

# Electrophoresis Power Supply **INSTRUCTION**

SPW-6S





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# IMPORTANT NOTES

Notes	The instruction contains particularly important information,so please read it carefully. Failure to follow the prompts may result in damage to the unit or failure to function properly.
Warning	The warning message asks you to take specail care in doing a certain procedure or method of operation. Fialure to follow the requirements correctly may result in serious personal injury.

- 1) Non professional personnel of the Servicebio must not disassembly the instrument without permission.After the instrument is powered on, it is not allowed to plug and unplug the electrophoresis connecting line for live operation.
- 2) In case of any damage to the power cord or the shell of the instrument, it is not allowed to continue to use. Please contact the after-sales service department of the company as soon as possible.
- 3) Please ensure that the voltage of the local power supply is consistent with the required voltage of the instrument before starting the machine to avoid equipment damage.
- 4) The environment shall be kept clean and away from water source, with good ventilation and no strong magnetic field interference.
- 5) Do not use this product in high temperature environment.

## 01 Product Overview

This product is a rectifier device that converts alternating current to direct current. It can convert alternating current to controllable constant voltage and constant current to meet the needs of electrophoresis and other experiments. It is widely used for nucleic acid gel electrophoresis, protein gel electrophoresis, Western Blot protein transfer, and other experiments in biological and medical fields.

### Product advantages

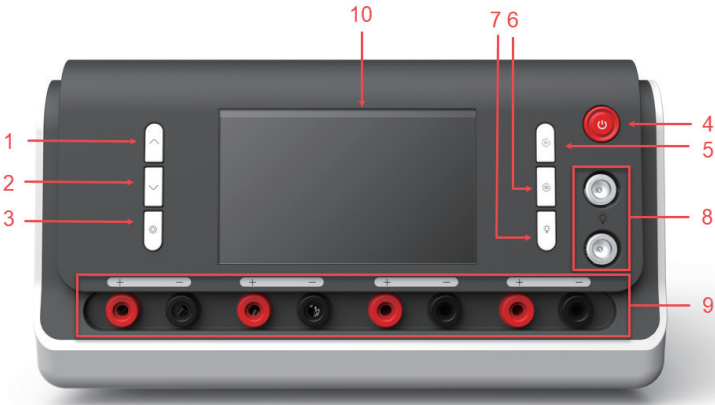
- 1) It can be fine tuned in real time under the working state.
- 2) Intelligent PID control, stable and reliable output.
- 3) HD LCD screen can display setting parameters, display real-time voltage, and current value.
- 4) High precision.
- 5) With constant voltage timing, constant current timing, gradient voltage programming, gradient current programming, and other working modes.
- 6) Using forward switching power supply design, good stability. With over voltage, over current, overload, variable load, no-load protection, abnormal automatic alarm protection.
- 7) can dynamically set the output voltage or current upper limit.
- 8) The parameters can be power off memory, equipment accident power after the power can automatically run the unfinished setting program.

## 02 Technical parameters

Input power supply	180V-240V	
AC frequency	50Hz/60Hz	
Ambient temperature	4°C -40°C	
Environmental humidity	10%-70%	
Output quantity	positive, negative pole A/B four groups	
Output range	voltage 6V-600V(accuracy 1V); 5 mA - 600 mA (precision of 1 mA)	
Control accuracy	voltage setting	<100V, voltage stability accuracy <1V >100V, voltage stability accuracy <±1%
	Current setting	<100mA, current stability accuracy <1mA >100mA, current stability accuracy <±1%
Rated output power	300W	
L*W*H (mm)	265×215×120	

## 03 Products introduction

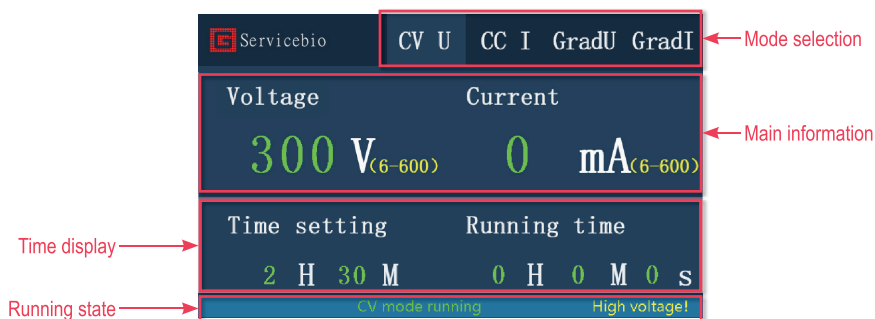
### Product Appearance





- 1) Increase: press once to increase the value by 1, and press for a long time to increase continuously.
- 2) Decrease: press once to decrease the value by 1, and press for a long time to decrease continuously.
- 3) Switch: switch to the next setting parameter.
- 4) Power switch: turn on and off the power supply.
- 5) Start / pause: start or pause the setup program.
- 6) Mode / stop: mode switching during setting / program stopping during running.
- 7) Lighting lamp: switch of lamp interface.
- 8) Lighting lamp interface: a single interface can be connected to 12V 1A at most, and can be connected with 2 blue light transilluminators of Servicebio.
- 9) Output interface: it can be connected to electrophoresis system, transfer system and other instruments and equipment. Red is the positive pole and black is the negative pole.
- 10) Screen: Setting and data changing display
- 11) Externa socket: External AC socket.
- 12) Cooling hole: internal cooling air outlet of power supply.

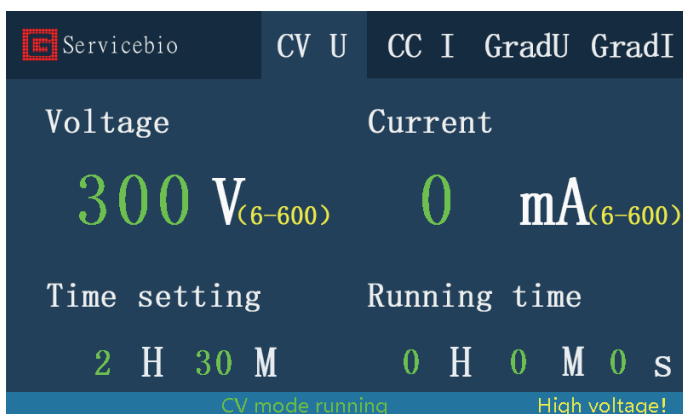
## Interface Display



- 1) Mode selection: in pause or standby mode, press the mode / stop button once to switch and can cyclic selection.
- 2) Main information: displays the currently set main values and main variable values.
- 3) Time display: display the set time and running time.
- 4) Operation status: displays the current mode operation status.

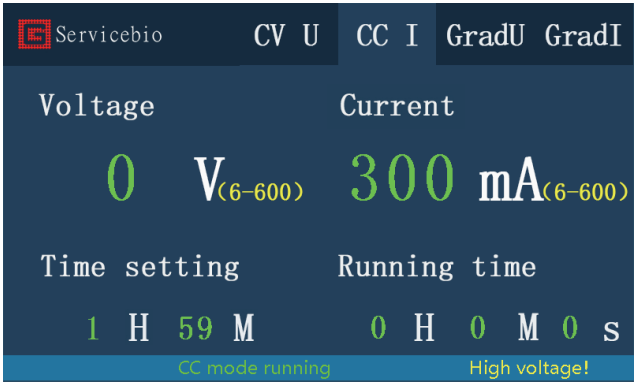
## 04 Operation Functions

### Constant voltage U mode



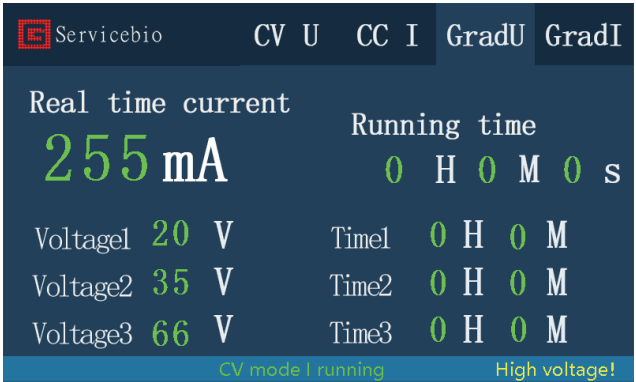
- 1) Voltage setting: after startup, the constant voltage mode is selected by default. If in other modes, press the mode / stop button to switch modes. Press the switch button to switch to voltage, the voltage value flashes, and press the increase and decrease buttons to adjust the value (the adjustment range is 6-600V).
- 2) Current setting: the current changes in real time during the experiment and cannot be set under constant voltage mode.
- 3) Time setting: press the switch button to switch to the time setting, and set the value by press the increase and decrease buttons. The upper limit of time is 99h59m.
- 4) Running time: after the mode runs, the time will be recorded in positive timing. After the operation, the running time will return to 0, and the interface will show that the work is completed.
- 5) Operation status: the bottom displays the operation status of the current mode, and the subtitle display will scroll at the bottom.
- 6) The running time will be restored to 0, and the interface will show that the work is completed.

Constant current mode



- 1) Current setting: press the mode / stop button to switch the mode to the constant current mode. Press the switch button to switch to current, the current value flashes, and press the increase and decrease buttons to adjust the value (the adjustment range is 6-600mA).
- 2) Voltage setting: the voltage changes in real time during the experiment and cannot be set under constant current mode.
- 3) Time setting: press the switch button to switch to the time setting, and set the value by press the increase and decrease buttons. The upper limit of time is 99h59m.
- 4) Running time: after the mode runs, the time will be recorded in positive timing. After the operation, the running time will return to 0, and the interface will show that the work is completed.
- 5) Operation status: the bottom displays the operation status of the current mode, and the subtitle display will scroll at the bottom.
- 6) The running time will be restored to 0, and the interface will show that the work is completed.

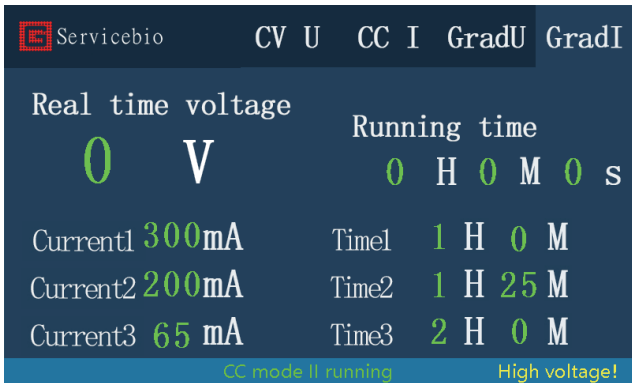
Gradient u mode (gradient constant pressure mode)





- 1) Gradient (U) mode: press the mode / stop button when pausing to switch to gradient (U) mode.
- 2) Real time current: displays the actual change of current in the current operating section.
- 3) Running time: displays the countdown of the current running segment. After running, the running time will be restored to 0, and the interface displays the completion of the work.
- 4) Voltage setting: press the switch button to switch voltage 1, voltage 2 and voltage 3. Press the increase and decrease buttons to increase or decrease the value. Three different voltage parameter segments can be set respectively. After operation, the parameters will be operated in the order of voltage 1, voltage 2 and voltage 3 (setting range: 6-600v).
- 5) Time setting: press the switch button to switch time 1, time 2 and time 3, and press the increase and decrease button to adjust the time value. Each gradient time can be set separately. If the time is set to 0, this gradient program will not be run.
- 6) Operation status: the bottom displays the operation status of the current mode, and the subtitle display will scroll at the bottom.
- 7) If the gradient U only needs to execute voltage 1, only set the data of voltage 1 and time 1, and set the time of time 2 and time 3 to 0. If a new gradient voltage 2 needs to be added, only set the data of voltage 2, and set the time of time 2. Press start / pause to start execution. The same is true for voltage 3.
- 8) If time 1, time 2 and time 3 are displayed as 0, press the start / pause button, the data of voltage 1 will be executed by default, and the running time is unlimited. If it is necessary to stop, press the pause or stop button manually.
- 9) After the program is completed, the running time will be restored to 0, and the interface shows that the work is completed.

## Gradient I Mode (Gradient Constant Current Mode)



- 1) Gradient (I) mode: press the mode / stop button when pausing to switch to gradient I (gradient constant current) mode.
- 2) Real time voltage: displays the actual change of the current operating section voltage.
- 3) Running time: displays the countdown of the current running segment.
- 4) Current setting: press the switch button to switch current 1, current 2 and current 3. Press the increase and decrease buttons to increase or decrease the values. Three different current parameter segments can be set respectively. After operation, the parameters will be operated in the order of current 1, current 2 and current 3 (setting range: 6-600ma).

- 5) Time setting: press the switch button to switch time 1, time 2 and time 3, and press the increase and decrease button to adjust the time value. Each gradient time can be set separately. If the time is set to 0, this gradient program will not be run.
- 6) Operation status: the bottom displays the operation status of the current mode, and the subtitle display will scroll at the bottom.
- 7) If gradient I only needs to execute current 1, only set the data of current 1 and time 1, and set the time of time 2 and time 3 to 0. If a new gradient current 2 needs to be added, only set the data of current 2, and set the time of time 2. Press start / pause to start execution. The same is true for current 3.
- 8) If time 1, time 2 and time 3 are displayed as 0, press the start / pause button, the data of current 1 will be executed by default, and the running time is unlimited. If it is necessary to stop, press the pause or stop button manually.
- 9) After the program is completed, the running time will be restored to 0, and the interface shows that the work is completed.

# PRODUCT CONFIGURATION LIST

Serial number	Name	Quantity
1	Electrophoresis power supply	1
2	Product instruction	1
3	Warranty card	1
4	Maintenance records	1
5	Quality certificate	1

# WARRANTY CARD

User name		contact number	
Equipment model		manufacturing No.	

# MAINTENANCE RECORDS

Warranty date	Fault and maintenance records	Maintenance date	Maintenance Engineer



Free hotline

**4006-027-178**

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