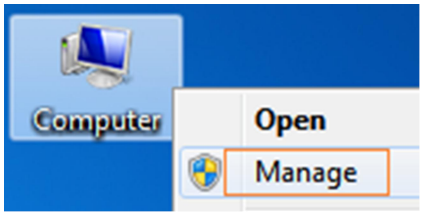
Sp&P4000seriesEasyControl Software Instruction

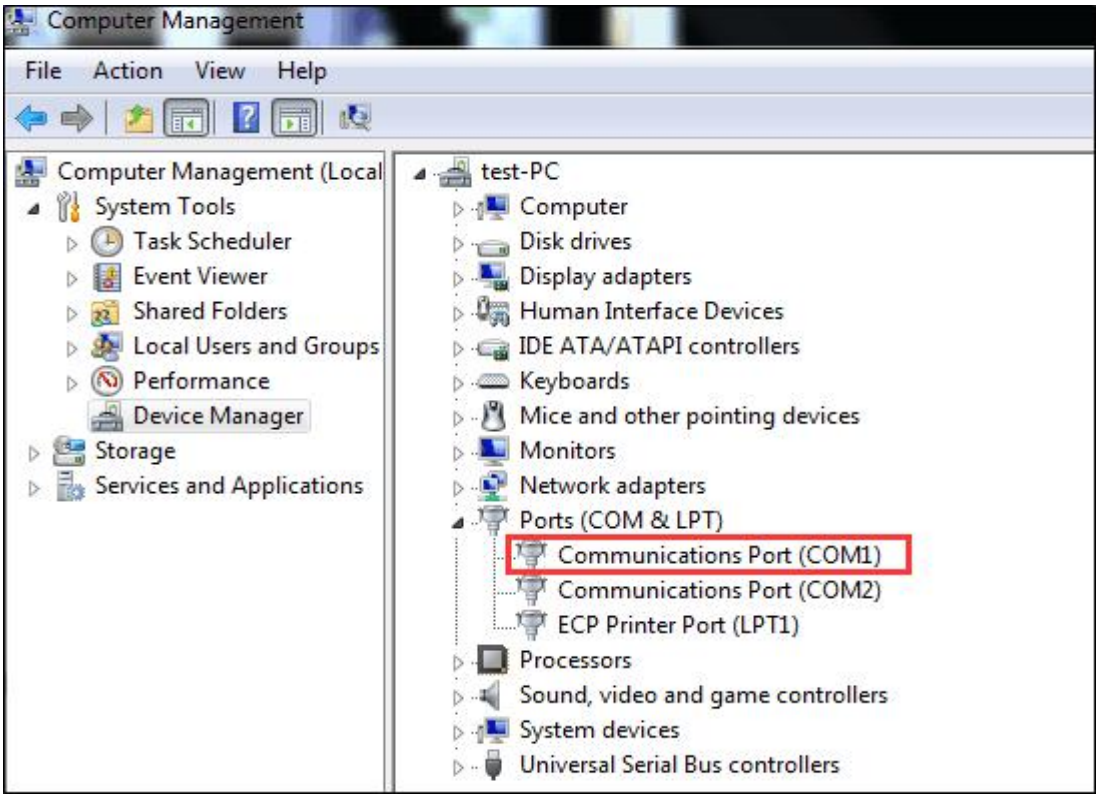
(Suitable for SP series and P4000 series power supply)

Install Driver

1. Before start Sp&P4000seriesEasyControl, please download and install the driver from NIVISA:
   Open http://www.ni.com, search "**NI-VISA**", click the link of NI-VISA Download. In the download page, select the supported OS and version (the recommended version is **15.0.1**), and then download the driver.
   A warning information will pop out if you didn't install this driver before start.
2. Right click [**Computer**], you can find it on the desktop, or in [**Start**] menu. In the drop down menu, click on [**Manage**], the "Computer Management" window opens.



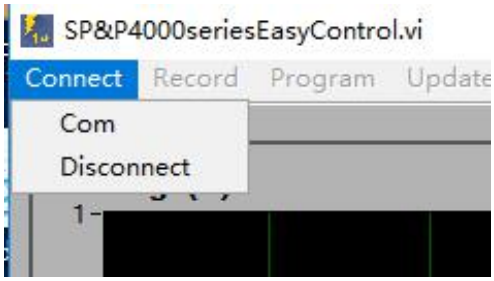
3. Click on "**Device Manager**" on the left hand side. On the right hand side, double click on "**Ports (COM & LPT)**".



Software Operation

How to connect

1. Start Sp&P4000seriesEasyControl after installation.
2. Connect the SP power supply COM interface with PC COM interface by cable.
3. Click **Connect** from left-top Menu bar, select **Com** from menu list. Then the serial port number input box will pop out.



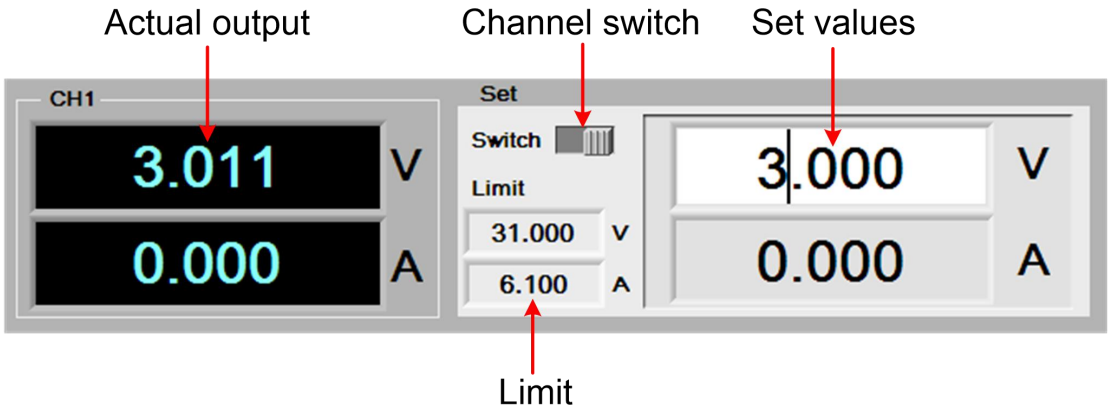
4. Input the serial port number of connected power supply, such as "COM1", click **OK**.



Interface Guide

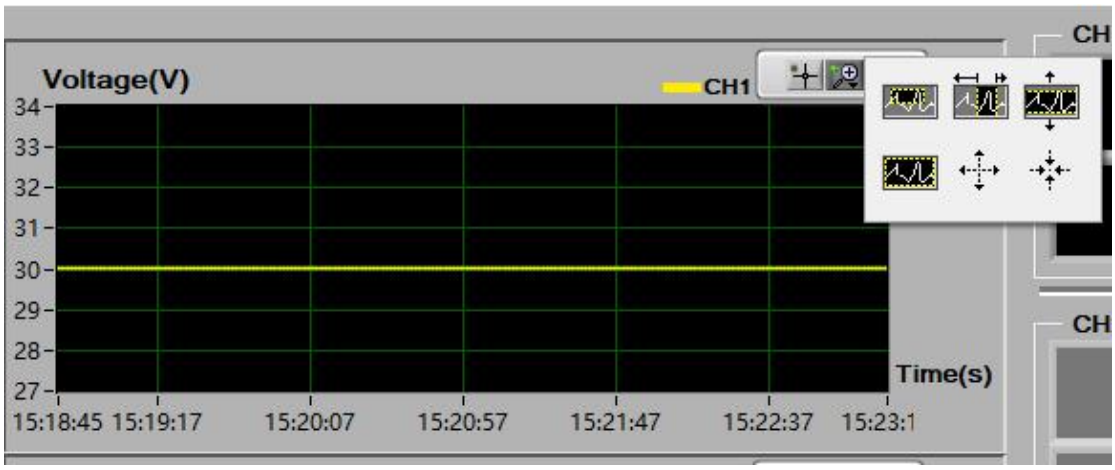


Channel Status Area



Voltage/Current Wave Area

Check the voltage/current waveform trends from waveform area when channel is opened.



 icon: to move waveform from wave area.

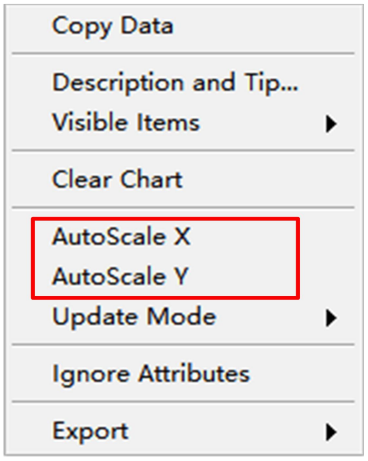
 icon: waveform zooming, to zoom in/out the waveform.

Waveform zooming icon introduction:

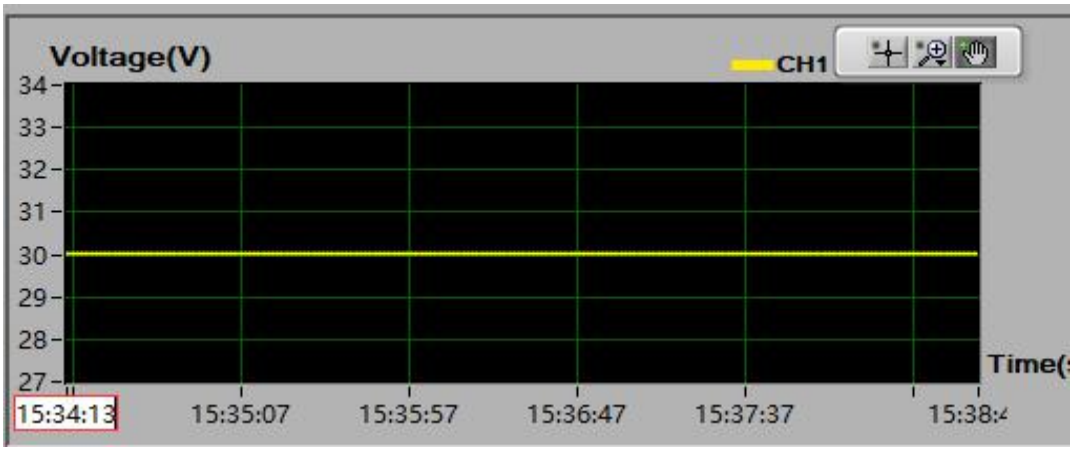
Icon	Note
	Enlarge the selected waveform area
	Enlarge the selected waveform area under horizontal direction
	Enlarge the selected waveform area under vertical direction
	Return to normal display
	When this selected, the waveform will enlarge aiming at mouse cursor as center
	When this selected, the waveform will enlarge aiming at mouse cursor as center.

Input X and Y axis scale manually

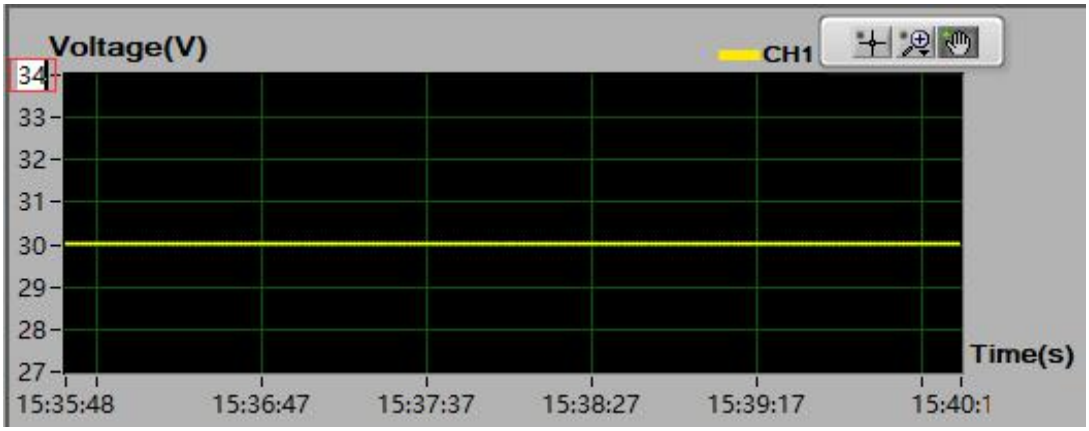
Right click the waveform area, uncheck the “AutoScale X” and “AutoScale Y”.



Click beginning time value on X axis to enter edit mode, input the required time to check.



By same way, click top value at Y axis scale to enter edit mode and input the required value.

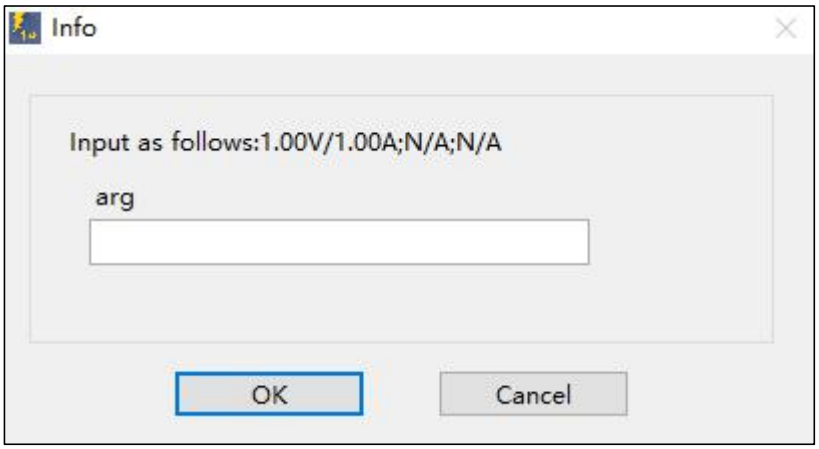


Quick Set Area

Set the hotkey parameter

Hold the mouse scroll wheel and point to a certain hotkey, a dialogue box will pop

out for channel voltage/current value configuring. The format is "voltage/current;N/A;N/A". For example, set to 1.00V, 1.00A, the format should be "1.00V/1.00A;N/A;N/A". Click OK to complete configuring.

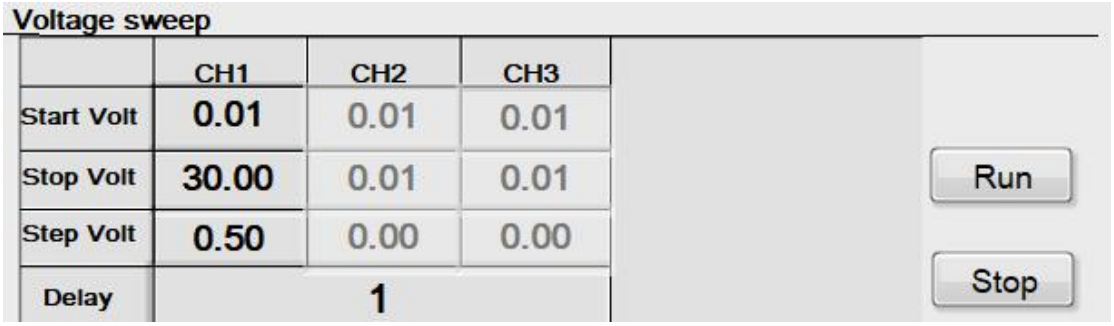


Use hotkey to configure channel output parameter

When left button click a certain hotkey, channel parameter configuration can be set as this hotkey's parameter.



Voltage Sweep Area



After setting the start voltage, stop voltage, voltage step and delay, click Run, the button will show Running. The channel will firstly output the scheduled start voltage, then increase or decrease the value by voltage step. When reaching the stop voltage, the output voltage will remain this value. If press Stop button while voltage is stepping, the voltage will stop stepping and keep on outputting current value.

For example, set as following parameter,

Voltage sweep

	CH1	CH2	CH3
Start Volt	1.000	0.01	0.01
Stop Volt	7.000	0.01	0.01
Step Volt	2.000	0.00	0.00
Delay	1		

Then voltage will be output by the time as follow：

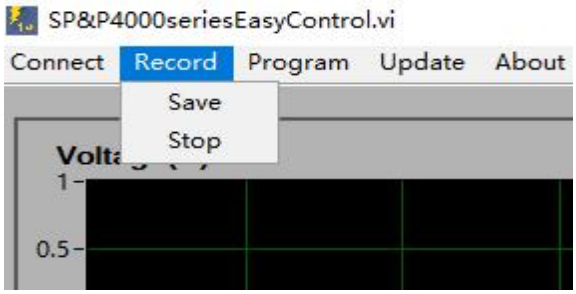
Time	0 sec	1 sec	2 secs	3 secs	4 secs	5 secs	…
Voltage	1V (Start Volt)	3V	5V	7V (Stop Volt)	7V	7V	…

Note: if the Step Volt is set as 0.000V, the channel will not be swept.

Data Record Function

Data could be saved as XLS format after record.
Click left-top menu and select **Record**, select **Save** from pull-down menu. Choose the save path, input the folder name and click save. Data will be saved in this way. Click the **Record** and select **Stop** can stop saving data.

One XLS file can keep one hour record at maximum. If the sum time of multiple records do not exceeds one hour, the multiple records will be saved into one file.
If the record exceeds one hour, the software will build a new XLS file to continue recording and saving.

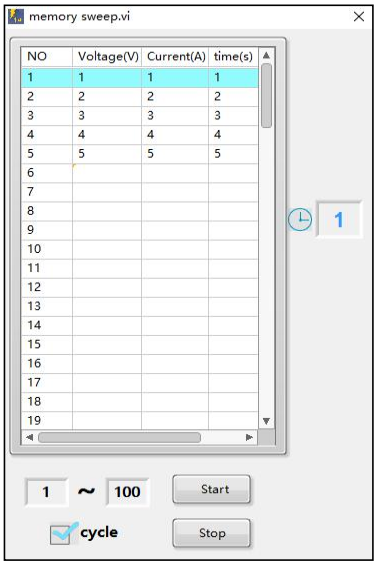


Programmable Output

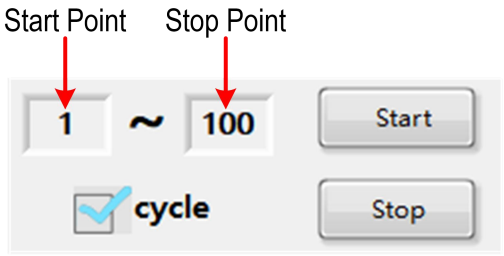
The programmable output function can preset up to 100 groups of parameters.

When you turn on the programmable output, the instrument will output the pre-specified voltage, current in pre-specified time.

1. Click left-top menu and select **Program**, a program window will pop up.



2. You can set the programmable parameters, including voltage, current and output time. Enter the value into the cells of **Voltage(V)**, **Current(A)**, **Time(S)**. This function allows up to 100 parameter groups.
3. Set the **Start Point** and **Stop Point**. The system will output the parameters between Start Point and Stop Point.
4. Check "**cycle**" to set to cycle mode; uncheck "**cycle**" to set to sequence mode.

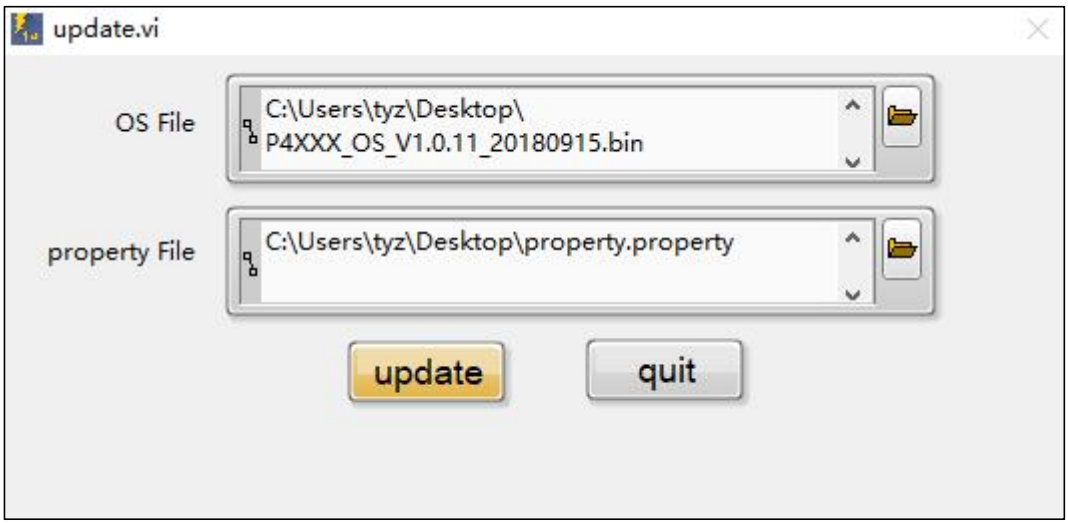


5. Click "**Start**" button to enable programmable output. The system will output the parameters between Start Point and Stop Point at sequence or cycle mode.
6. If you want to stop the programmable output, click "**Stop**" button.

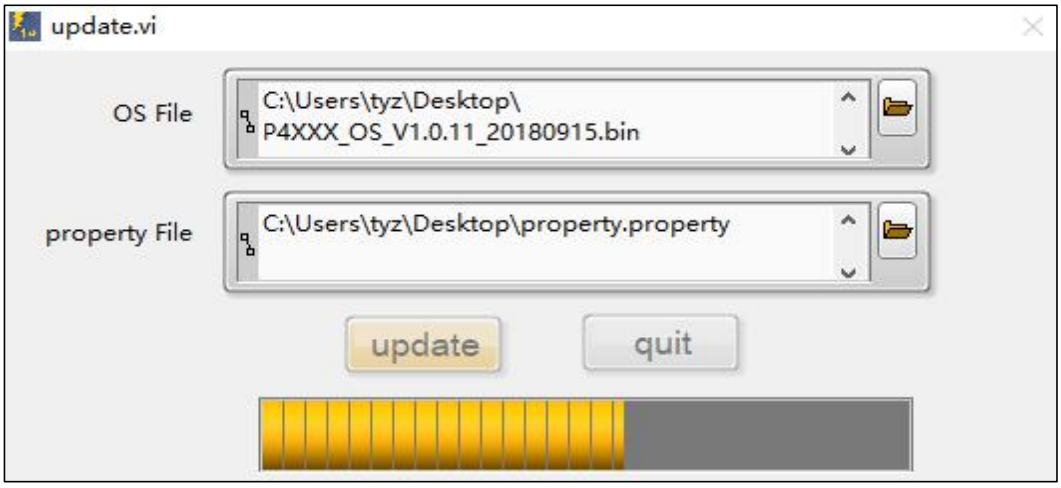
Update the Instrument Firmware

You can update your instrument firmware using this function. The OS file and property file will be needed (provided by our company if necessary for upgrade).

1. Click left-top menu and select **Update**, a update window will pop up.



2. Click , browse to the OS file. Select the property file in the same way.
3. Click "**update**" button to start updating. The progress bar indicates the update process is in progress.



4. Wait until a message pops up saying update success.

