sink mode will available only after option and install the sink module.



This part provides three ways to set the parameters. Select the desired operation mode (CR, CP, CV or CC) first, then

1. Rotate the knob for a rough setting.
2. Enter the desired values directly.
3. Use the up and down arrows to change the settings.

5.8 Sink ON/OFF

Sink mode ON/OFF switch.



6

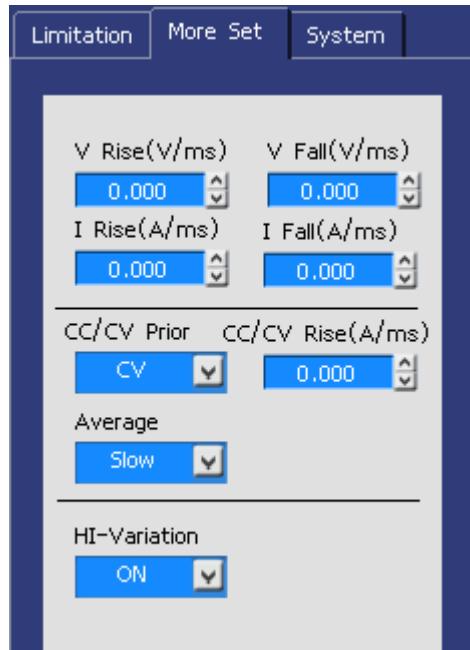
System Parameters setup

6.1 Limitation and Protection Setup

Limitation		More	Set	System
V Limit(V)-H	V Limit(V)-L			
84.000	0.000			
I Limit(A)-H	I Limit(A)-L			
204.750	0.000			
P Limit(W)-H	P Limit(W)-L			
6300.0	0.0			
RLimit(ohm)-H	RLimit(ohm)-L			
12.600	0.000			
OVP(V)	OVP Delay(s)			
88.000	1.000			
OCP(A)	OCP Delay(s)			
214.500	0.001			
OPP(W)	OPP Delay(s)			
6600.0	0.001			
UVP(V)	UVP Delay(s)			
0.000	0.100			
CC/CV	CC/CV Delay(s)			
CV-CC	2.000			
OVP	OCP			
Disable	Enable			
OPP	CC-CV			
Enable	Disable			
UVP				
Disable				

- V Limit(V)-H:** Voltage upper limit, setting range is 0~105% * rated voltage.
- V Limit(V)-L:** Voltage lower limit, setting range is 0~105% * rated voltage.
- I Limit(A)-H:** Current upper limit, setting range is 0~105% * rated current.
- I Limit(A)-L:** Current lower limit, setting range is 0~105% * rated current.
- P Limit(W)-H:** Power upper limit, setting range is 0~105% * rated power.
- P Limit(W)-L:** Power lower limit, setting range is 0~105% * rated power.
- R Limit(ohm)-H:** Resistance upper limit, setting range is 0~105% * rated resistance.
- R Limit(ohm)-L:** Resistance lower limit, setting range is 0~105% * rated resistance.
- OVP(V):** Over voltage protection, setting range is 0~110% rated voltage.
- OVP Delay(s):** Over voltage protection delay time.
- OCP(A):** Over current protection, setting range is 0~110% rated current.
- OCP Delay(s):** Over current protection delay time.
- OPP(W):** Over power protection, setting range is 0~110% rated power.
- OPP Delay(s):** Over power protection delay time.
- UVP(V):** Under voltage protection.
- UVP Delay(s):** Under voltage protection delay time.
- CC/CV:** Regulation mode protection, setting range is CC-CV or CV-CC.
- CC/CV Delay(s):** Regulation mode protection delay time.
- OVP:** Enable or Disable over voltage protection.
- OCP:** Enable or Disable over current protection.
- OPP:** Enable or Disable over power protection.
- CC/CV:** Enable or Disable CC-CV or CV-CC protection.
- UVP:** Enable or Disable under voltage protection.

6.2 Output and Measurement Setup



V Rise (V/ms): Voltage rise slew rate setting.

V Fall (V/ms): Voltage fall slew rate setting.

I Rise (A/ms): Current rise slew rate setting.

I Fall (A/ms): Current fall slew rate setting.

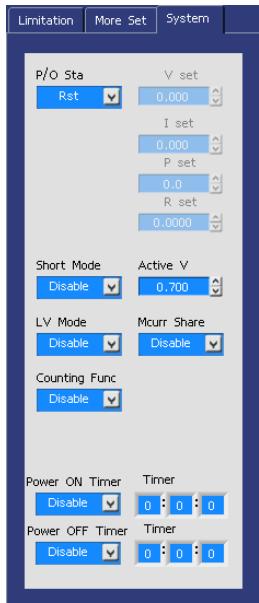
CC/CV Prior: CC or CV priority setting.

CC/CV Rise (A/ms): Set voltage or current rise slew rate.

Average: Meter averaging time setting.

HI-Variation: Used to shorten the output voltage fall time.

6.3 Special Function Setup



P/O Sta: Power on state setting.

Rst: The power source will NOT store any settings when it is powered off and will initialize with factory defaults at the next power on.

Save: In this mode, a user-defined configuration can be assigned for recall when the power source is turned on. This means the power supply will always turn on with the values of this specific configuration.

Last: The power supply will store the settings in effect when the supply was last powered off, and will recall the same settings at power on. This means the unit will power up in the same conditions as when it was turned off.

Short Mode: Enable or disable short mode.

Active V: Set the trigger voltage of Short protection.

LV Mode: Enable or disable LV mode.

Mcurr Share: Enable or disable current sharing function.

Counting Func: Includes Voltage and Current counting function.

IL (A): Cut-off current for counting.

Ib (A): Start current for counting.

Power ON Timer: Enable or Disable power on timer function.

Timer: Setting a timer.

Power OFF Timer: Enable or Disable power off timer function.

Timer: Setting a timer.

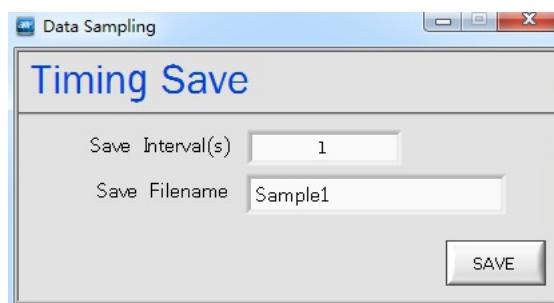
7 Data Record

To record the running data in this basic mode page.

1. Click on "Record Data" button to create a new database.



2. Save the running data to a defined database.



Save Intervals (s): Set the sampled-data interval. The minimum value is 1 second.

Save Filename: Rename the database.

SAVE: Click on this button to confirm the settings.

3. Turn on the output after setting the parameters.

4. Click on the "Report Edit" button to enter into report edit page after the conclusion of the running.

5. Report edit page.

The screenshot shows a Windows application window titled "Data Record". At the top, there is a toolbar with buttons for "Select File" (containing "Sample1.mdb"), "Delete Table", and "Save to Excel". Below the toolbar, there are two date/time input fields: "Begin Date" set to "2021/01/04 00:00:00" and "End Date" set to "2021/01/04 23:59:59". The main area is a table with the following columns: NO., Date Time, Voltage(V), Current(A), Power(W), and Resistance(Ohm). The table contains 23 rows of data, each corresponding to a timestamp from 2021/01/04 16:33:37 to 2021/01/04 16:33:54. All values in the table are 0.000 except for the first row which has a voltage of 9.707. At the bottom of the window, there are buttons for "Query" (with a magnifying glass icon) and "Delete Record" (with a trash bin icon).

NO.	Date Time	Voltage(V)	Current(A)	Power(W)	Resistance(Ohm)
7	2021/1/4 16:33:37	9.707	0.000	0.0	0.0000
8	2021/1/4 16:33:38	9.709	0.000	0.0	0.0000
9	2021/1/4 16:33:39	9.711	0.000	0.0	0.0000
10	2021/1/4 16:33:40	9.706	0.000	0.0	0.0000
11	2021/1/4 16:33:41	9.708	0.000	0.0	0.0000
12	2021/1/4 16:33:42	9.708	0.000	0.0	0.0000
13	2021/1/4 16:33:43	9.709	0.000	0.0	0.0000
14	2021/1/4 16:33:44	9.708	0.000	0.0	0.0000
15	2021/1/4 16:33:46	9.708	0.000	0.0	0.0000
16	2021/1/4 16:33:47	9.708	0.000	0.0	0.0000
17	2021/1/4 16:33:48	9.708	0.000	0.0	0.0000
18	2021/1/4 16:33:49	9.708	0.000	0.0	0.0000
19	2021/1/4 16:33:50	9.708	0.000	0.0	0.0000
20	2021/1/4 16:33:51	9.710	0.000	0.0	0.0000
21	2021/1/4 16:33:52	0.063	0.000	0.0	0.0000
22	2021/1/4 16:33:53	0.000	0.000	0.0	0.0000
23	2021/1/4 16:33:54	0.000	0.000	0.0	0.0000

Select File: Select the wanted database file.

Delete Table: Delete the database file.

Begin Date/End Date: Define the start time and end time of the report.

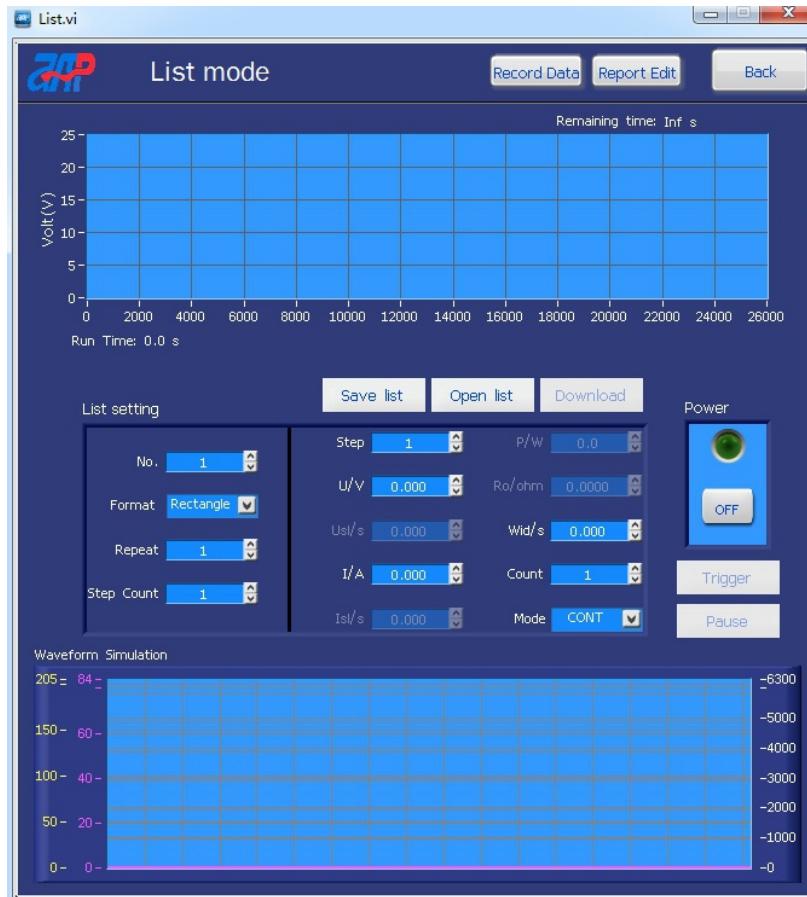
Query: Query the running data.

Save to Excel: Save the running data to a excel file.

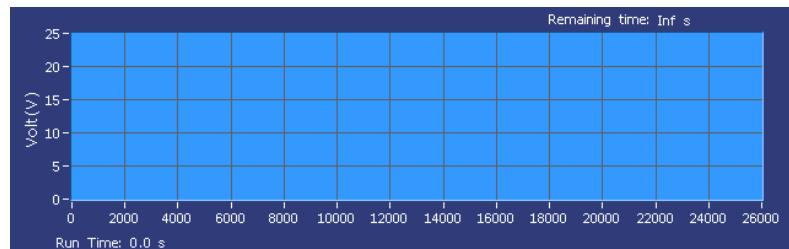
Delete Record: Delete the running data shown in the table.

8

List Mode



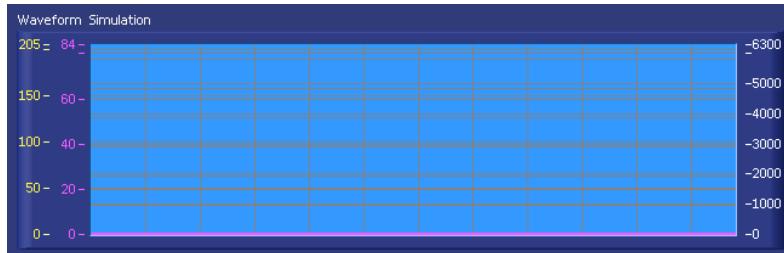
8.1 List Voltage Waveform Preview



Remaining time: Remaining time of this List mode.

Run Time: Escaped time of this List mode.

8.2 Output Waveform Preview



Can real time display output Voltage, Current and Power waveform after selected.

8.3 List Mode Parameters Setup

List setting		Save list	Open list	Download	
No.	1	Step	1	P/W	0.0
Format	Rectangle	U/V	0.000	R _o /ohm	0.0000
Repeat	1	Usl/s	0.000	Wid/s	0.000
Step Count	1	I/A	0.000	Count	1
		Isl/s	0.000	Mode	CONT

No.: List file number, which range is 1~30.

Format: List format, includes three options: Rectangle, S-Ramp and F-Ramp.

Repeat: Repeat times setting, which range is 0~9999, 0 means infinite loop.

Step Count: Set the total number of steps in the current list file, which can range from 1 through 8.

Step: Currently editing step.

U/V: Voltage setup.

Usl/s: Set the slop time for the voltage from the previous step to current step.

I/A: Current setup.

Isl/s: Set the slop time for the current from the previous step to current step.

P/W: Power setup.

R_o/Ω: Output impendence setup.

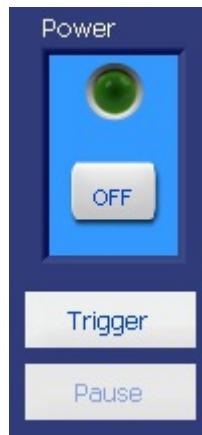
Wid/s: Dwell time of the current step.

Count: Number of times the current step will be repeated.

Mode: List execution mode - Cont (continuous) or Step (once).

- Save List:** Save the edited List file to the computer.
Open List: Recall the List file saved in the computer.
Download: Download the selected List file to the unit.

8.4 List Execution Button



- Power:** Indicates the output state of the power supply.
Trigger: Begins the execution of the selected list file. Once pressed, this soft key will change to Stop which when pressed will terminate the list execution.
Pause: Pauses the list execution. Once pressed, this soft key changes to Continue. Upon pressing Continue, the list execution will continue from where it was paused.

8.5 List Data Record

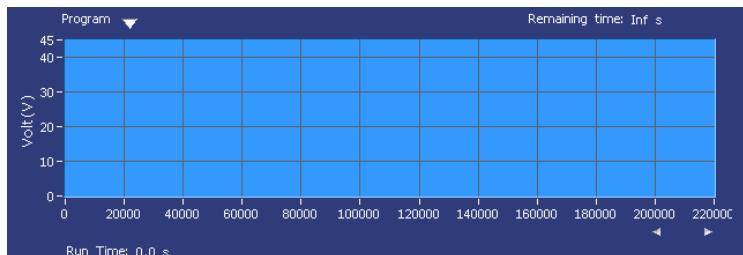
Refer to Chapter 7 for the details on data record operation.

9

Program Mode



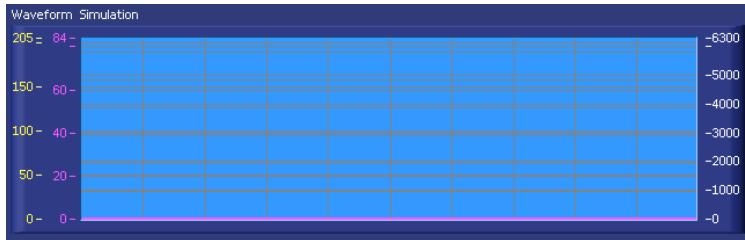
9.1 Program Voltage Waveform Preview



Remaining time: Remaining time of this Program mode.

Run Time: Escaped time of this Program mode.

9.2 Output Waveform Preview



Can real time display output Voltage, Current and Power waveform after selected.

9.3 Program Mode Parameters Setup



Step Count: The total number of steps in the selected program file, which ranges from 1 through 18.

Step: Currently editing step.

Mode: Continuous or Step.

Cycle: Number of times to repeat the list file in a given program step, 0 means infinite loop.

List Data: Click on  to select the edited List file.

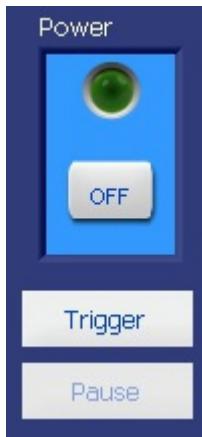
Repeat: The number of times to repeat the program file.

Save Pro: Save the edited Program file to the computer.

Open Pro: Recall the Program file saved in the computer.

Download: Download the selected Program file to the unit.

9.4 Program Execution Button



Power: Indicates the output state of the power supply.

Trigger: Begins the execution of the selected program file. Once pressed, this soft key will change to Stop which when pressed will terminate the program execution.

Pause: Pauses the program execution. Once pressed, this soft key changes to Continue. Upon pressing Continue, the program execution will continue from where it was paused.

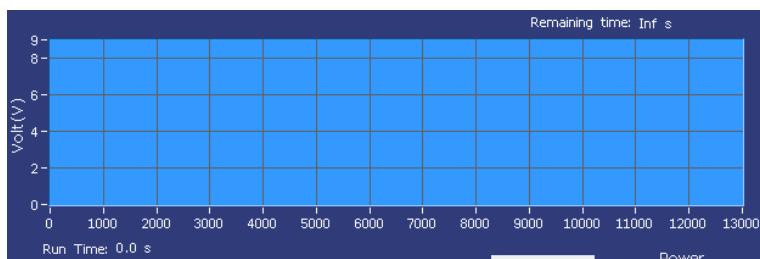
9.5 Program Data Record

Refer to Chapter 7 for the details on data record operation.

10 Step Mode



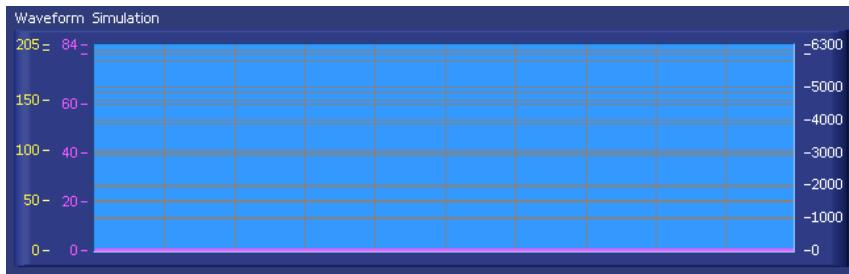
10.1 Step Voltage Waveform Preview



Remaining time: Remaining time of this Step mode.

Run Time: Escaped time of this Step mode.

10.2 Output Waveform Preview



Can real time display output Voltage, Current and Power waveform.

10.3 Step Mode Parameters Setup

Step setting			Download
Step NO.	1	I/A	0.000
Count	1	$\Delta I/A$	0.000
U/V	0.000	P/W	0.0
$\Delta U/V$	0.000	$\Delta P/W$	0.000
		Repeat	1

Step NO. : Step file NO., which range is 1~5.

Count: Number of times to repeat the step.

U/V: Start voltage.

$\Delta U/V$: Step voltage.

I/A: Start current.

$\Delta I/A$: Step current.

P/W: Start power.

$\Delta P/W$: Step power.

R_o/Ω : Start resistance.

$\Delta R_o/\Omega$: Step resistance.

$\Delta t/s$: The length of a step in seconds.

Repeat: Number of times to repeat the step.

Download: Download the selected Step file to the unit.

10.4 Step Execution Button



Power: Indicates the output state of the power supply.

Trigger: Begins the execution of the selected program file. Once pressed, this soft key will change to Stop which when pressed will terminate the program execution.

Pause: Pauses the program execution. Once pressed, this soft key changes to Continue. Upon pressing Continue, the program execution will continue from where it was paused.

10.5 Program Data Record

Refer to Chapter 7 for the details on data record operation.

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Contact Us

If you have any questions about the High Power DC Power Supply Control Panel please contact us per the contact information below. We will be happy to promptly answer any of your questions.

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1

前言

1.1 介绍

此软件支持APM 80V、165V、250V、500V、750V、1000V、1500V、2250V系列的所有大功率直流电源，使用软件之前PC与电源必须通讯连接正常。

此软件可以进行大功率直流电源的输出参数设定、输出量的监控、切换电源功能等。

1.2 支持产品

APM大功率直流电源：

输出电压	3U			6U		
	6000W	12000W	18000W	24000W	30000W	36000W
80VDC	200A	400A	600A	800A	1000A	1200A
165VDC	-	180A	-	360A	-	540A
250VDC	-	-	180A	-	-	-
360VDC	42.5A	85A	127.5A	170A	212.5A	255A
500VDC	32A	64A	96A	128A	160A	192A
750VDC	21A	42A	63A	84A	105A	126A
1000VDC	-	32 A	-	64A	-	96A
1500VDC	-	21A	32A	42A	-	63A
2250VDC	-	-	21A	-	-	-

1.3 通讯界面

PC与电源间通讯方式：

- RS232
- RS485
- USB
- LAN
- GPIB
- CAN

1.4 软件和硬件需求

执行程式较大，建议个人电脑软、硬件系统配置如下：

■ CPU主频1G以上(目前双核处理器一般都在1G以上)

■ 支持操作系统: windows 7 SP1 x86, x64

 windows 8.1 x86, x64

 windows 10 x86, x64

■ 建议16G以上存储硬盘(目前一般硬盘都在500G以上)

■ 内存最少1G，推荐2G以上。若64位系统4G以上

■ VGA或SVGA彩色显示器

■ PS2滑鼠

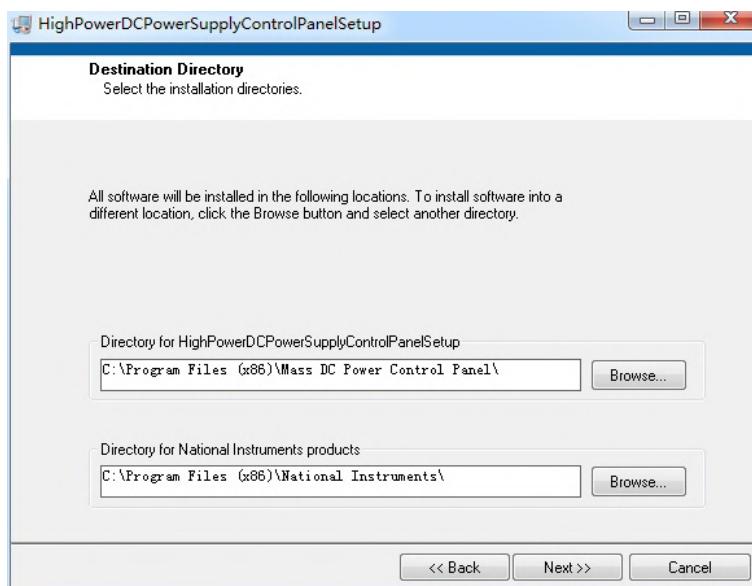
2021年02月发行，版本PA

2

软件安装

官网:www.apmtech.cn可在“服务支持”的子模块“下载中心”内进行下载。

双击.exe格式文件，按照提示进行安装。如要更换安装路径，点击Browse...按钮，指定安装路径。



一直点击“Next”按钮完成软件的安装，安装完成之后，可在电脑桌面上找到软件的快捷方式。

3

软件卸载

在电脑上打开“控制面板”，选择“卸载程序”，找到“High Power DC Power Supply Control Panel Setup”，右击选择“卸载”。



4

软件介绍

4.1 登录界面



此上位机软件High Power DC Power Supply Control Panel包括RS232、RS485、USB、GPIB、LAN、CAN这6种通讯方式。

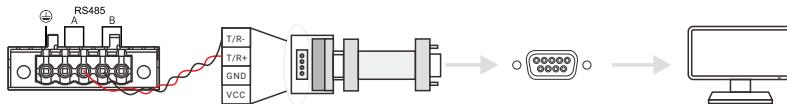
4.1.1 RS232通讯方式

勾选RS232通讯方式，将通讯参数与电源的RS232通讯参数配置一致；点击“SEARCH”搜索电源，勾选需要监控的电源，点击“OK”进入监控软件的主界面。



4.1.2 RS485通讯方式

参考下图进行RS485通讯模式下的连接。



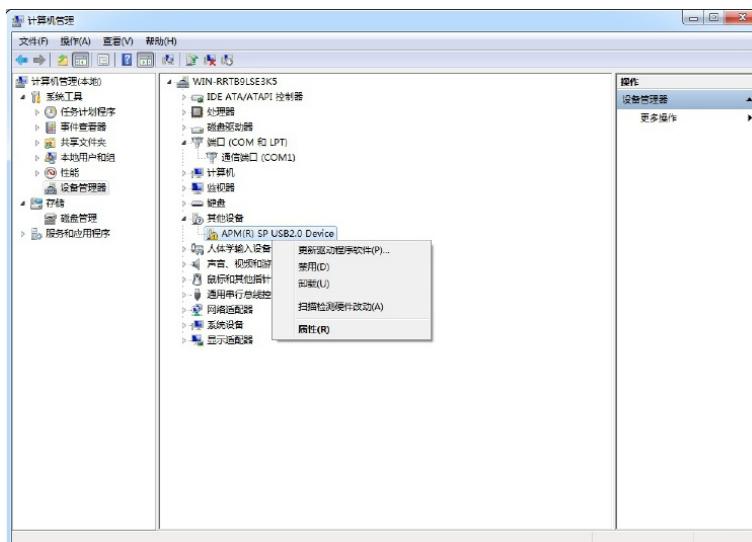
勾选RS485通讯方式，将通讯参数与电源的RS485通讯参数配置一致；点击“SEARCH”搜索电源，勾选需要监控的电源，点击“OK”进入监控软件的主界面。



4.1.3 USB通讯方式

使用USB通讯方式之前需要先安装USB驱动。

右击“计算机”打开“属性”，选择“设备管理器”，找到“APM(R)SP USB2.0 Device”，右击选择“更新驱动程序软件(P)”。



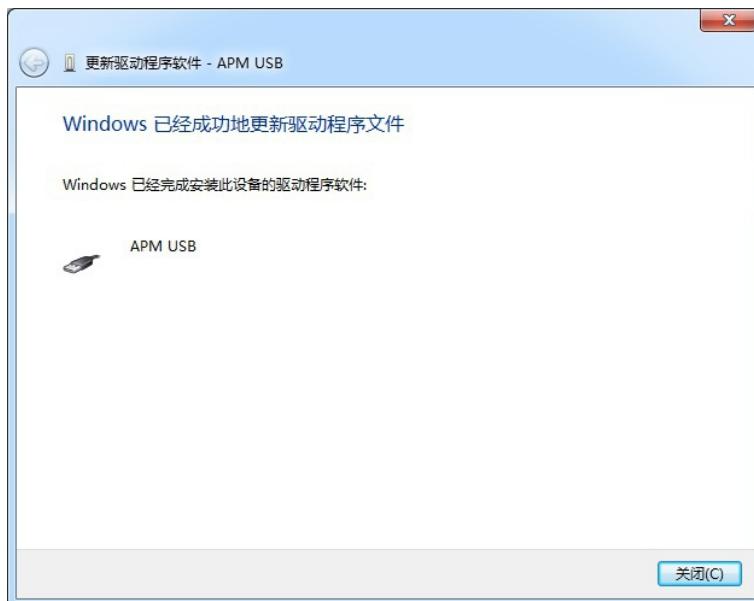
点击“浏览计算机以查找驱动程序软件(R)”



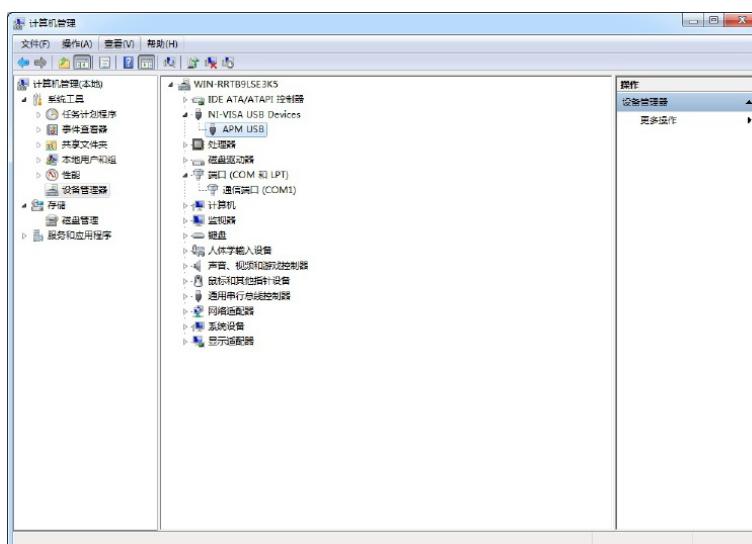
点击“浏览(R)...”按钮，选择USB驱动文件所在的文件夹；



点击“下一步(N)”按钮来安装USB驱动。



驱动安装完毕后，可在设备管理器中找到“APM USB”。

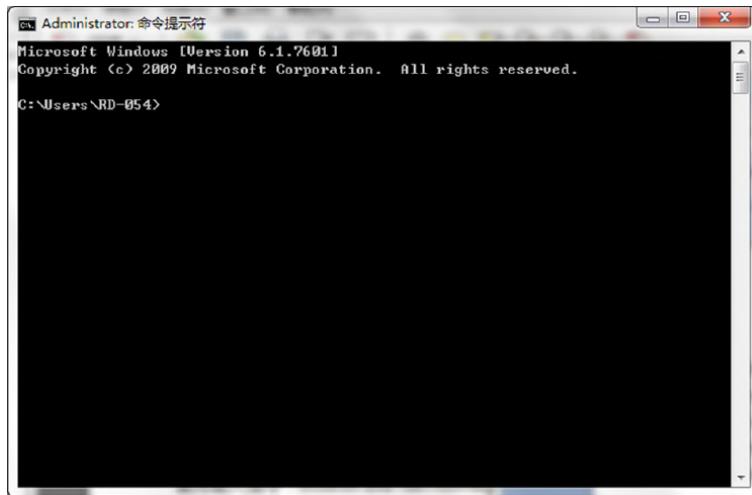


注意关于禁用数字签名：

1. Win7系统：选择命令提示符（管理员）“command Prompt(Admin)”；

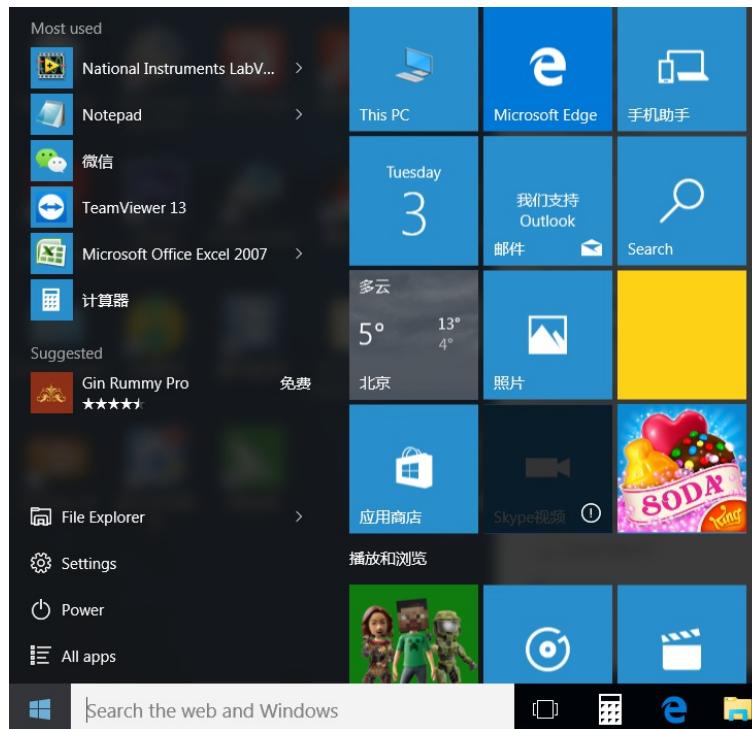
禁用输入指令：bcdedit.exe /set nointegritychecks on 回车；

恢复数字签名指令：bcdedit.exe /set nointegritychecks off 回车。

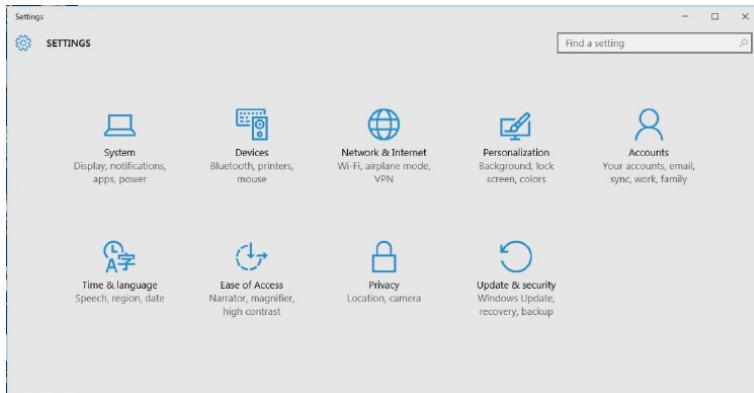


2. Win10系统：

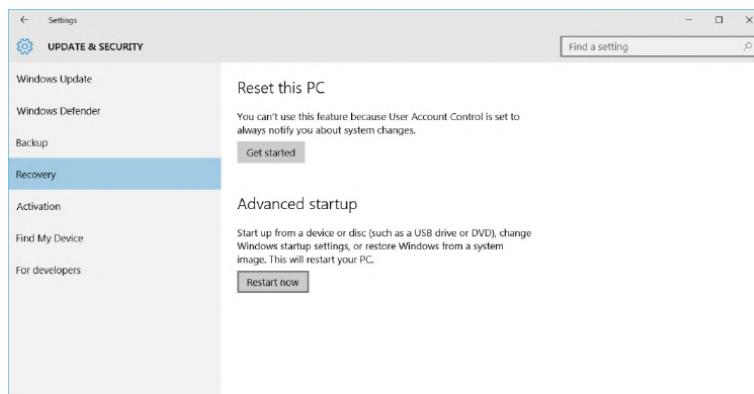
1) 点击系统左下角 开始 (start)，然后点击设置 (Settings)。



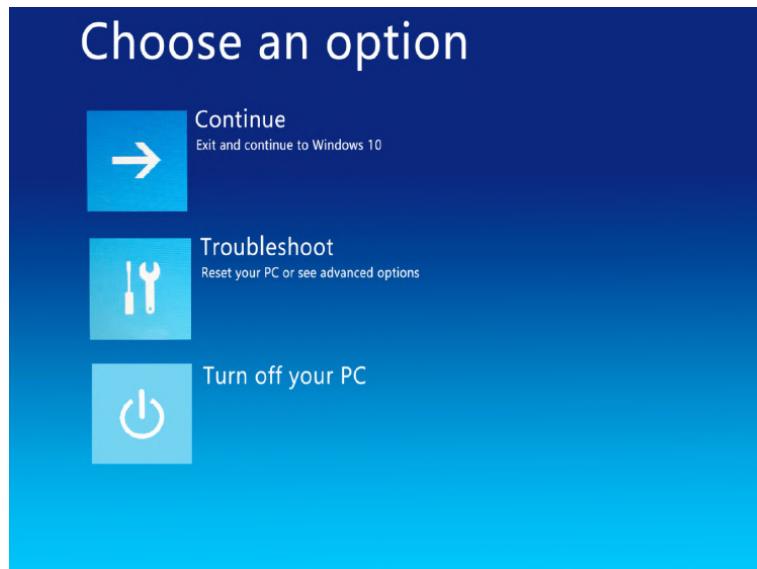
2) 在setting界面，点击 更新和安全 (Update & Security)



3) 在更新和安全 (Update & Security) 界面里选择恢复 (Recovery)，点击下方的立即重启(Restart now)。



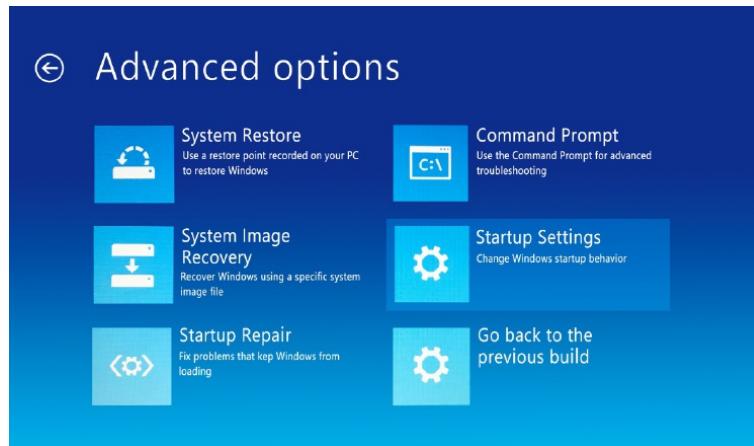
4) 进入下图界面后，点击选择疑难解答(Troubleshoot)



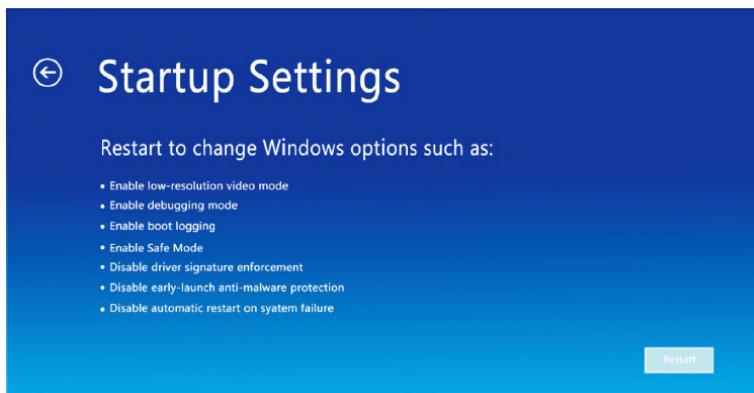
5) 进入疑难解答(Troubleshoot)界面后，点击高级选项(Advance options)。



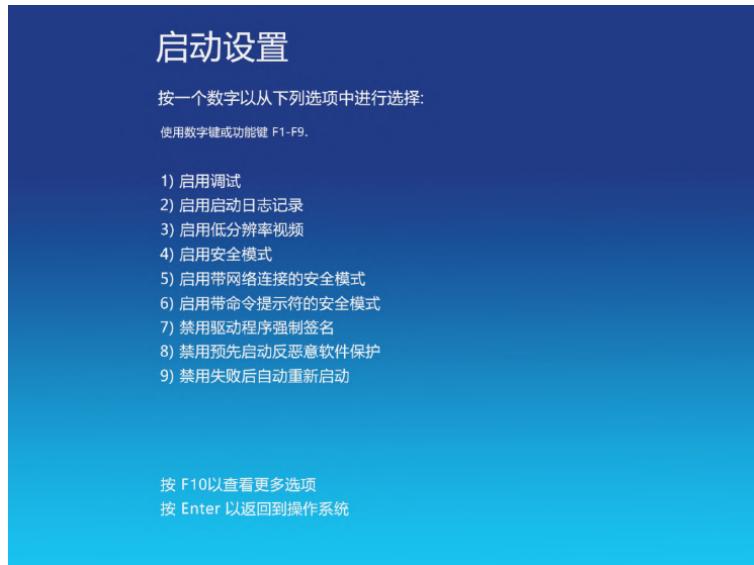
6) 进入高级选项(Advance options)界面后，点击启动设置(Startup Settings)。



7) 进入启动设置(Startup Settings)界面后，点击重启(Restart)。



8) 电脑重启后，按选择数字键7或F7，系统自动重启后就禁用数字签名。



勾选USB通讯方式，点击“SEARCH”按钮搜索电源，勾选需要监控的电源，点击“OK”进入监控软件的主界面。



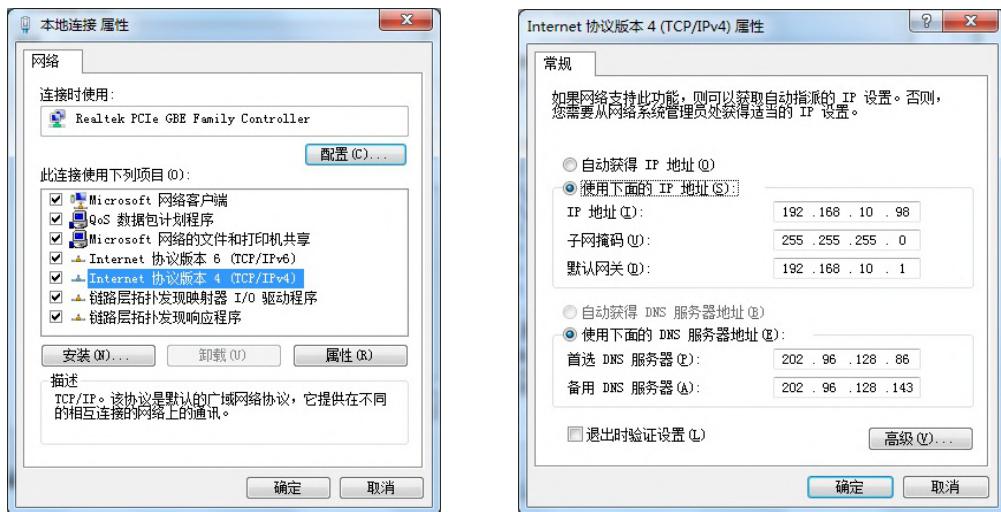
4.1.4 GPIB通讯方式

勾选GPIB通讯方式，点击“SEARCH”按钮搜索电源，勾选需要监控的电源，点击“OK”进入监控软件的主界面。



4.1.5 LAN通讯方式

打开“网络和共享中心” – “本地连接” – “属性” – 选择“Internet 协议版本 4 (TCP/IP)”来获取电脑的 IP 配置。



通过电源的前面板，把电源的IP地址与电脑设置在同一网段。



勾选LAN通讯方式，点击“SEARCH”按钮搜索电源，勾选需要监控的电源，点击“OK”进入监控软件的主界面。

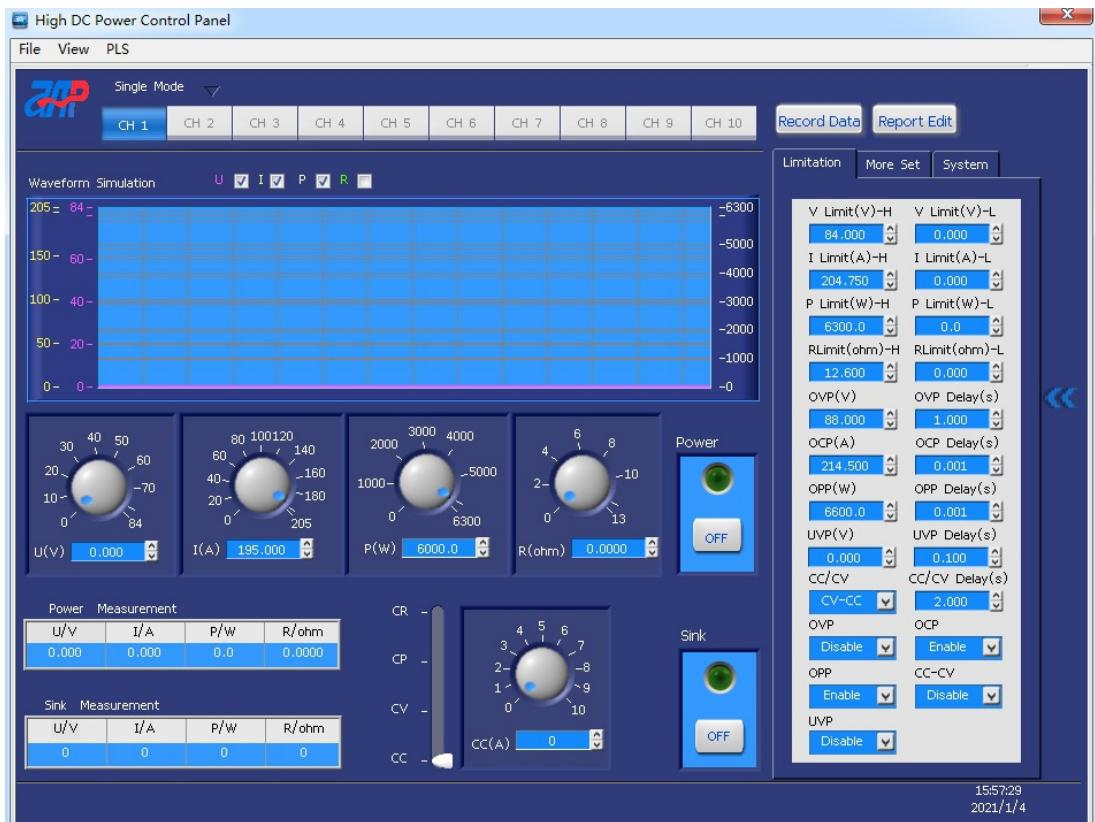


4.1.6 CAN通讯方式

说明：此通讯方式暂未完善。

5

主界面



5.1 功能栏

File	View	PLS
Exit (退出)	System Information (电源信息)	List Mode (列表模式)
	Warning Log (告警记录)	Program Mode (序列模式)
	Back (返回电源搜索界面)	Step Mode (步进模式)

5.2 通道选择区

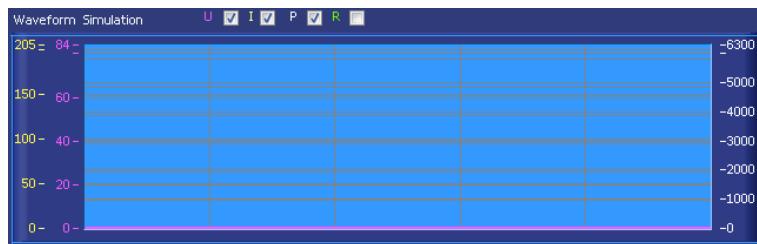
此监控软件可监控多台电源，点击通道选择区进行电源切换。

说明：此功能暂未完善。



5.3 波形显示区

在U、I、P、R右侧的方框内勾选后，可在仿真区对应的显示输出波形。



5.4 电源输出参数设置

设置输出参数有以下三种方式：

1. 分别点击各个旋钮拖至目标值放开，快速设置输出值；
2. 在设置框内直接输入数字设置输出值；
3. 点击设置区的上、下箭头设置输出值；



5.5 电源输出开关ON/OFF

点击OFF按钮，电源输出打开，且绿灯变亮，同时此位置显示ON；再次点击，电源输出关闭。



5.6 电源、耗散器测量区

Power Measurement电源测量区，电源输出时，可看到实时值。

Power Measurement			
U/V	I/A	P/W	R/ohm
0.000	0.000	0.0	0.0000

Sink Measurement耗散器测量区，耗散器启用后，可看到实时值。

Sink Measurement			
U/V	I/A	P/W	R/ohm
0	0	0	0

5.7 耗散器(Sink)参数设置

只有电源选配耗散器后，监控软件的该功能才可使用。

点击CR、CP、CV、CC右侧光标，切换耗散器的工作模式；

参数设置有以下三种方式：

1. 分别点击各个旋钮拖至目标值放开，快速设置输入值；
2. 在设置框内直接输入数字设置输入值；
3. 点击设置区的上、下箭头设置输入值；



5.8 耗散器(Sink)输入开关ON/OFF

点击OFF按钮，耗散器输入打开，且绿灯变亮，同时此位置显示ON；再次点击，耗散器输入关闭。



6

系统参数设置区

6.1 限值/保护(Limitation)设置区

Limitation		More Set	System
V Limit(V)-H	V Limit(V)-L		
84.000	0.000		
I Limit(A)-H	I Limit(A)-L		
204.750	0.000		
P Limit(W)-H	P Limit(W)-L		
6300.0	0.0		
RLimit(ohm)-H	RLimit(ohm)-L		
12.600	0.000		
OVP(V)	OVP Delay(s)		
88.000	1.000		
OCP(A)	OCP Delay(s)		
214.500	0.001		
OPP(w)	OPP Delay(s)		
6600.0	0.001		
UVP(V)	UVP Delay(s)		
0.000	0.100		
CC/CV	CC/CV Delay(s)		
CV-CC	2.000		
OVP	OCP		
Disable	Enable		
OPP	CC-CV		
Enable	Disable		
UVP			
Disable			

V Limit(V)-H: 电压上限, 设定范围0~105%*额定电压。

V Limit(V)-L: 电压下限, 设定范围0~105%*额定电压。

I Limit(A)-H: 电流上限, 设定范围0~105%*额定电流。

I Limit(A)-L: 电流下限, 设定范围0~105%*额定电流。

P Limit(W)-H: 功率上限, 设定范围0~105%*额定功率。

P Limit(W)-L: 功率下限, 设定范围0~105%*额定功率。

R Limit(ohm)-H: 电阻上限, 设定范围0~105%*额定电阻。

R Limit(ohm)-L: 电阻下限, 设定范围0~105%*额定电阻。

OVP(V): 过压保护, 设定范围0~110%*额定电压。

OVP Delay(s): 过压保护延迟时间。

OCP(A): 过流保护, 设定范围0~110%*额定电流。

OCP Delay(s): 过流保护延迟时间。

OPP(W): 过功率保护, 设定范围0~110%*额定功率。

OPP Delay(s): 过功率保护延迟时间。

UVP(V): 低压保护。

UVP Delay(s): 低压保护延迟时间。

CC/CV: 折返保护, 可选择CC-CV或CV-CC。

CC/CV Delay(s): 折返保护延迟时间。

OVP: 过压保护, Enable(启用)、Disable(关闭)。

OCP: 过流保护, Enable(启用)、Disable(关闭)。

OPP: 过功率保护, Enable(启用)、Disable(关闭)。

CC/CV: 折返保护, Enable(启用)、Disable(关闭)。

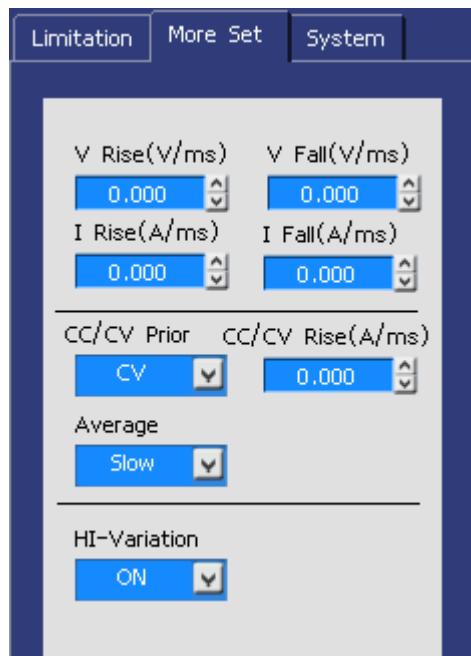
UVP: 低压保护, Enable(启用)、Disable(关闭)。

说明:

SP80VDC6000W~36000W的机型, 电流设置范围0~102%*额定电流。

SP80VDC6000W~36000W的机型, OCP设置范围0~107%*额定电流。

6.2 输出&测量(More Set)设置区



V Rise(V/ms): 电压上升斜率。

V Fall(V/ms): 电压下降斜率。

I Rise(A/ms): 电流上升斜率。

I Fall(A/ms): 电流下降斜率。

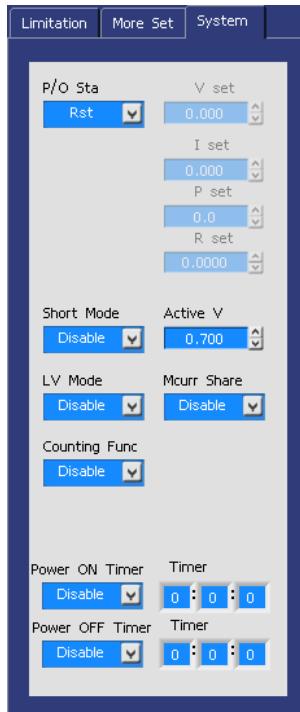
CC/CV Prior: 设定CC优先或CV优先。

CC/CV Rise(A/ms): 设置电流或电压上升斜率。

Average: 滤波设置，快(Fast)、中(Middle)、慢(Slow)。

HI-Variation: 高速跃变，OFF、ON、Auto。

6.3 特殊功能(System)设置区



P/O Sta: 设置电源开机后的状态:默认(Rst)、自定义(Save)、上次关机状态(Last);
选择Save, 可设定V set、I set、P set、R set。

Short Mode: 短路模式, 开(Enable)、关(Disable)。

Active V: 动态电压, 启用短路模式后, 输出低于动态电压值, 触发短路告警。

LV Mode: 低压模式, 开(Enable)、关(Disable)。

Mcurr Share: 模块均流, 开(Enable)、关(Disable)。

Counting Func: 计数功能, 关(Disable)、电压计数(Voltage)、电流计数(Current)。

IL(A): 计数截止电流。

Ib(A): 开始计数电流。

Power ON Timer: 定时开机, 开(Enable)、关(Disable)。

Timer: 定时开机时间。

Power OFF Timer: 定时关机, 开(Enable)、关(Disable)。

Timer: 定时关机时间。

7

数据导出功能

该功能用于导出电源输出时的实时电压值、电流值、功率值、电阻值。

为了方便使用，在监控软件的主界面可看到此功能区；同时，在PLS功能栏下的List mode(列表模式)、Program mode(序列模式)、Step Mode(步进模式)的功能界面下也添加了此功能区。

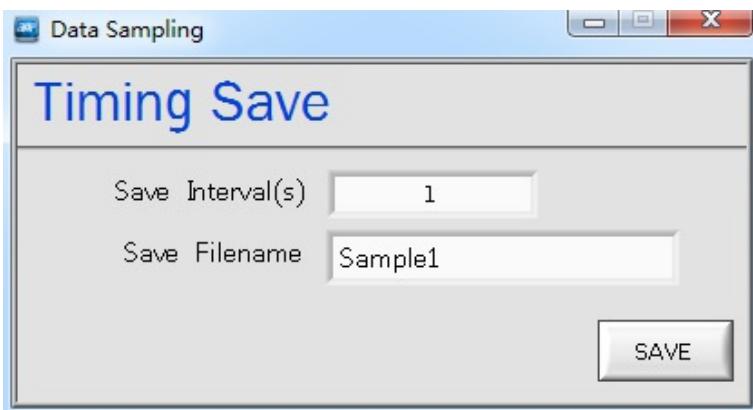
在所有功能下进行实时数据导出前，都需要先启用此功能，建立数据库；测试过程完成后，再导出数据。

过程如下：

1. 点击Record Data，进入建立数据库界面。



2. 保存数据库



Save Interval(s): 采样时间间隔。

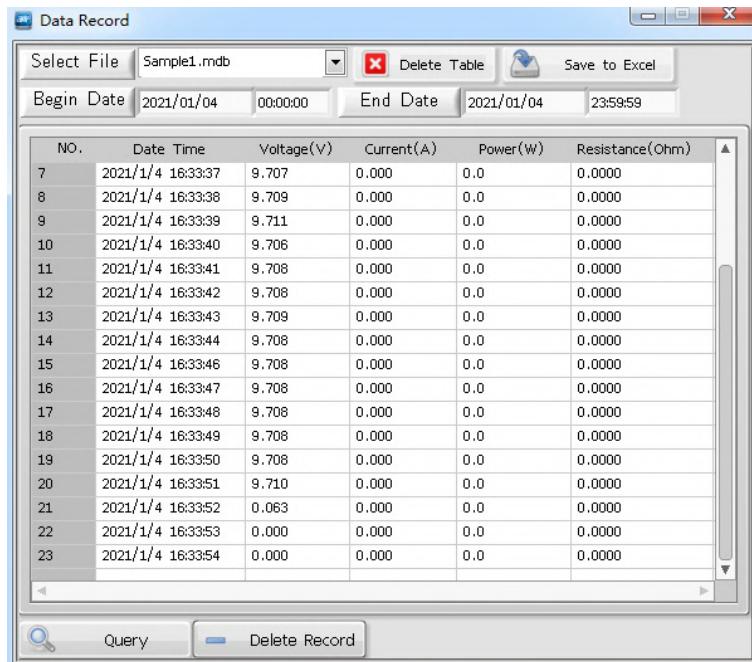
Save Filename: 数据库文件名。

SAVE编辑完后点击保存。

3. 编辑电源的输出参数，点击输出开关ON/OFF键。

4. 测试完成后点击Report Edit。

5. 进入采样数据报告编辑界面。



Select File: 选择需要导出的数据库。

Delete Table: 删除数据库文件。

Begin Date/End Date: 导出数据的开始/结束时间，请按默认格式填写。

Query: 选择第2步保存的数据库，点击此查询按键，表格区域显示设定时间内的实时数据。

Save to Excel: 保存到Excel表。

Delete Record: 清除已经查询到的数据。

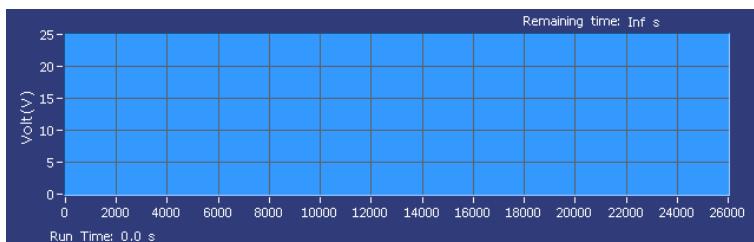
说明：导出实时数据，必须按上述过程进行操作，否则不能正常导出数据。

8

List Mode 列表模式



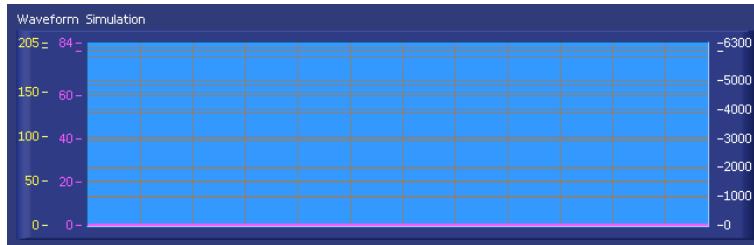
8.1 List参数设定波形显示区



Remaining time: List运行倒计时。

Run Time: List文件运行总时间。

8.2 输出波形显示区



程序运行后，可在此区域看到电源输出后的电压、电流、功率波形。

8.3 List参数设置



No.: List文件名，设置范围1~30。

Format: List格式，包括Rectangle(无变量)、S-Ramp(多变量)、F-Ramp(全变量)。

Repeat: List循环次数，设置范围0~9999，0代表无限循环。

Step Cont: List文件总步数，设置范围1~8。

Step: 当前编辑的步数。

U/V: 电压。

Usl/s: 电压斜率，用时间表达；比如，第二步设置1s，第一步电压到第二步电压用时1s。

I/A: 电流。

Isl/s: 电流变化斜率，用时间表达。

P/W: 功率。

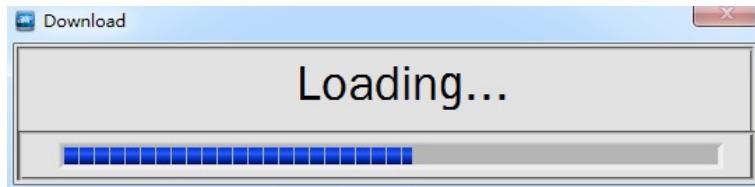
Ro/Ω: 输出阻抗。

Wid/s: 当前步数的持续时间。

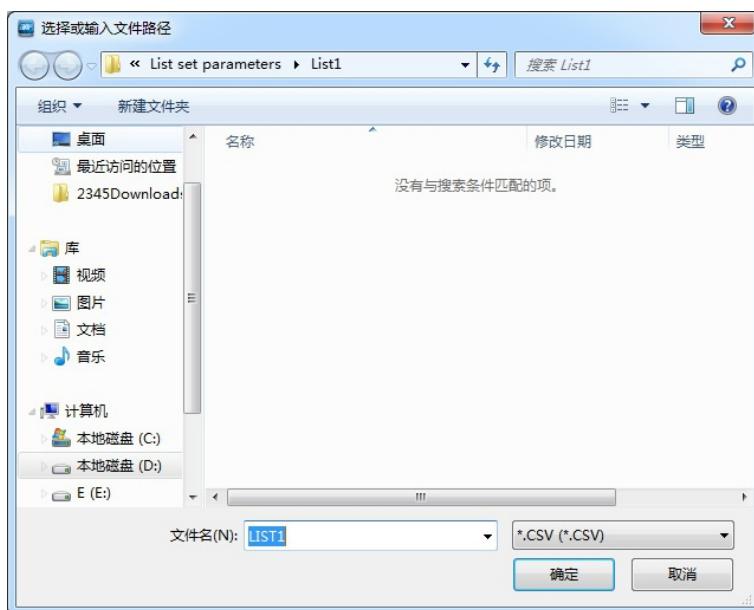
Count: 当前步数的运行次数。

Mode: 当前步数的运行模式, Cont(当前步数运行完自动进行下一步), Step(当前步数运行完后, 需按触发键运行下一步)。

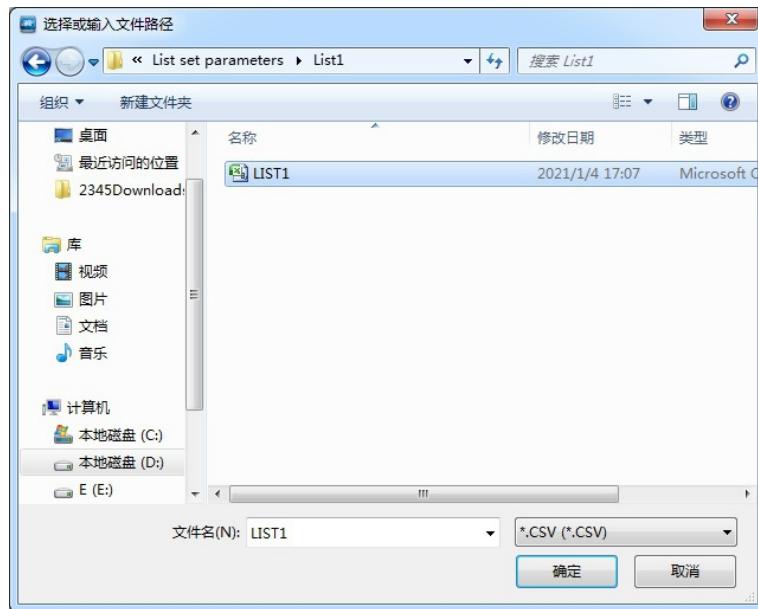
Download: 程序编辑完成, 点此下载。



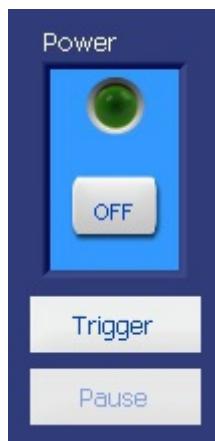
Save list: 保存编辑的程序文件到电脑, 保存路径可自行选择。



Open list: 调取保存在电脑中的程序文件。



8.4 List输出开关ON/OFF



Power: 显示电源的输出状态。

Trigger: 点击触发list程序运行。同时，此位置显示Stop，点击后停止运行。

Pause: 点击暂停程序运行。同时，此位置显示Continue，再次点击，按暂停值继续运行。

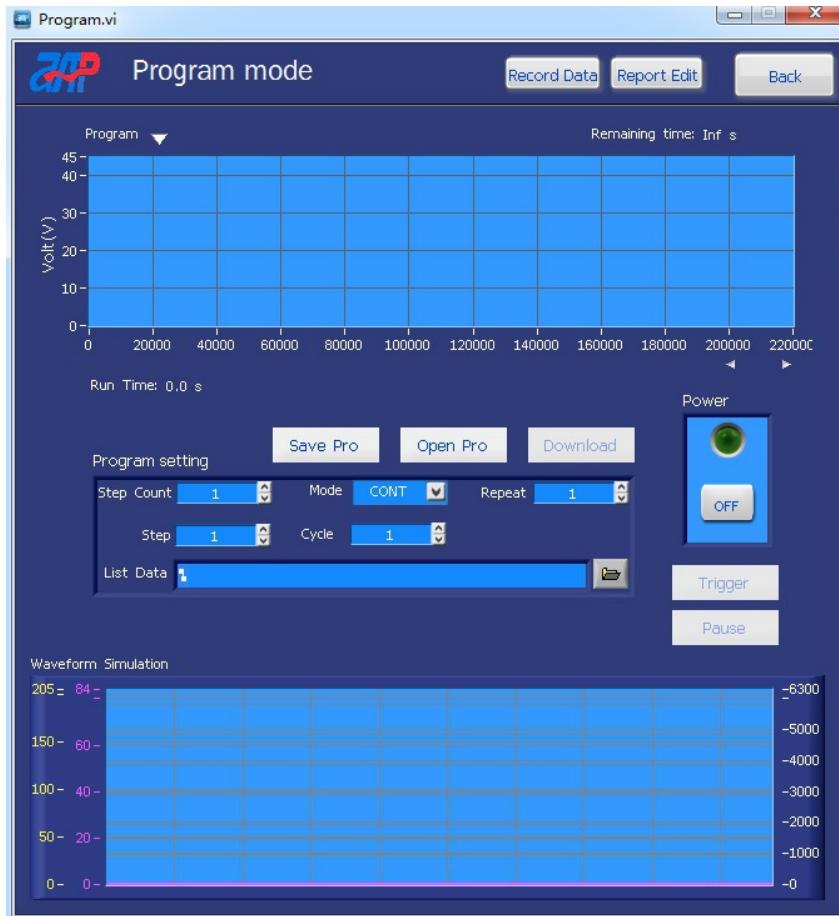
8.5 数据导出功能



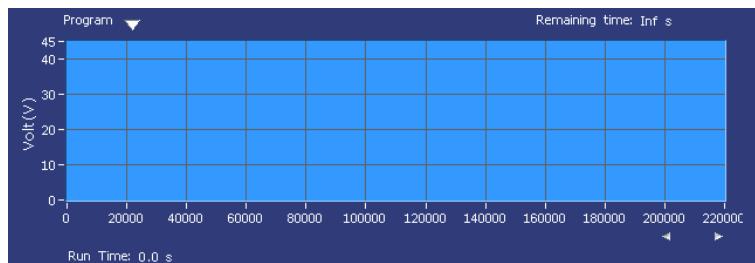
此功能请参考【第7章 数据导出功能】的操作过程。

9

Program mode 序列模式



9.1 Program参数设定波形显示区

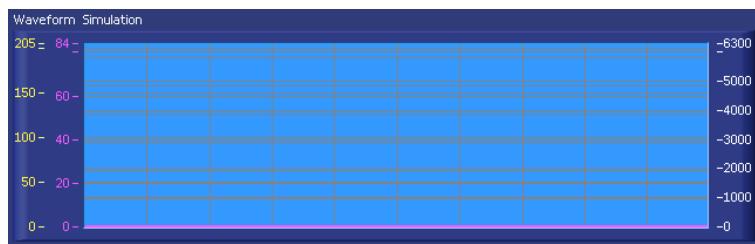


点击Program旁边的三角形，可选择查看单个List文件的模拟波形。

Remaining time: Program运行倒计时。

Run Time: Program文件运行总时间。

9.2 输出波形显示区



程序运行后，可在此区域看到电源输出后的电压、电流、功率波形。

9.3 Program参数设置



Step Count: 序列文件总步数，设置范围1~18。

Step: 选择当前编辑的文件步数。

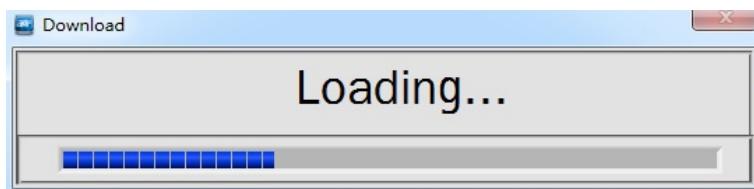
Mode: 当前步数的运行模式，Cont(当前步数运行完自动进行下一步)，Step(当前步数运行完后，再次点击ON运行下一步)。

Cycle: 当前编辑步数的循环次数，设置范围0~9999，0代表无限循环。

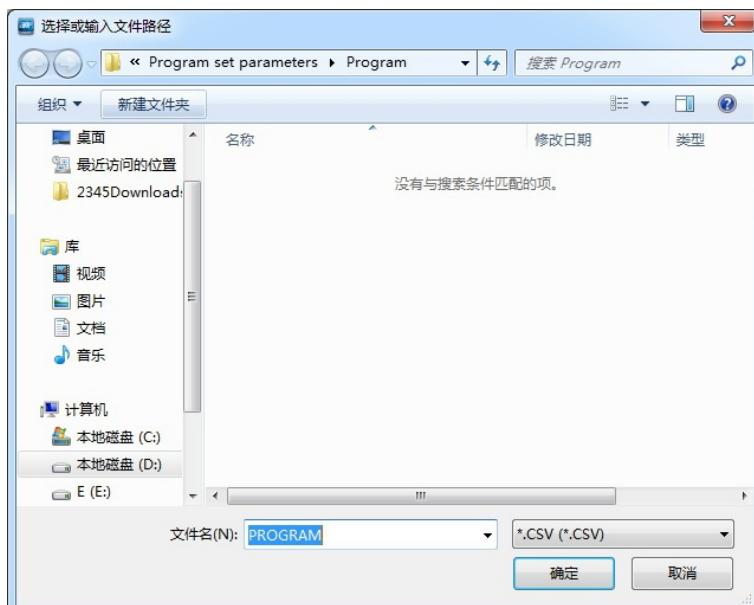
List Data: 点击 ，选择List文件。

Repeat: Program文件循环次数。

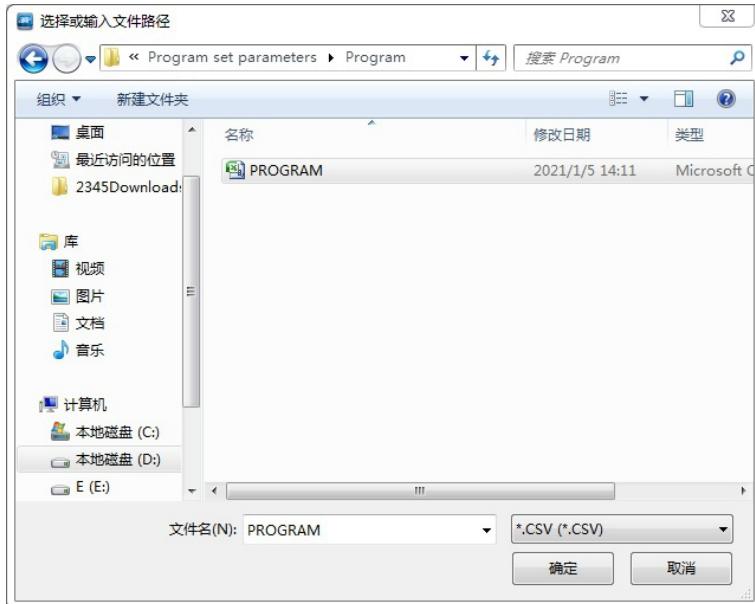
Download: 程序编辑完成，点击下载。



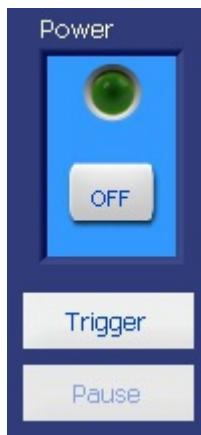
Save Pro: 将已经编辑好的Program文件保存到电脑中。



Open Pro: 将保存在电脑中的Program文件调取出来。



9.4 Program输出开关ON/OFF



Power: 显示电源的输出状态。

Trigger: 点击触发Program程序运行。同时，此位置显示Stop，点击后停止运行。

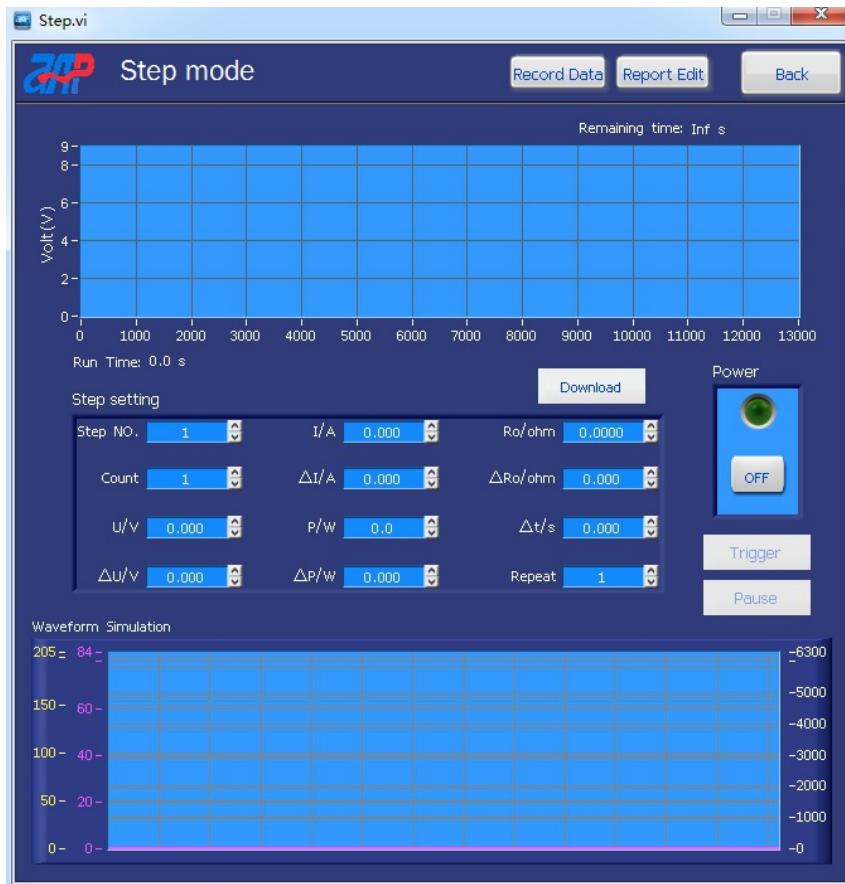
Pause: 点击暂停程序运行。同时，此位置显示Continue，再次点击，按暂停值继续运行。

9.5 数据导出功能

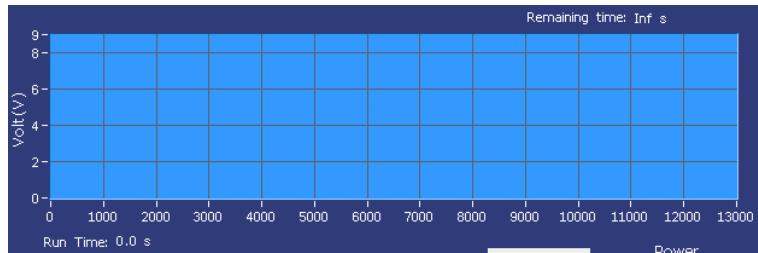


此功能请参考【第7章 数据导出功能】的操作过程。

10 Step mode 步进模式



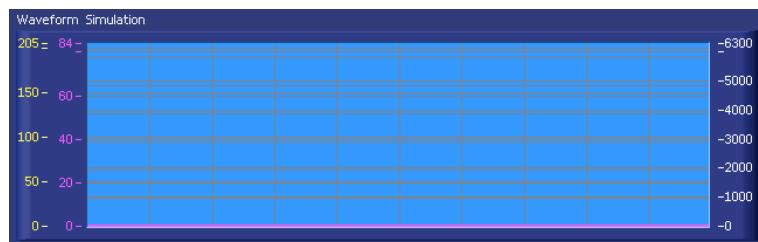
10.1 Step参数设定波形显示区



Remaining time: Step运行倒计时。

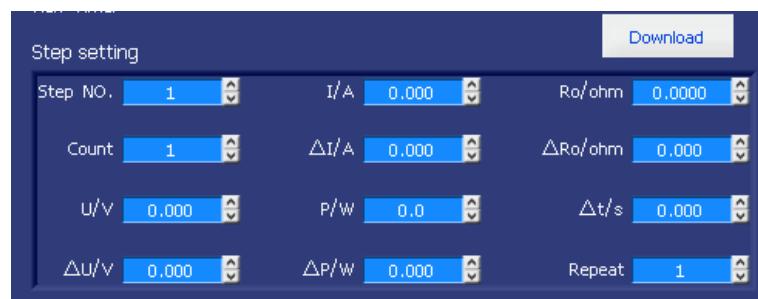
Run Time: Step文件运行总时间。

10.2 输出波形显示区



程序运行后，可在此区域看到电源输出后的电压、电流、功率波形。

10.3 Step参数设置



A screenshot of the software interface showing the 'Step setting' dialog box. It contains fields for Step NO., Count, U/V, ΔU/V, I/A, ΔI/A, P/W, ΔP/W, Ro/ohm, ΔRo/ohm, P/W, Δt/s, Repeat, and a 'Download' button. All fields are set to 0.000 or 1.

Step NO.	I/A	Ro/ohm
1	0.000	0.0000

Count	ΔI/A	ΔRo/ohm
1	0.000	0.000

U/V	P/W	Δt/s
0.000	0.0	0.000

ΔU/V	ΔP/W	Repeat
0.000	0.000	1

Step NO.: Step文件名，设置范围1~5。

Count: Step文件步进次数。

U/V: 电压。

ΔU/V: 步进电压。

I/A: 电流。

ΔI/A: 步进电流。

P/W: 功率。

ΔP/W: 步进功率。

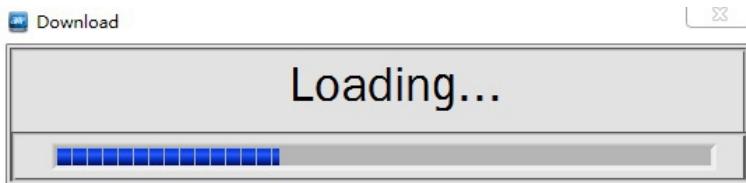
R_o/Ω: 电阻。

ΔR_o/Ω: 步进电阻。

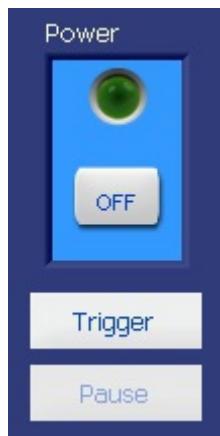
Δt/s: 每一个步进持续时间。

Repeat: Step文件循环次数。

Download: 文件编辑完成，点击下载。



10.4 Step输出开关ON/OFF



Power: 显示电源的输出状态。

Trigger: 点击触发Program程序运行。同时，此位置显示Stop，点击后停止运行。

Pause: 点击暂停程序运行。同时，此位置显示Continue，再次点击，按暂停值继续运行。

10.5 数据导出功能



此功能请参考【第7章 数据导出功能】的操作过程。

11 联系我们

如您有关于本公司的High Power DC Power Supply Control Panel的任何问题，请与我们取得联系。
我们将非常乐于为您解答，以下是我们的联系方式：

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