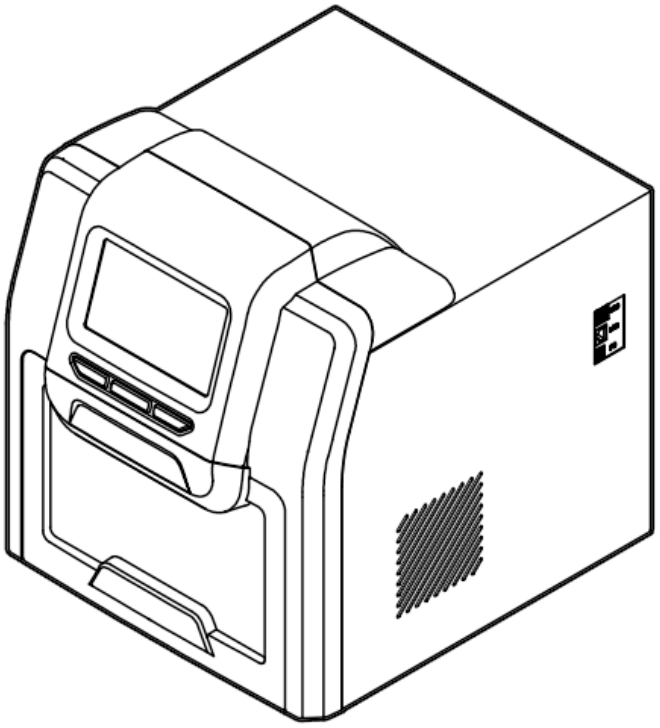
Operation Manual

V4.0

Auto-Pure Series Nucleic Acid Purification System



ALLSHENG

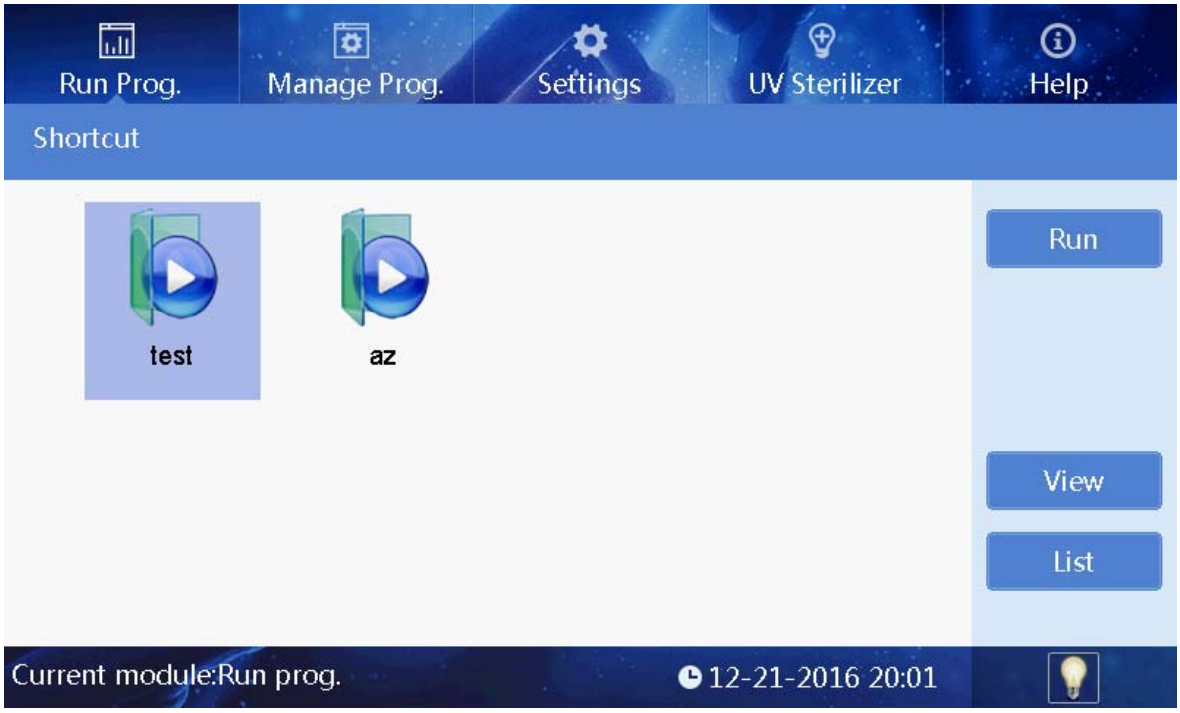
Hangzhou Allsheng Instruments Co., Ltd.

6. Operation

6.1 Start-up Interface

Turn on the instrument and make sure the drawer is closed before start, the screen will display the start-up interface.

After start, it will enter into the shortcut mode as below:



6.2 Program Run

6.3 Shortcut mode

Under the shortcut mode, select the program needed and click “Run”, it will enter into the program run interface.

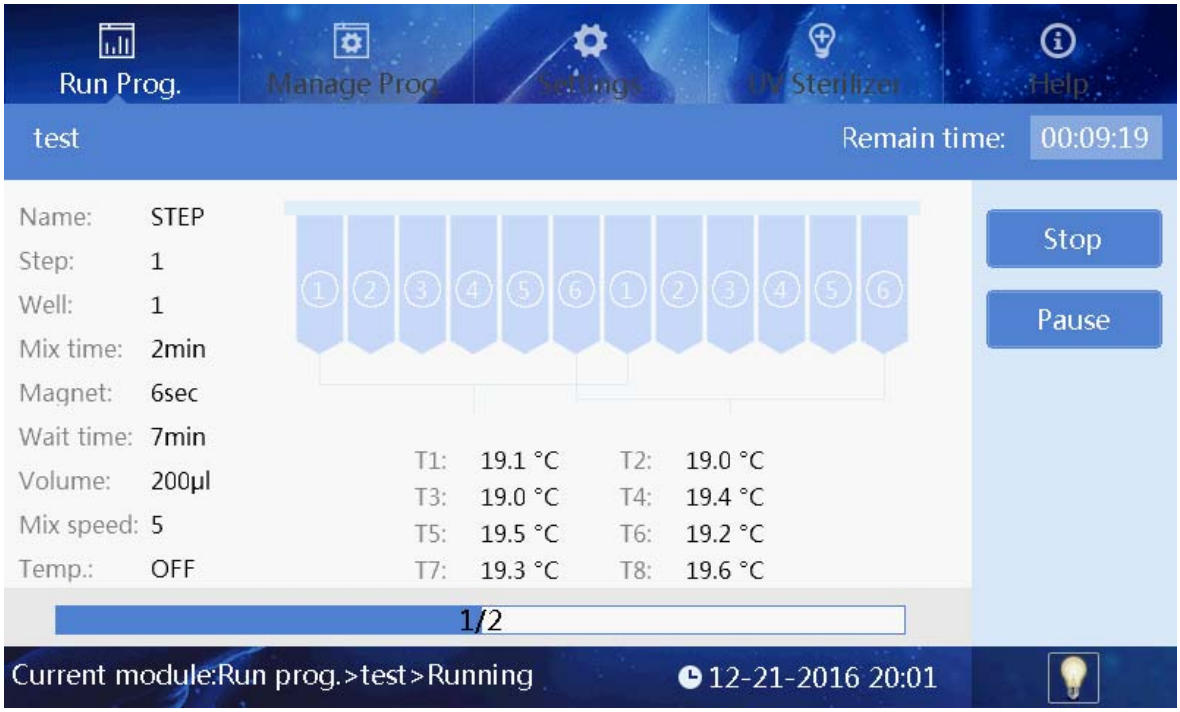
The program can also be selected by press “Tab” button on the panel and then press “Run” for start or “Stop” for terminate.

Auto-Pure 20A Running interface

Auto-Pure 20B Running interface

Auto-Pure 24BT Running interface

Auto-Pure 24D Running interface



Auto-Pure 32A Running interface

Auto-Pure 48A Running interface

On the left side, it shows the current step info., when the exact reagent position start to run, then this position will be highlighted, and there will be temperature display on the position of heating function. The progress bar will display the progress and there's also left time display on the top right corner.

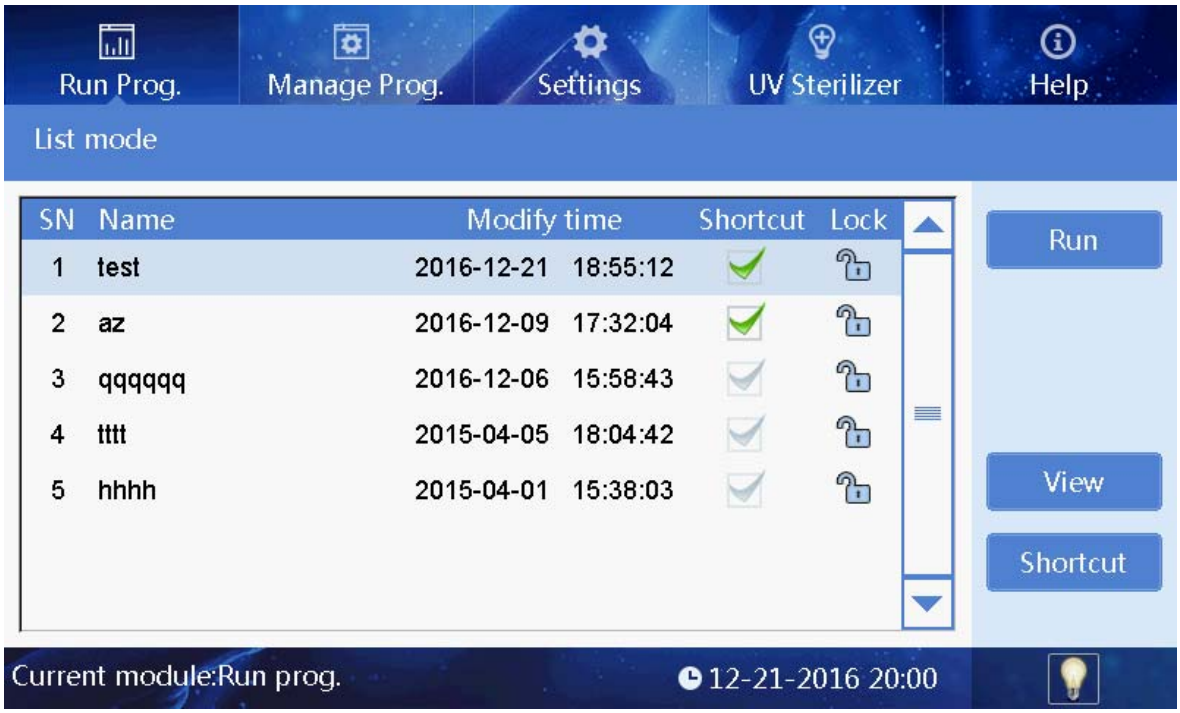
Click "Pause" to pause or continue the program.

Click "Stop", the program will stop and there will be check box. Click "Cancel", program will be continue and click "OK" the program run will be back to original place and the "Stop" button will change to "Run Again". Click "Run Again" to continue the program.

Click "Back" to return the previous menu.

Remark: If the drawer is open during operation, there will be below message box and the device will stop to run, and the instrument will continue to run only after the drawer is closed.

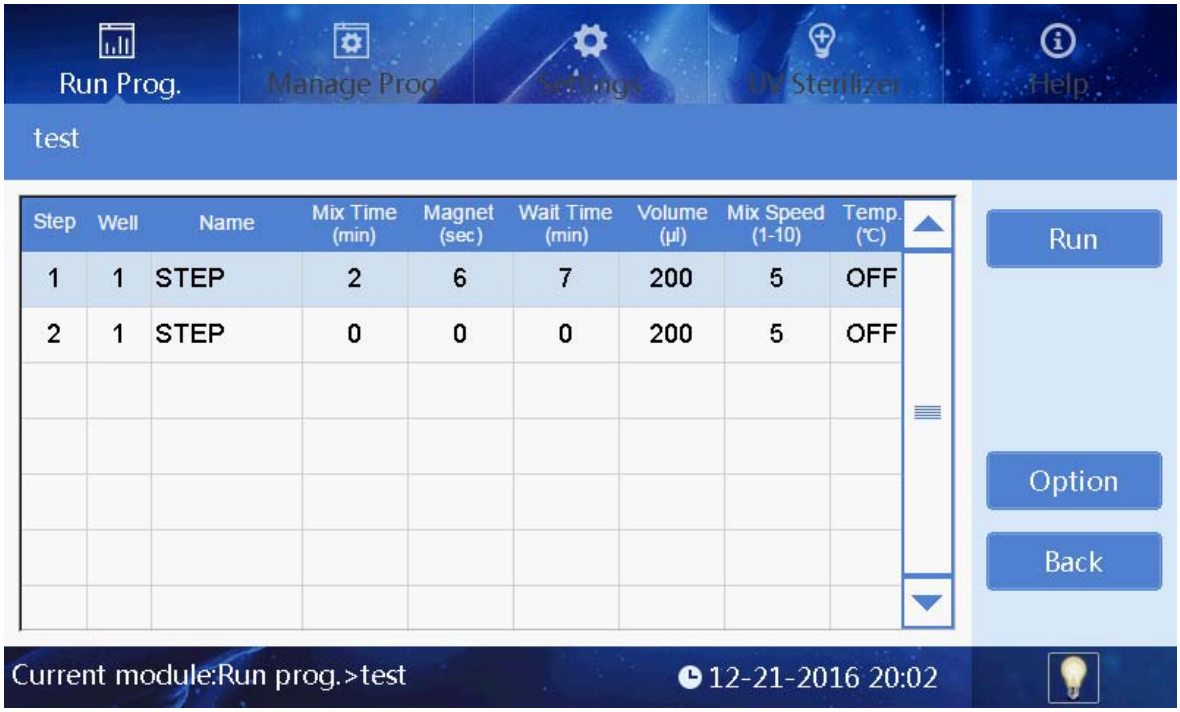
6.3.1 List mode



Users may review the file by scroll bar on the right side.

Select the program and click "Run" to enter into the run interface.

Click “View” to enter into the check interface.



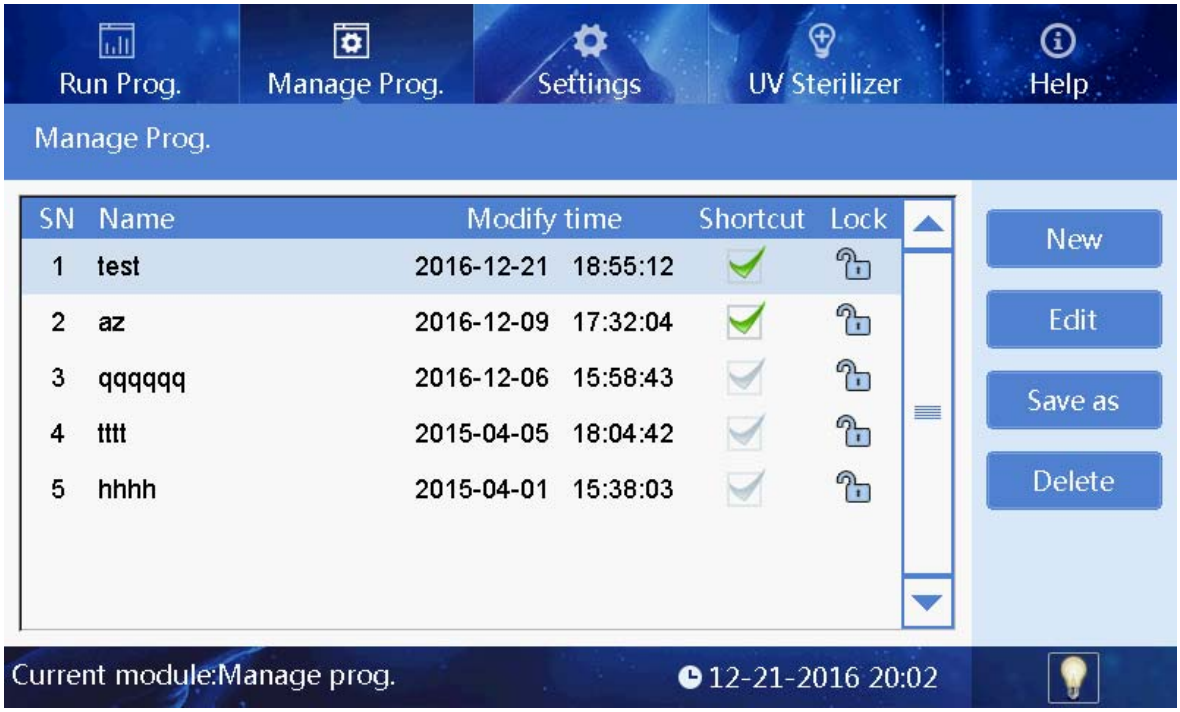
Click “Run” to enter the running interface.
Click “Option” to view the parameter setting of the program.
Click “Back” to previous interface.

6.3.2 Lamp

At the bottom of interface, the icon “  ” shows that the lamp is on,and the icon “  ” shows that the lamp is off. Click this icon to change the state of the lamp.

6.4 Program Management

Click “Manage prog” into the surface of program management


Run Prog.
Manage Prog.
Settings
UV Sterilizer
Help
Manage Prog.
SN Name Modify time Shortcut Lock
1 test 2016-12-21 18:55:12
2 az 2016-12-09 17:32:04
3 qqqqqq 2016-12-06 15:58:43
4 tttt 2015-04-05 18:04:42
5 hhhh 2015-04-01 15:38:03
New
Edit
Save as
Delete
Current module:Manage prog.
12-21-2016 20:02

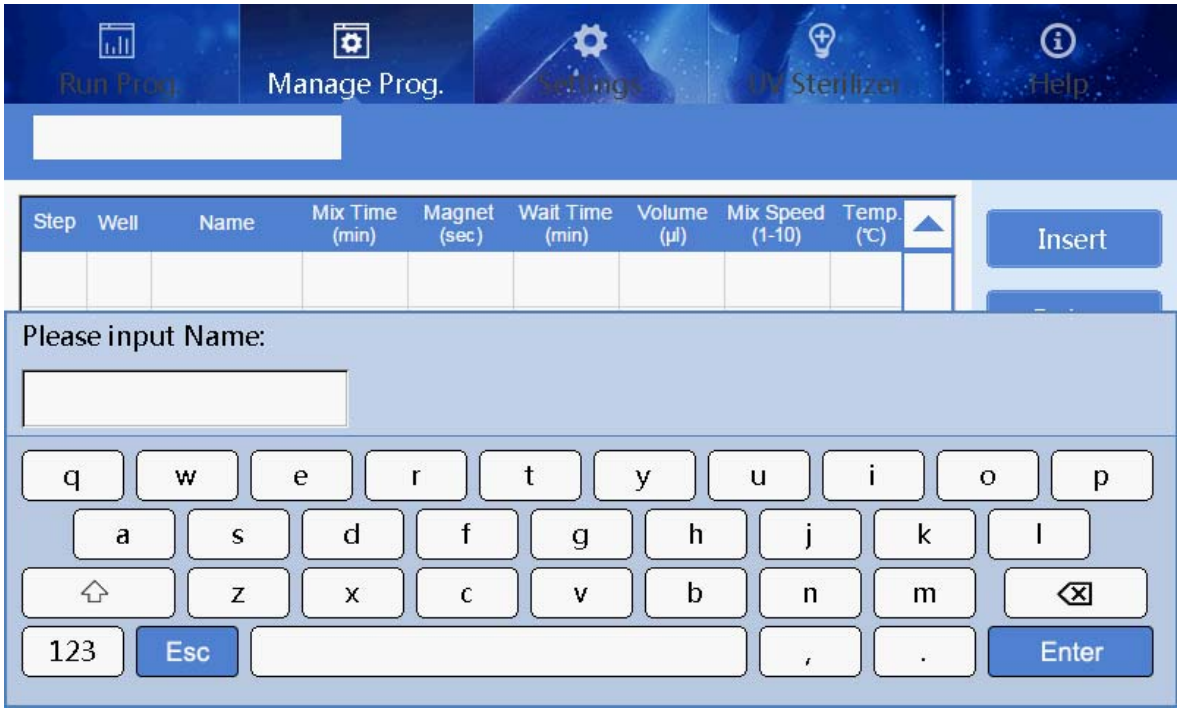
6.4.1 Shortcut operation

Click “√” of the program in the “Manage Prog.” interface, the program will be displayed in the “Shortcut” list interface.

In the list of “Lock”, if the icon is “ ”, the program can not be edited, deleted and saved as; if the icon is “ ”, the program can be edited, deleted and saved as.

6.4.2 Program Management--Insert

Click “Insert” under the “Manage prog.” to enter into the “Insert” surface.



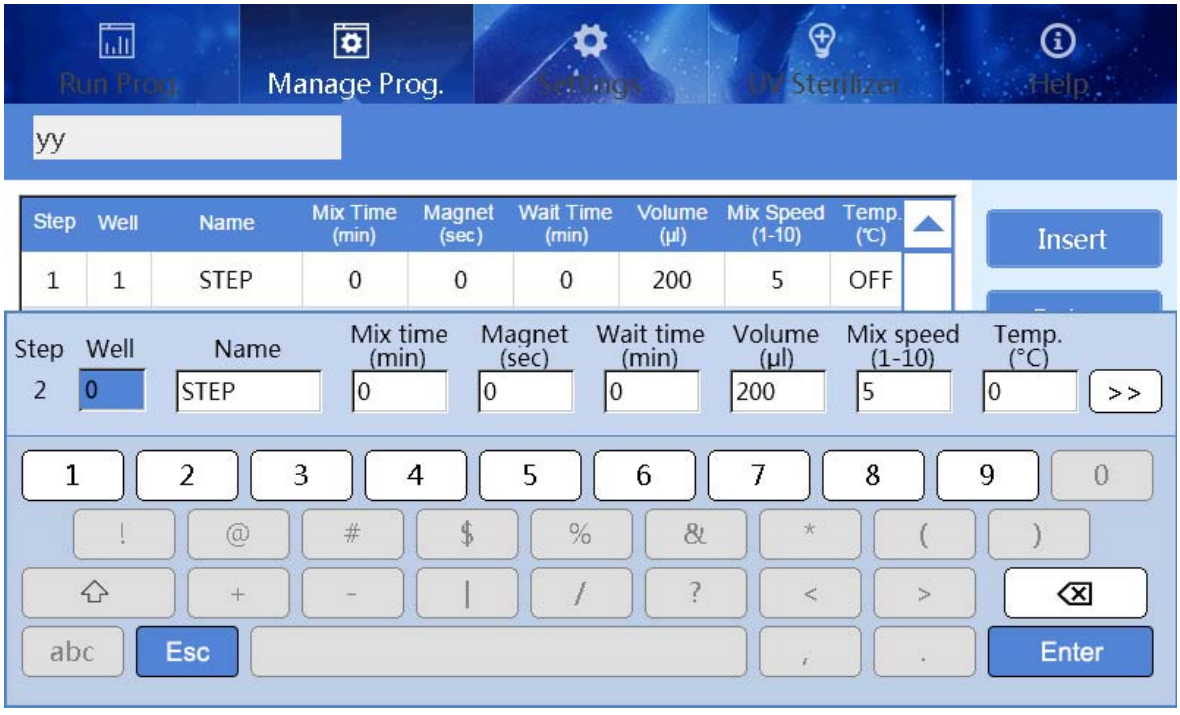
When new program, you should input the name of program in the first place.

Click “Insert” to add a new step.

Click “Well” to insert the well number, then input the program name, waiting time, mixing time, magnetic time and sample volume. At the end, please click the mixing speed to select the speed.

If input “0” for the position of well, insert step is pause, then only the name of step is able to edit., rest of parameters cannot be edit. Under this directive, magnetic rod and magnetic rod cover combined and rise.

If input “9” for the position of well, inset step is pause, then only the name of step is able to edit, rest of parameters cannot be edit. Under this directive, magnetic rod and magnetic rod cover rise but separate from each other. The magnetic rod cover is able to insert.



For Auto-Pure 20A, only well location 1, 2 & 9 have heating function.
For Auto-Pure 20B, only well location 1 & 7 have heating function.
For Auto-Pure 24BT, only well location 1 & 8 have heating function.
For Auto-Pure 24D, only well location 1 & 6 have heating function.
For Auto-Pure 32A, only well location 1 & 6 (Corresponding to the well location of 1,6,7 &12 for 96 well plate) have heating function.
For Auto-Pure 48A, only well location 1,4 (Corresponding to the well location of 1,4,5,8,9 &12 for 96 well plate) have heating function.
"Temperature" number box is available to input the temperature value that would like to set. If input the number of "37" or below, then the device won't heating when running to this step.

When selecting other wells location than the above, the corresponding step line "temperature" number box is not available .

Click "  " to enter the extended parameter setting interface, it isn't necessary to set in normally use, or you can reset if have special requirement. Click "  " back to the parameter setting interface.

Click "Delete" and then click "OK" to delete the last step; or click "Cancel" not to delete the last step.

Click "Option" to set "Heating block", "Temperature heating", "Temperature cooling", "Magnetic function" and "Dry function ", users may do the open setting for the protocol.

Click "Save" and then click "OK" to save the editing program; or click "Cancel" not to save the editing program.

Click "Back", if the new program has saved, then it will be back to "Management prog." interface. If not, Click "Yes" to save and back to "Management prog." interface.

Click “Cancel”, it will be back to “Management prog” interface and without save.
Click “Cancel”, it will stay in the “Insert” surface.

6.4.3 Program Management--Edit

Choose the program in the “Manage prog.” interface, then click “Edit” enter into edit program.

Same step as “Insert” in 6.3.2

6.4.4 Program Management-Save as

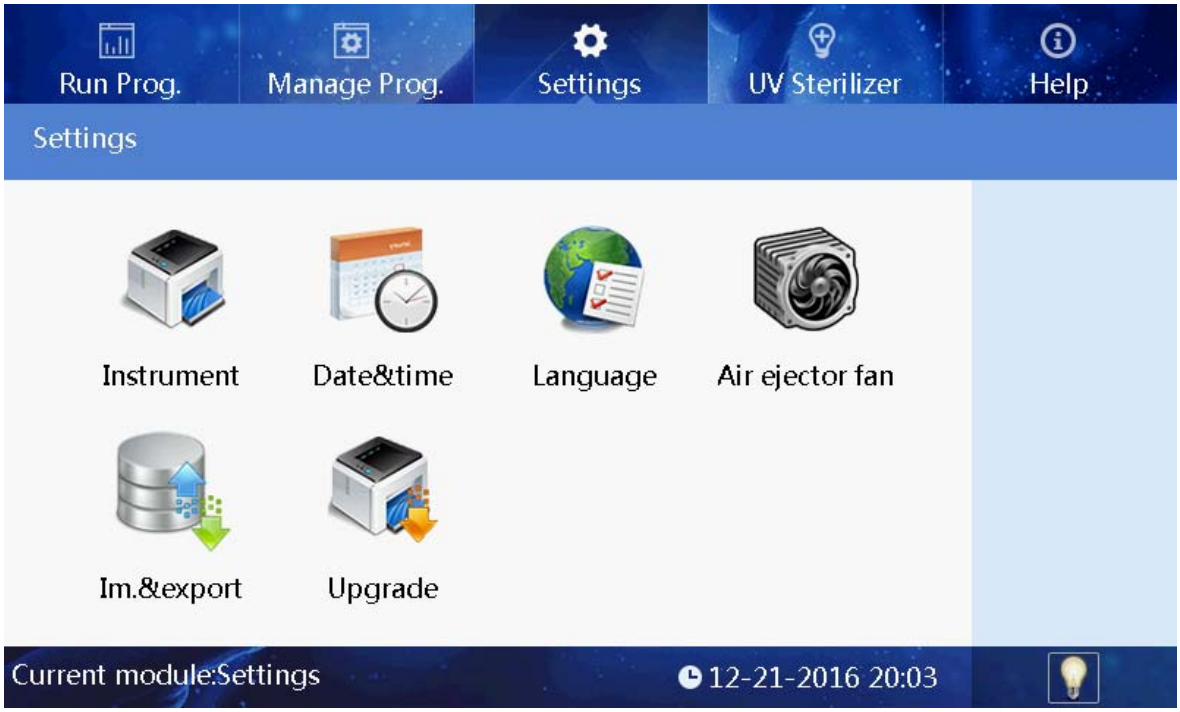
Under the “Manage prog.” interface to make selection, Click “Save as” and then input a new program name, click “Enter” to save the current program, or “ESC” to not save.

6.4.5 Program Management-Delete

Under the “Manage prog.” interface to make selection, Click “Delete” and then click “Ok” to confirm the delete, or “Cancel” to not delete.

6.5 System Setting

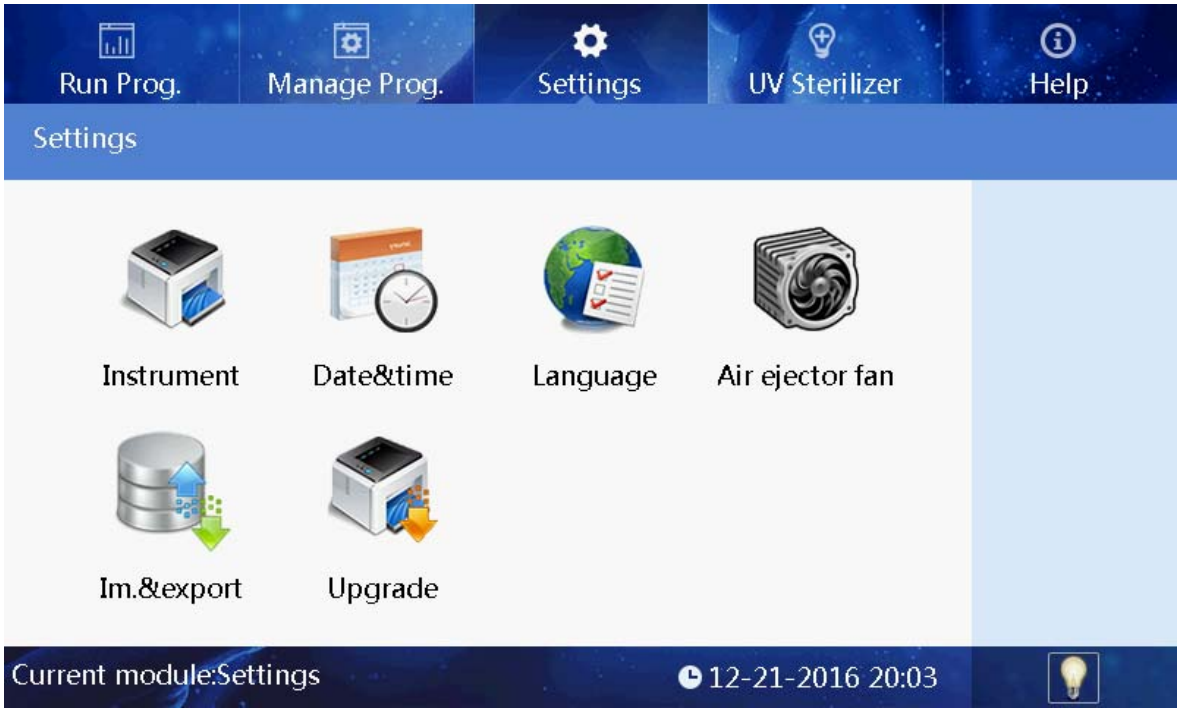
Click “Settings” and enter into the System Setting surface



6.5.1 System Setting-Instrument Setting

Click “Instrument” to input the right password and then enter the setting interface to set the

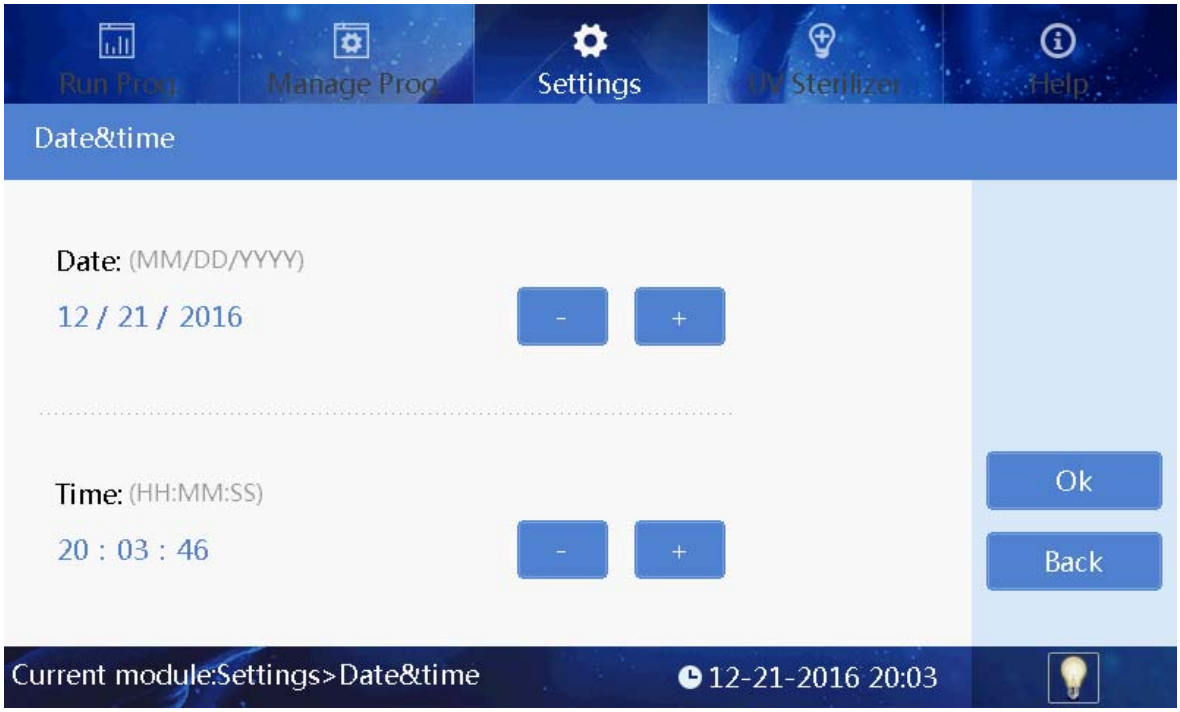
parameter of instrument.



Remarks：Regularly, there's no need to set unless it's failed and need repair, as instrument has already finished setting before factory dispatch, and even if it's failed, this kind setting will be authorized by distributor or manufacturer.

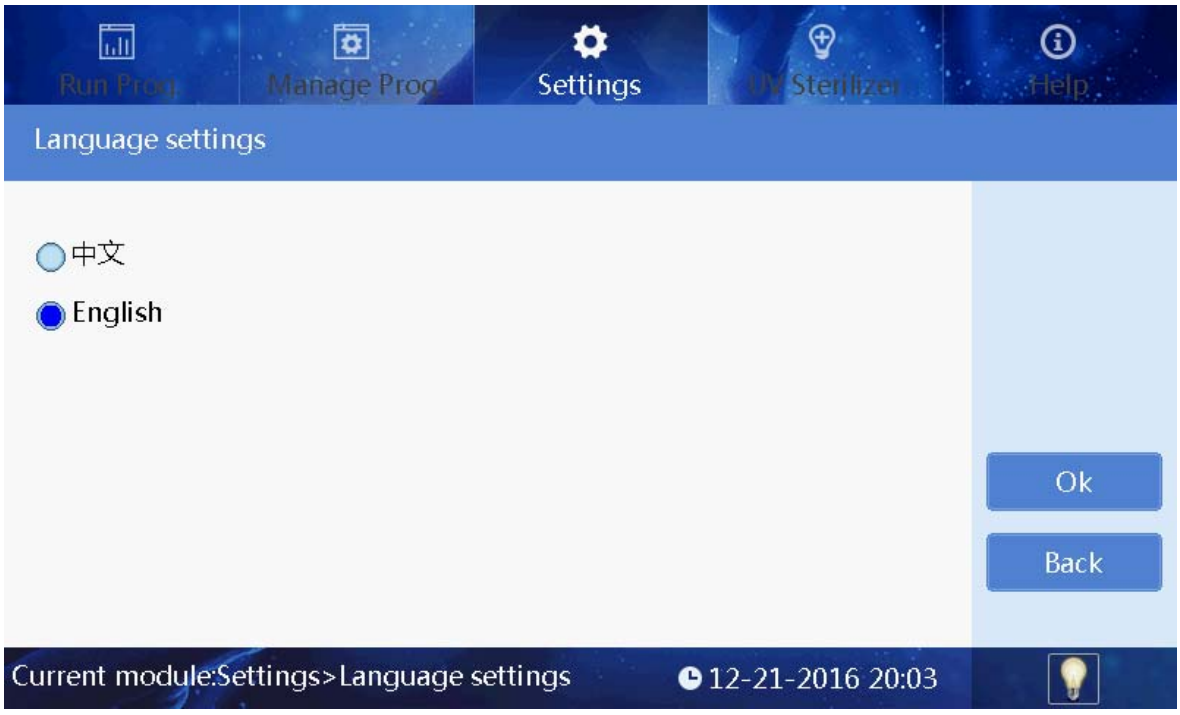
6.5.2 System Setting -- System Time

Click "Date & Time" to set system time by directly enter into number or click "+" "-".



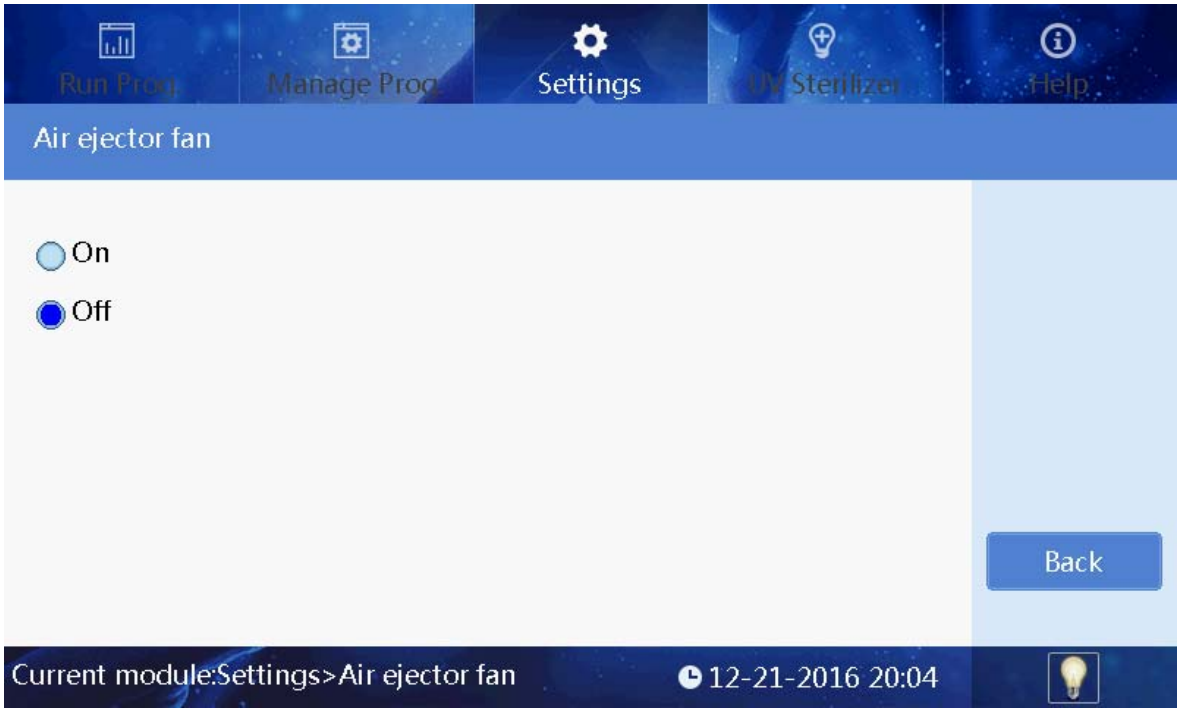
6.5.3 System Setting--Language

Click “Language Setting” to choose the language that you need.



6.5.4 System Setting -- Fan

Click “ Air Ejector Fan” to have the fan setting

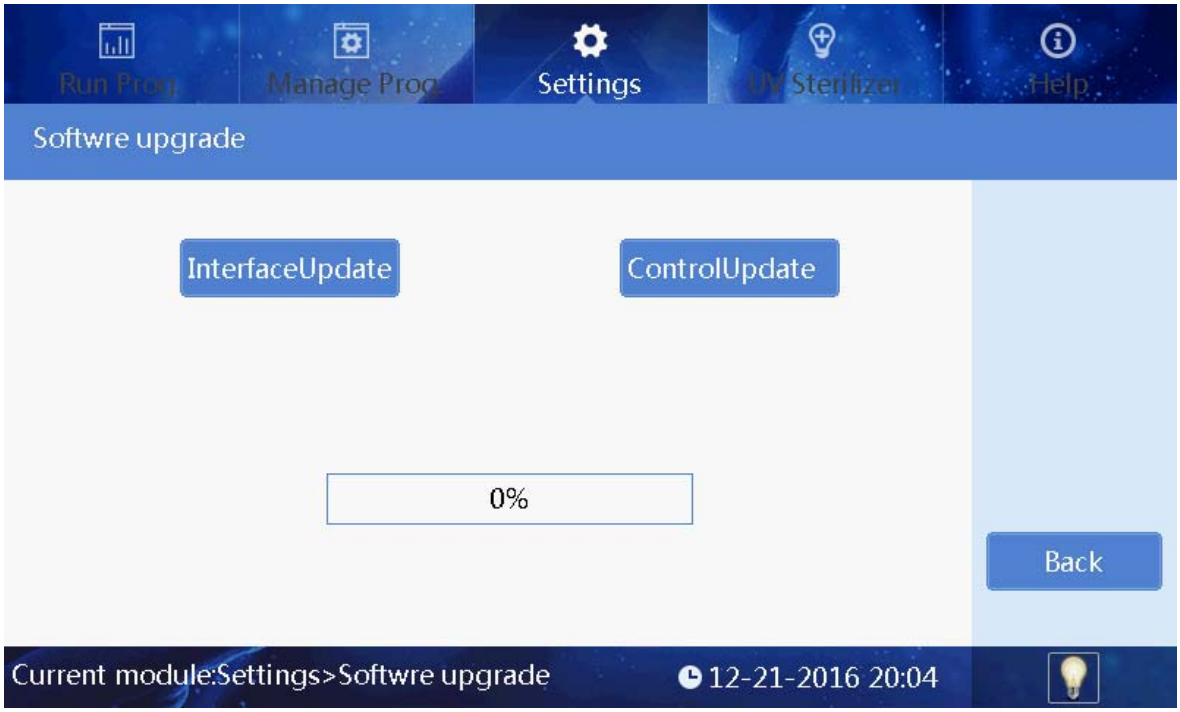


6.5.5 System Setting -- Import/Export

Click “Import/Export” and insert U disk to finish the step.

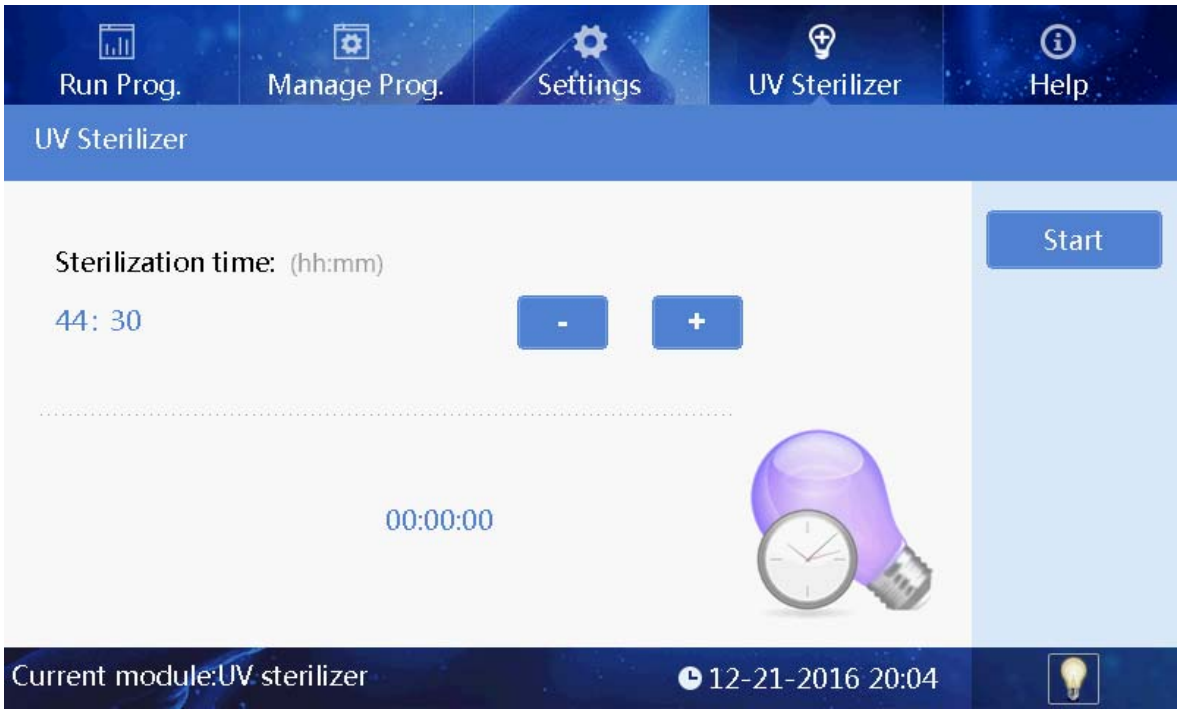
6.5.6 System Setting--Software upgrade

Click “Software upgrade” to input the right password enter the interface and then insert the U disk to operation.



6.5.7 UV sterilization

Click “UV sterilization” and input number or click “+” “-”to set time.



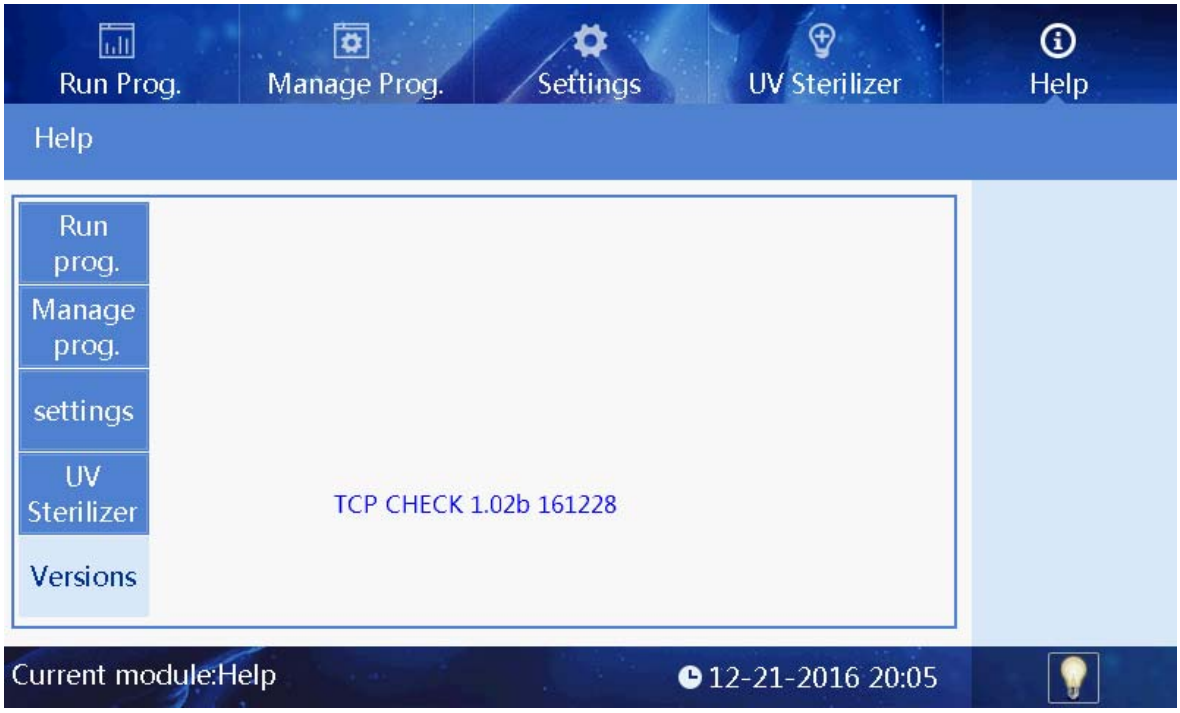
Click “Start” to open the UV light to start UV sterilization and time count down.
Click “Stop” to stop the UV sterilization.

During sterilization, the UV light will automatically stop when the drawer is open, and it will continue

after the drawer is closed.

6.6 Help

Click “Help” to check the help info.Help interface displays the relevant features and version information.



Chapter 5 Troubleshooting

No	Fault phenomenon	Possible Causes	Solution
1	No display after switch on	Power not connected	Check power
		Switch failure	Replace switch
		Fuse failure	Replace fuse （5X20 250V 8A）
		Others	Contact with Distributor
2	No UV light	UV light failure	Replace light tube Contact with distributor
3	No light	Light failure	Replace light tube Contact with distributor
4	Instrument not able to automatically stop after drawer is open	Sensor failure	Contact with distributor
5	Big variance between actual and display temperature	Sensor failure	Contact with distributor
6	No heating in heating strip	Sensor failure	Contact with distributor
		SCR failure	
		Heater failure	
7	Instrument can’t run	Controller failure	Contact with distributor
		Motor failure	
8	Abnormal sound during operation	guide rail install incorrect	Contact with distributor
		Motor failure	
		synchronous belt abrasion	
9	Press button failure	Press button failure	Contact with distributor

Software fault alarm list

Fault type	Fault name	Error message	Model
Temperature (code: 0)	T1,T2,T3,T4,T5,T6, T7,T8 Overheat	E011,E021,E031,E041, E051,E061,E071,E081	Auto-Pure 32A Auto-Pure 48A
	T1,T2,T3,T4,T5,T6, T7,T8 Drive circuit fault	E018,E028,E038,E048, E058,E068,E078,E088	
	T1,T2,T3,T4,T5,T6, T7,T8 Open circuit	E015,E025,E035,E045, E055,E065,E075,E085	
	T1,T2,T3,T4,T5,T6, T7,T8Short circuit	E016,E026,E036,E046, E056,E066,E076,E086	
	T1,T2,T3,T4 Overheat	E011,E021,E031,E041	Auto-Pure 20A Auto-Pure 20B Auto-Pure 24D Auto-Pure 24BT
	T1,T2,T3,T4 Drive circuit fault	E018,E028,E038,E048	
	T1,T2,T3,T4 Open circuit	E015,E025,E035,E045	
	T1,T2,T3,T4 Short circuit	E016,E026,E036,E046	
	The drive circuit of exhaust fan fault	E019	Auto-Pure 20A Auto-Pure 20B Auto-Pure 24D Auto-Pure 24BT Auto-Pure 32A Auto-Pure 48A
	The drive circuit of cooling fan fault	E009	
Electric machinery (code: 1)	Electric machinery brake lock fault	E108	
Electric machinery stroke position (code:4)	The left sensor	E403	
	The sensor of magnetic bar cover on electric machinery position fault	E425	
	The sensor of magnetic bar on electric machinery position fault	E415	
LCD, Crystal oscillator, Storage (code: 7)	The clock crystal fault	E702	
	The storage chip E2P fault, setting parameter lost	E703	
Communication (code: 8)	Online failure	E801	

Chapter 6 Spare Parts List

1. Auto-Pure 20A/20B Spare parts list

No.	Item	Unit	Qty	Remark
1	Power line	PCS	1	
2	Mouse	PCS	1	
3	Kits tray	PCS	2	
4	Allen wrench	PCS	1	
5	U disk	PCS	1	For upgrading software and transferring programs

2. Auto-Pure 32A/48A /24D/24BT Spare parts list

No.	Item	Unit	Qty	Remark
1	Power line	pc	1	
2	Mouse	pc	1	
3	Allen wrench	pc	1	
4	U disk	PCS	1	For upgrading software and transferring programs

Chapter 7 Abbreviation and Symbols

1. Abbreviation

Abbreviation used

A	Ampere
AC	Alternating current
V	Volt
Hz	Hertz
W	Watt
USB	Universal Serial Bus
SD	Secure Digital Card
WiFi	WLAN
kg	Kilogram
mm	Millimeter
µL	Microlitre
hPa	Hectopascal
℃	Degree Centigrade
CV	Coefficient of variation of well
TAB	Switch
RUN	Operation
STOP	Stop

2. Symbols

Symbols used on device

	Warning
	Heating
	Indicates conformity with health, safety, and environmental protection standards for products sold within the European Economic Area