USER MANUAL

Vacuum Tissue Processor

LMVTP-A101

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1. Safety Measures

- Ensure the cleaning agent level stays above the red line but not overfilled.
- Keep the equipment surface clean, promptly removing wax and dirt.
- Check if paraffin temperature settings are appropriate.
- Ensure proper grounding of the equipment casing.

2. Introduction

Vacuum Tissue Processor LMVTP-A101 features 12-station processing system. It has fully enclosed vacuum operation preventing harmful gas leakage. Equipped with a smart key function for blind operation during display failure. Incorporated with self-test function for fault diagnosis and real-time status monitoring. Our Processor is ideal for histopathology and research laboratories.

3. Features

- Large color LCD touch screen
- 20 programmable settings
- Automatic reagent detection
- Dual-bottle failure protection
- Gas-driven reagent agitation

4. Specifications

Model No.	LMVTP-A101
Paraffin capacity	2.5L
Paraffin Cylinder Number	4
Treatment Cylinder Volume	3.8L
Reagent Bottle Capacity	2.5L
Working Pressure	±70KPA
Stirring Time	30 seconds
Stirring Interval Time	5 minutes
Treatment Chamber Temperature Range	Room Temperature to 85ºC
Paraffin Cylinder Temperature Range	Room Temperature to 85ºC
Power Supply	220V, 50Hz

5. Applications

Vacuum Tissue Processor LMVTP-A101 is ideal for histopathology and research laboratories. It is suitable for tissue dehydration, clearing, and infiltration processes.

6. Operations

6.1 Usage Instructions

1) Check if the main power supply is normal and the grounding is good.
2) Fill the cleaning bottle with the cleaning agent.
3) Fill the reagent cylinder with the appropriate reagent.
4) Fill the paraffin cylinder with paraffin.
5) Take samples and label them.
6) Place the specimens into the tissue basket.
7) Open the machine's working cylinder lid and place the tissue basket inside.
8) Press the **"Run"** button; the machine will start self-checking and then automatically run the program.
9) After the process is complete, press the **"Stop"** button to drain the paraffin from the working cylinder.
10) Remove the specimens and place them in an empty sample basket.
11) Press **"Clean"** to start cleaning the residual paraffin from the pipes.

6.2 Introduction to the screen interface

6.2.1 Startup screen

Figure-1

Press the **Automatic** button to enter the following screen.

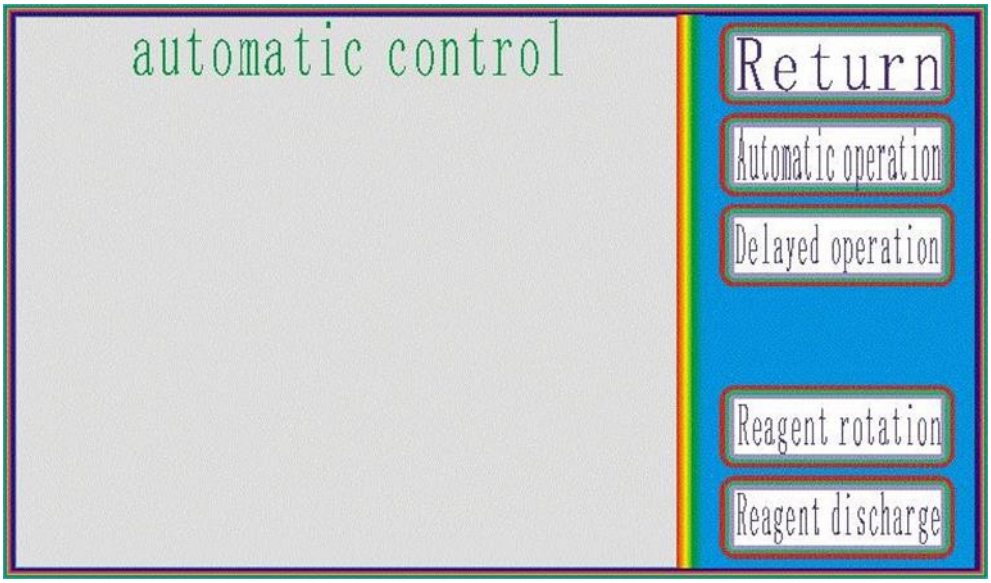

Figure-2

Press **"Return"** to return to the main interface, press **"Run"** to enter.

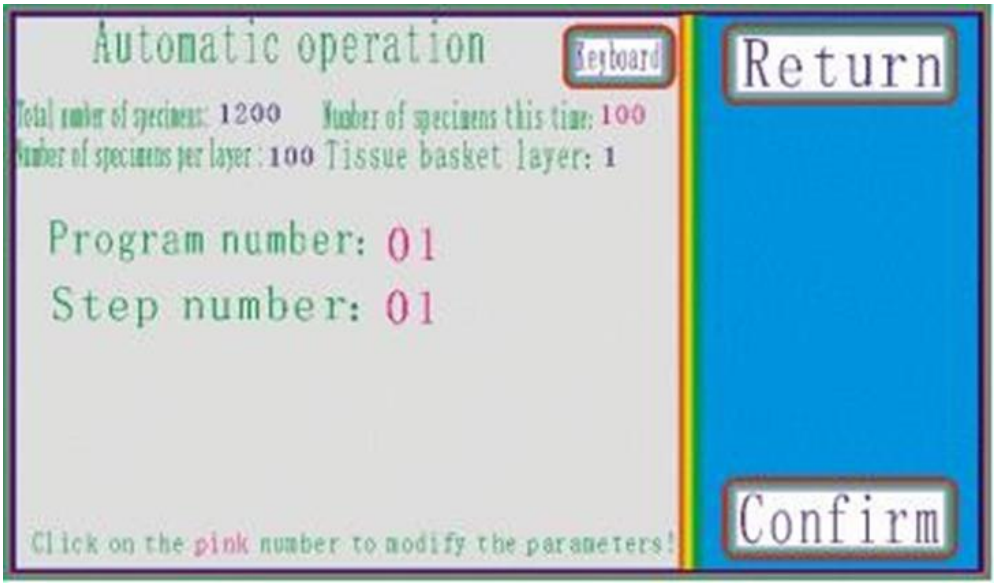

Figure-3

Press the **"Delay Run"** button to enter the following screen.

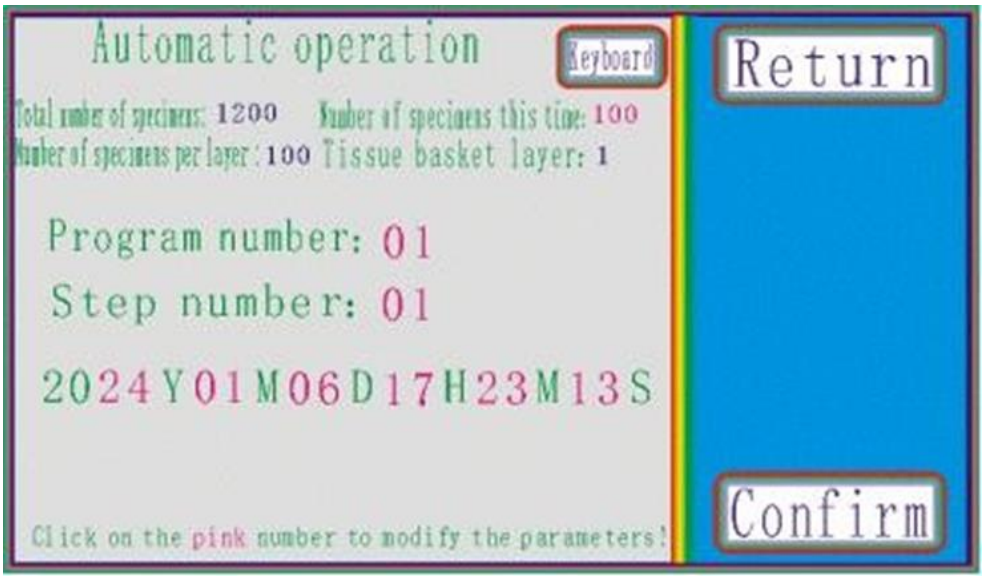

Figure-4

Press the **"pink number"** to input the number of specimens, program number, starting step number, and machine start time for this run. After confirming the parameters with the confirm button, the machine will start the self-check program. If the self-check is performed, press **"stop"** to stop the self-check and enter the automatic operation interface; If there are no faults in the self-check, it will enter the automatic operation interface.

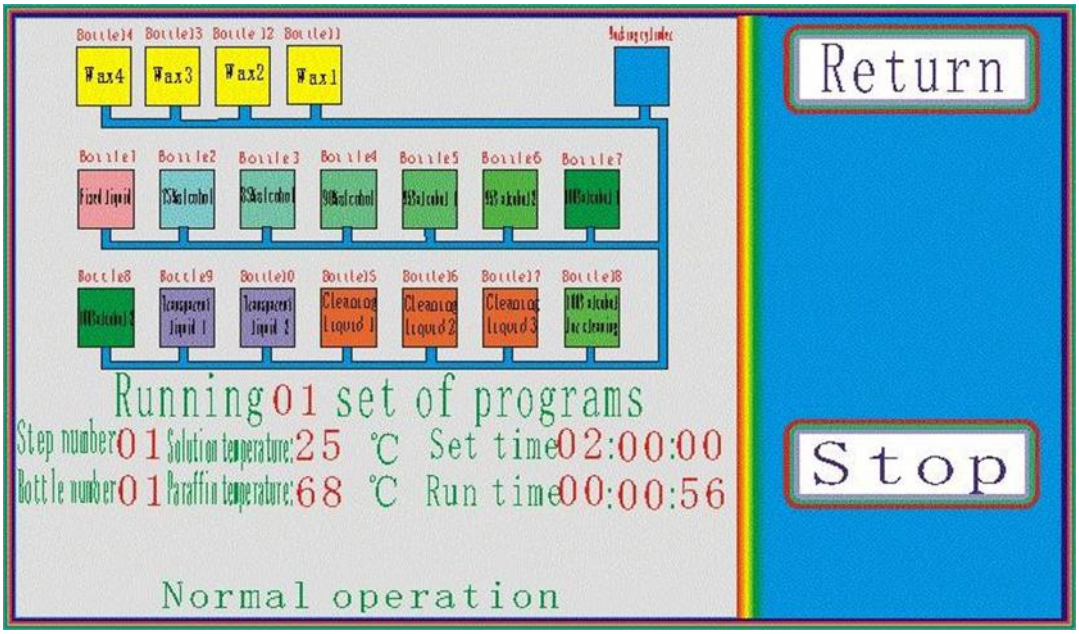

Figure-5

Press the "**Stop**" button and "**Confirm**" to start automatic liquid withdrawal. The machine will only stop working after the withdrawal is completed. If the paraffin cylinder is running, the machine will automatically request cleaning.
When the reagent volume is too low or the upward and downward liquid withdrawal fails during reagent operation, the equipment will automatically run the backup reagent for each bottle or use the backup reagent for replenishment (different models and methods may vary). If there is replenishment, the interface will display.

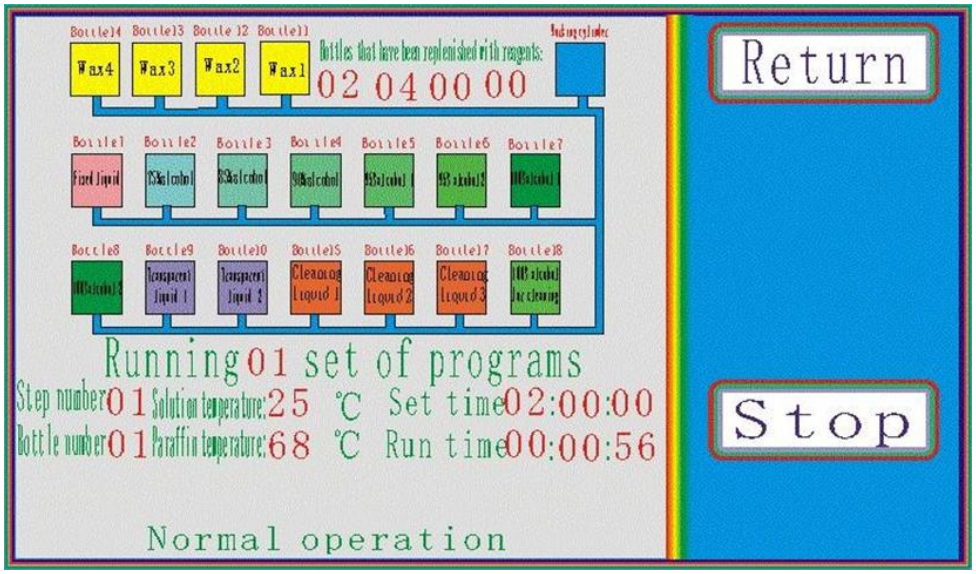

Figure-6

When the reagent backup bottle fails to return liquid when it is 0, or when the backup bottle also fails to return liquid when it is not 0, the fault bottle will be displayed. When both bottles fail, the machine stops running and enters a protection state. The interface is as follows.

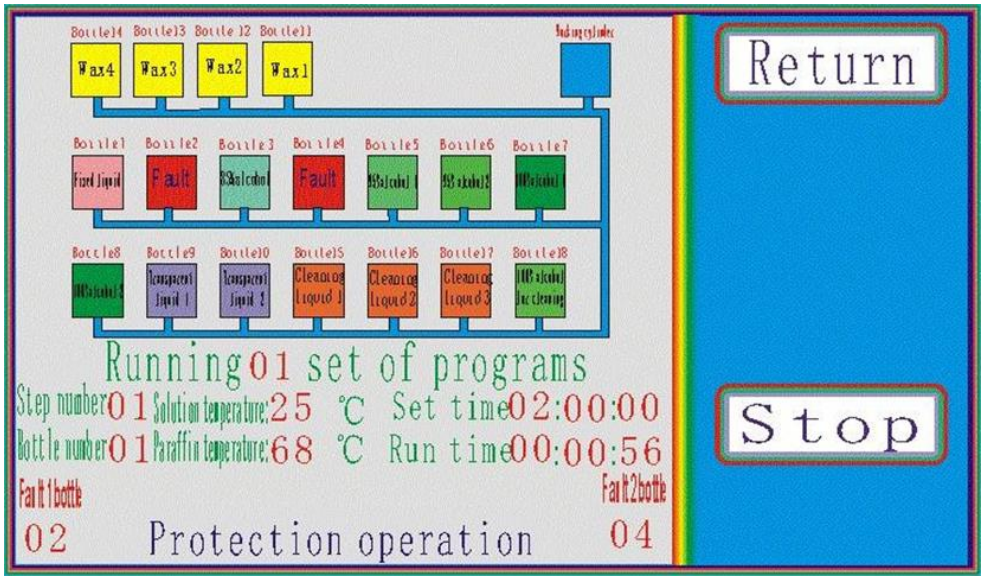

Figure-7

When it is necessary to replace the cleaning agent, the device will display after cleaning is completed.

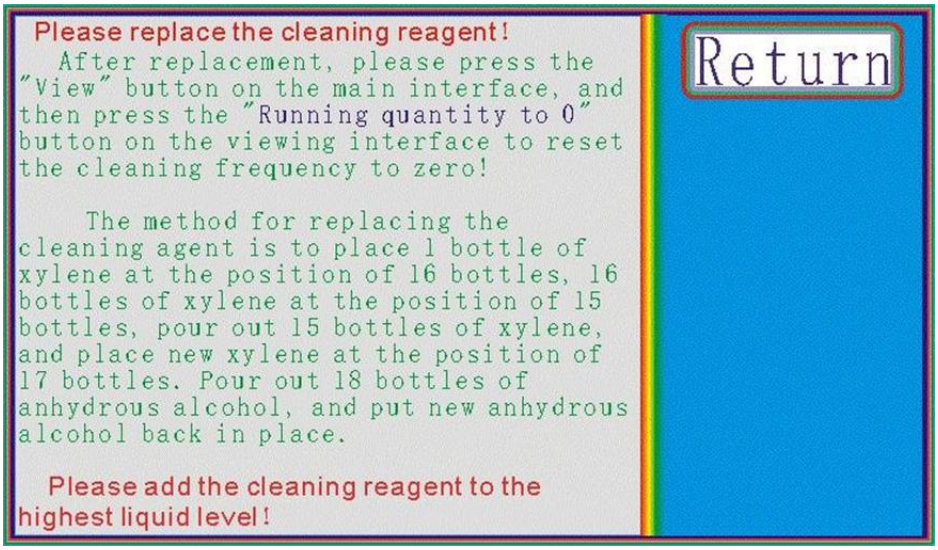

Figure-8

When it is necessary to replace the dehydrating agent, it will display after the equipment is cleaned.

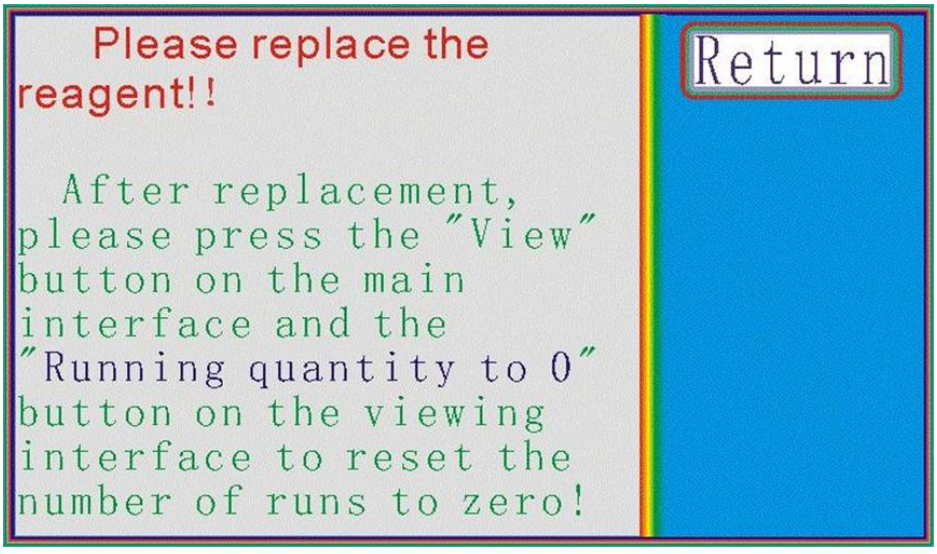

Figure-9

When there is fluid replenishment, it will display after the equipment is cleared.

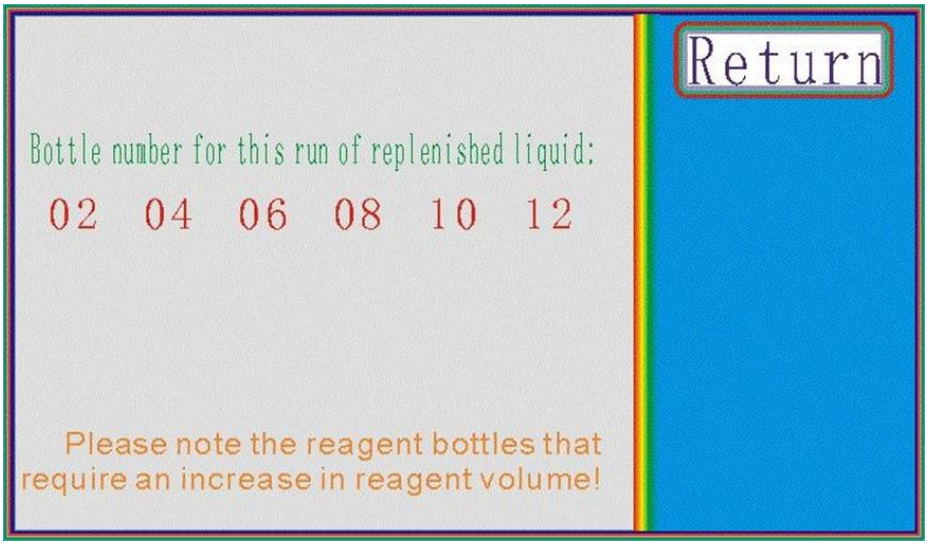

Figure-10

Press the **"Reagent Rotation"** button to enter the following interface.

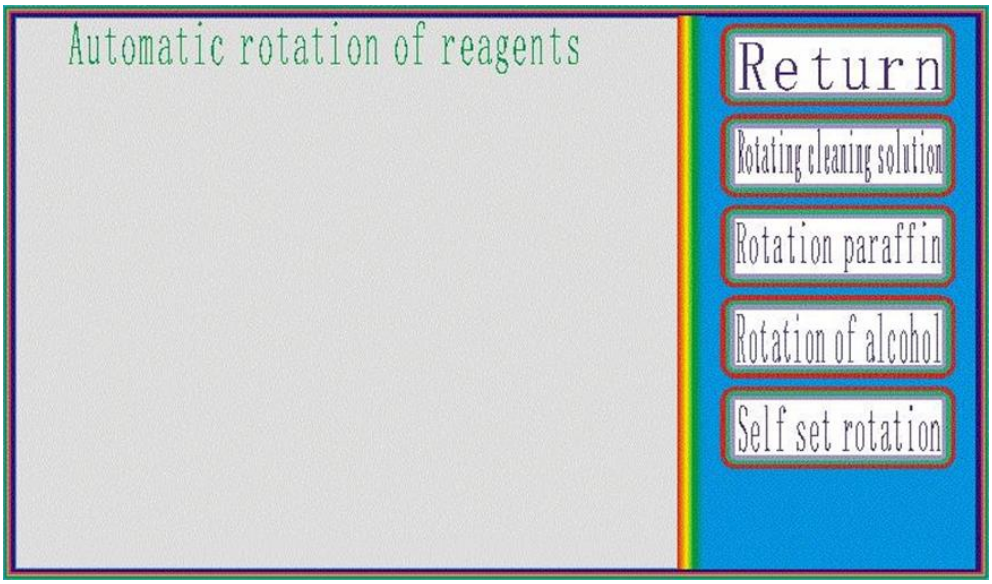

Figure-11

When pressing **"rotate alcohol"**, it will display as follows.

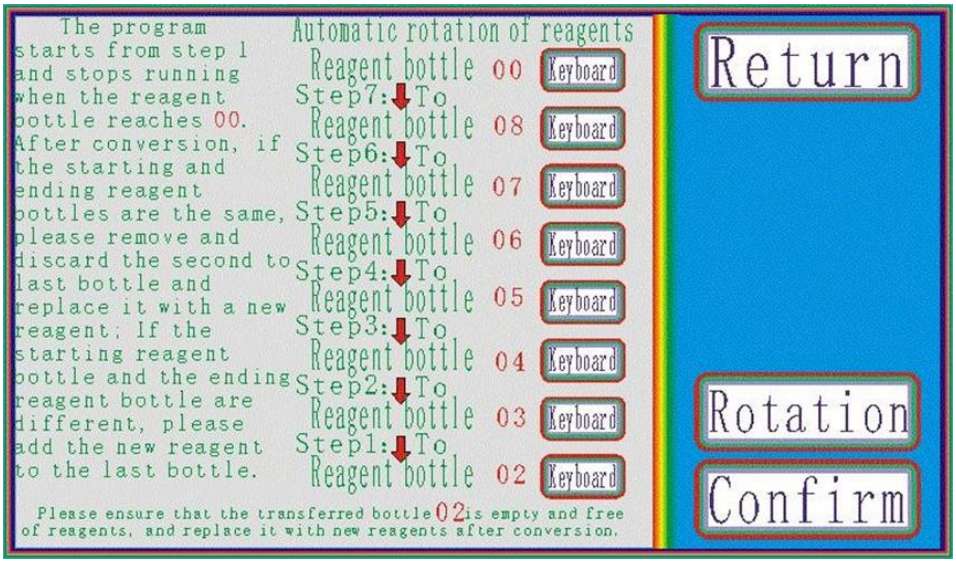

Figure-12

When selecting a rotating cleaning solution, the first three bottles of cleaning solution are rotated, and the self-set rotation is to input all bottle numbers by oneself. Press "**Rotation**" and "**Confirm**" key, the device will start automatic rotation and move forward, enter the following interface.

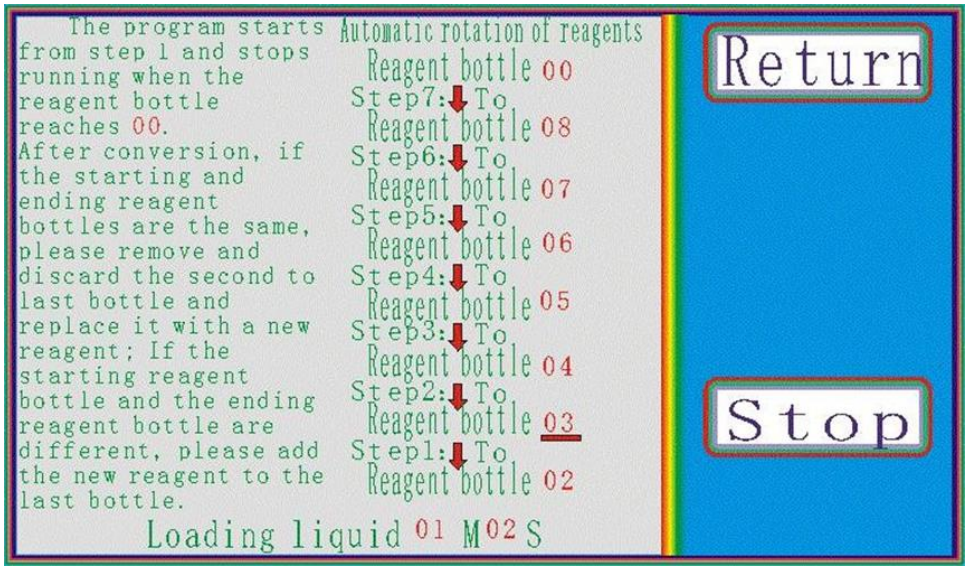

Figure-13

Press "**Return**" to return to the main interface, press "**Stop**" to enter.

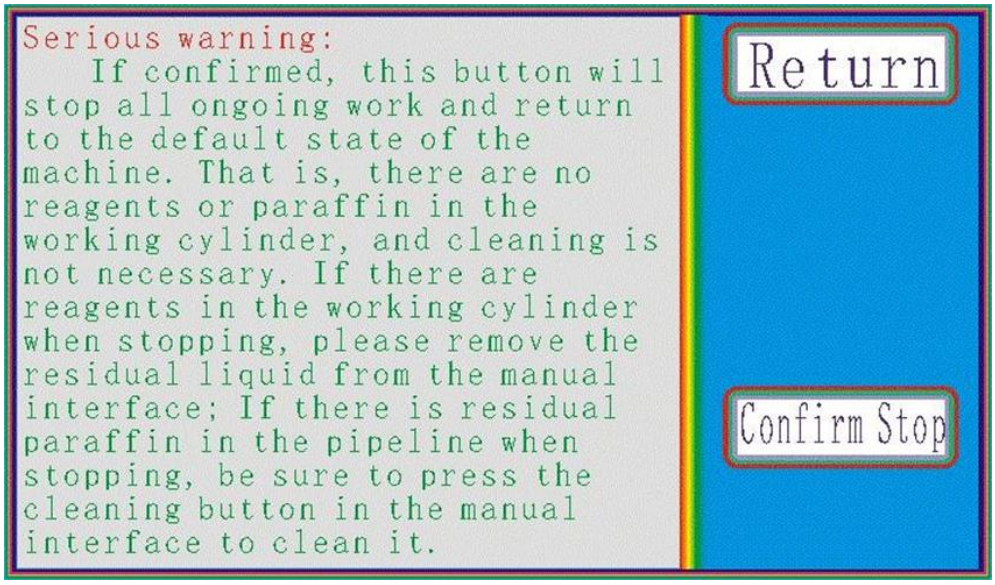

Figure-14

Press the **"Manual"** button to enter the following interface.

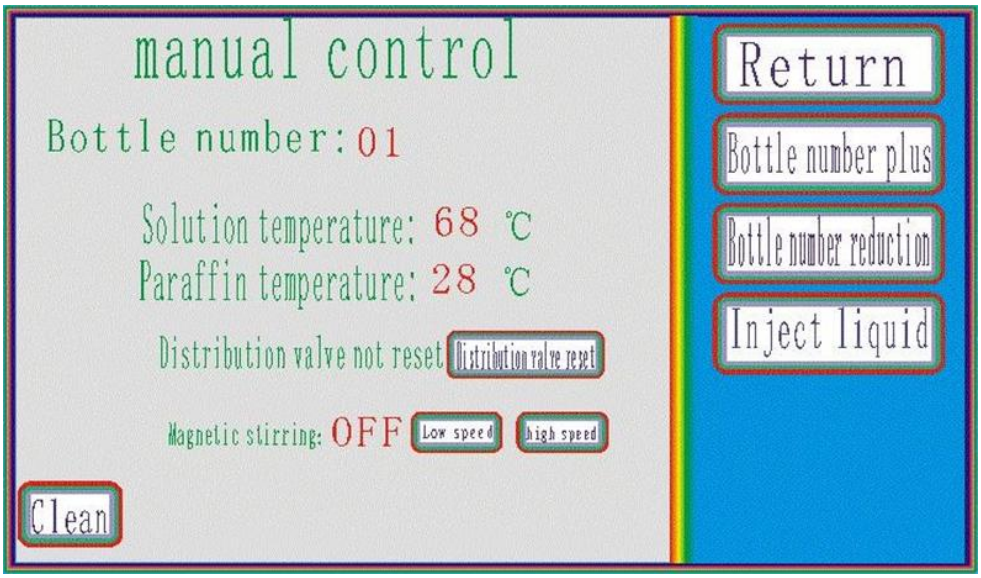

Figure-15

Press **"Return"** to return to the main interface; Press "**Add Bottle Number**" or "**Reduce Bottle Number**" to change the running bottle number. Press "**Add Liquid**" and "**Confirm**" to start adding liquid. If the liquid has already been added, there is only the "**Return Liquid**" button in manual mode. Press the "**Transfer Bottle**" button to choose between transferring out and in bottles. Press the "**Add Liquid**" button and then press "**Confirm**" to transfer one bottle of reagent to another bottle. Press the "**Clean**" button to enter the cleaning interface. If confirmed, start cleaning the working cylinder.

If the distribution valve has not been reset, press the "**Distribution Valve Reset**" button. If the distribution valve has been reset, it will display:

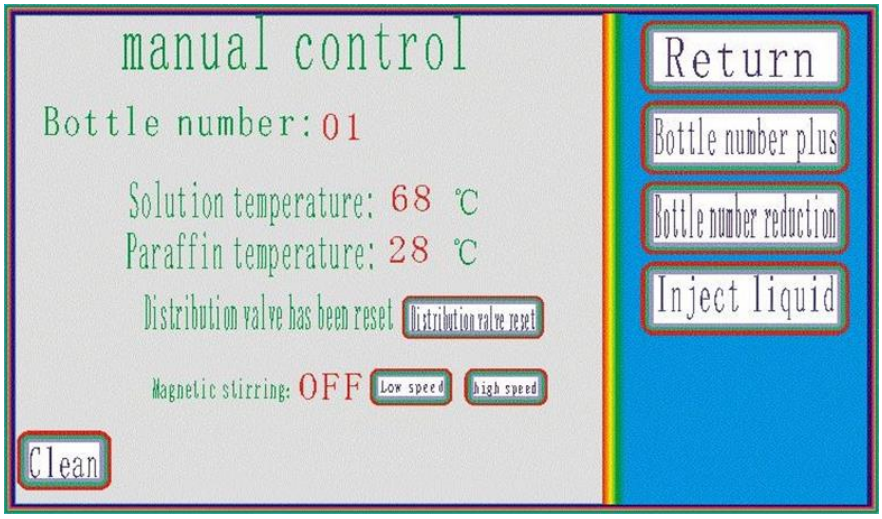

Figure-16

Press the "**Settings**" button to enter the following interface.

Figure-17

Click on the "**pink number**" to change the above parameters, press the switch button to switch the abstract mixing method, and switch between pneumatic mixing, pneumatic+magnetic mixing, and magnetic mixing.

Press the **"Set Program"** button to enter the following interface.

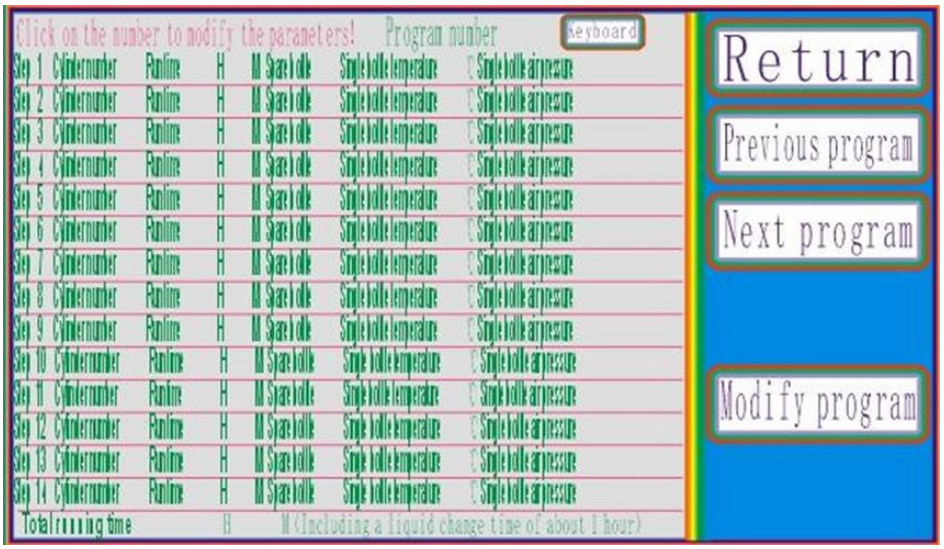

Figure-18

Click on the number to modify the parameters. The program ends when the cylinder number is 0, skips this cylinder when the time is 0, and selects the system temperature when the temperature is 0!
Enter after pressing "**Modify Program**" or step number.

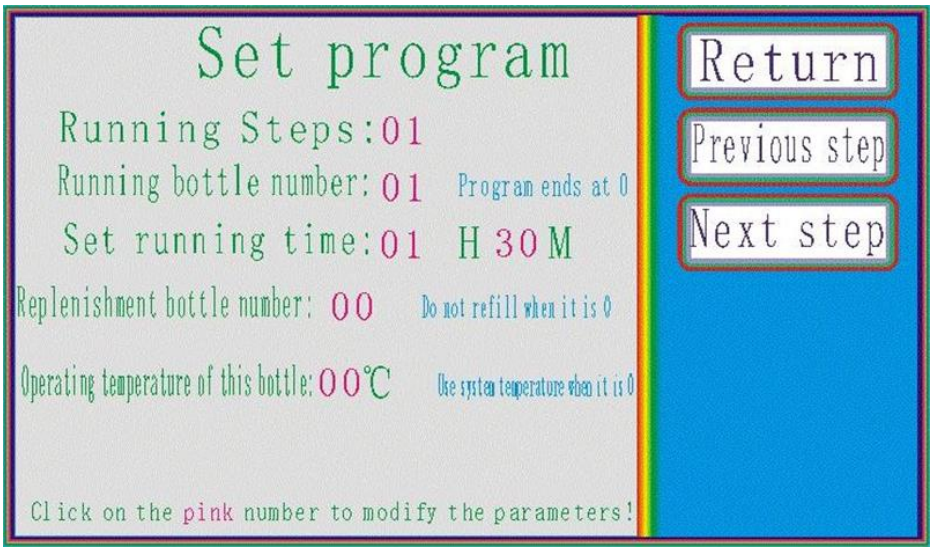

Figure-19

Click on the number to modify the parameters. The program ends when the cylinder number is 0, skips this cylinder when the time is 0, and selects the system temperature when the temperature is 0! Press "**Previous**" and "**Next**" to set other steps.
Press the "**On/Off Password**" button to enter the following interface.

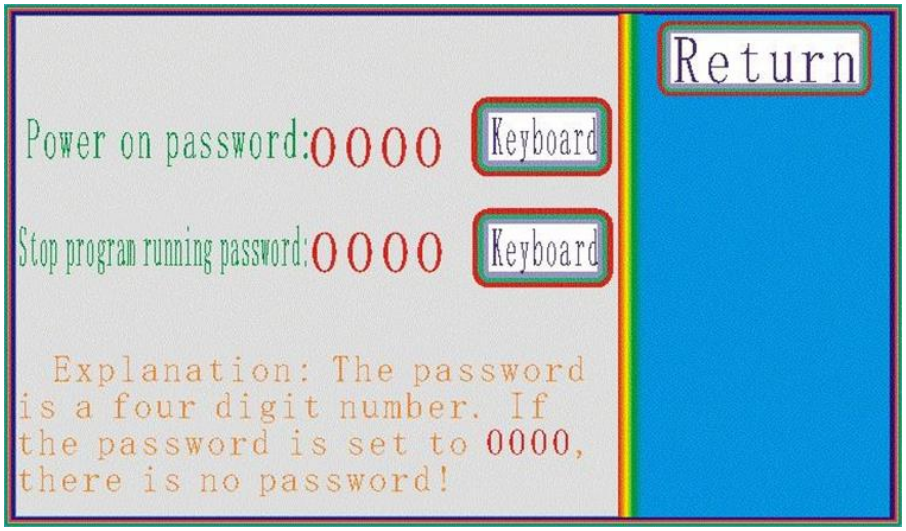

Figure-20

Press the keyboard to enter the power-on password and the stop program password.
Press "**self check**" to start the machine self check, and the display is as follows.

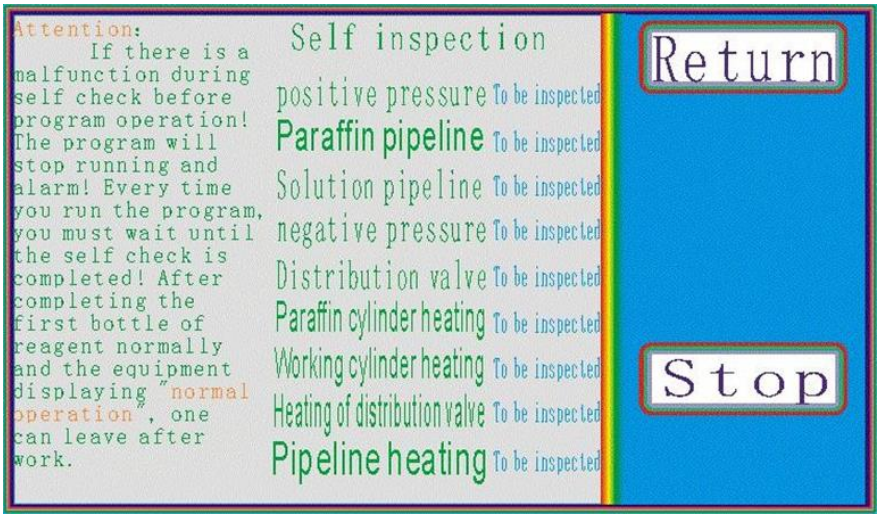

Figure-21

Press "**Return**" to return to the main interface, press "**Stop**" to enter the stop self-test. If it is a self-test before the automatic program runs, it directly enters the program running interface.

Press "**Check**" to start resetting the machine. The display is as Follows.

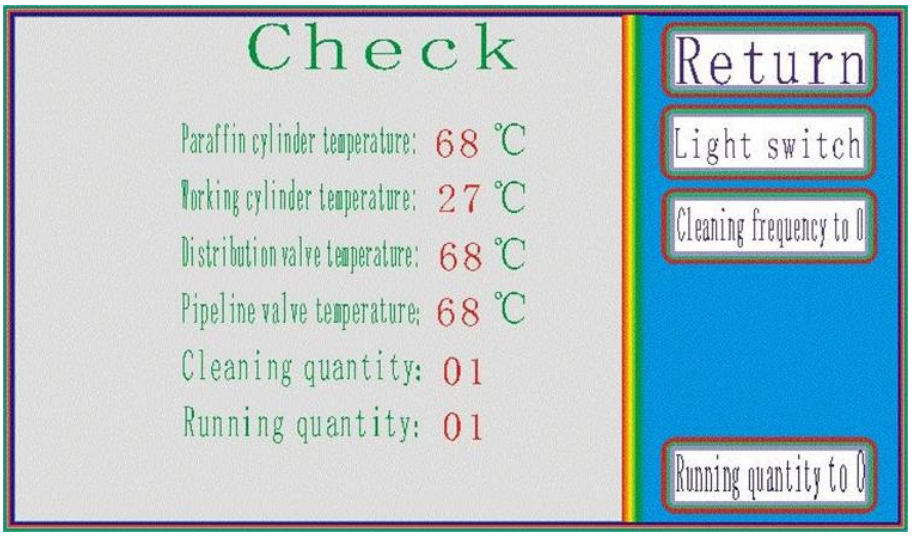

Figure-22

Press "**Return**" to return to the main interface, press "**Clean Zero**" to reset the cleaning frequency, and press "**Run Zero**" to reset the running frequency. There is a hidden "**emergency stop**" button below the number of runs. If the stop is confirmed, the device will stop all actions.
Press "**Stop**" to stop any automatically running steps.

7. Troubleshooting

Fault	Cause	Solution
No display on startup	Poor power connection	Plug it firmly in and replace the socket
	The fuse is blown	Replace the fuse
Unheated	Improper temperature setting	Reset the temperature
	The fuse is blown	Replace the fuse
The cylinder lid opening resistance	Residual wax or dirt on the work surface, cylinder lid, or around the cylinder	Clean the work surface, cylinder lid, or area around the cylinder of residual wax or dirt