

I、 Preface

We write this book in order to help installation and operation and to prolong its lifetime and ensure the safety during using.

II、 Safety



Danger symbol: This icon reminds the users that this product has dangerous voltage!



Warning symbol: This icon reminds the users that this product is enclosed with important operating and maintenance instruction!

【Warning】

1. In order to prevent fire or electric shock accident, do not expose the controller to the rain or humid environment. There are dangerous high-tension fittings inside the controller, therefore do not open the cover. Entrust the repairing work only to the qualified professional repairing personnel when repairing is required.
2. Without the clear approval from the controller manufacturer or its authorized units, any change or alternation to this controller might bring various inconveniences to the users when in use.

【Attention】

1. Please read this operating instruction manual thoroughly, so as to allow you to master the correct use of this controller.
2. After reading this operating instruction manual, please keep it safe and for reference in the future. If repairing is required, please contact the local dealer or the technical service center of our company.

【Notice for use】

1. In case this controller is not used for a long time, please remove the power plug from the socket.
2. Before switching on the power, please make sure that all wirings and power cord have been connected accurately.
3. Please put this controller in a ventilated dry area. Prevent it from getting close to the heat source, put it away from direct sunlight, mechanical vibration, dampness and dusty environment, and prevent it from getting close to other thermal-radiating objects.

【Helpful suggestion】

1. In order to prolong the service life of this controller, the time interval for continuously turning on and off the machine must be over 30 seconds.
2. Please switch off the power after use.
3. The power supply used must be consistent with the voltage specified value indicated on this controller; otherwise it will not work, or even burn out the controller.
4. When installing this controller, carefully check if the load parameters are consistent with the parameters required by this controller, otherwise it will not work, or even burn out the controller.
5. If it is halted accidentally, please close and restart.

III、 Precautions for Installation and Use

Users must carefully read the following precautions to ensure the normal use of the product, extension of its service life and the personal safety:

1. Users must install loads in strict compliance with the circuit diagrams and parameters supplied by our company.
2. The ground wire must be connected to the power supply line with good grounding.
3. The end user should use power supply cables in $3 \times 3\text{mm}^2$ or wider cable diameter. According to the National standards (GB). The socket should be of 30A or above according to the National standards (GB).
4. The end user should install air-break or leakage switch of 30A or above according to the National standards (GB).
5. Strictly check the power supply wiring of the control box. Power on to use only after no errors confirmed.
6. The electric appliances recommended by illegal manufacturers must not be connected to the controller. Unapproved dismantling and modification of the enclosed internal wiring are strictly prohibited. It is not allowed to connect or plug the wires and plug-in units on the power supply box during the power-on.
7. The connecting wires of the power supply box should be connected and plugged correspondingly according to the tags and specifications of the connectors. The output wires cannot be short circuited each other.
8. After using, please cut off the power to avoid aging of the device.
9. The installation of the controller must be performed in strict compliance with the installation instructions by qualified persons.
10. No recoverable elements exist in the controller. Don't try to improve it by yourself for the high voltage in the controller can cause dangers. The maintenance and adjustment must be performed by professionals.

For any consequences caused by wrong operation, the user should bear the responsibility.

IV、 Brief Introduction

1. General Description of Functions

Model		PR313
FUNCTIONS		
1.	LOCK	√
2.	PUMP	√
3.	BLOWER	√
4.	THEOMOSTATIC HEATING/ADJUST	√
5.	TEMPRETURE SENSOR	√
6.	LAMP	√
7.	FM DIGITAL TURNNING RADIO	√
8.	Bluetooth speaker	X
9.	MP3	X
10.	LEVEL DETECTION	√
11.	OZONE	√
12.	CLEANNING	X

2. Controller System Including:

- 1) Control panel(1);
- 2) Control electric box (1).

3. Characteristics of the Controller

- | | | | |
|--------------------------|---------------|--------------------------------|-----------------------|
| 1) Rated voltage | :AC220V-240V | 4) Power consumption | :<10W (all loads OFF) |
| 2) Working voltage range | : AC198V-242V | 5) Applied ambient temperature | :+5°C ~ +40°C |
| 3) Rated power | :50Hz/60Hz | | |

4. Devices controlled by the controlling system

- | | | | |
|-------------------------|----------------|--------------------|--------------|
| 1) Pump | :AC220V/1.5HP | 4) Lamp | : DC12V/1W*2 |
| 2) Thermostatic heating | : AC220V/1500W | 5) Ozone generator | : DC12V/6W |
| 3) Blower | : AC220V/300W | 6) Loudspeaker | : 8Ω/15W |

5. Schematic Diagram of control panel



Power switch



Choose to left



Function confirm



Choose to right

V、 Operation of Control Panel

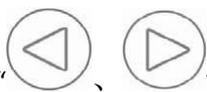
1 The panel is with inducing function, the duration of the touch is about 0.5 s. When any function button works, there is a sound of “di...”

2 Power Switch



Press “” to turn on the controller, lamp is turned on; Press again to turn off the controller and turn off all the functions.

3 Lamp



When the system is on, press “、” to choose the Light function, when cursor select



“”, press “” to turn on the light, light icon on LCD blinks, press “” again to turn off the light, light icon stops blink.

4 Lock

4.1 If no operation with the control panel for 1 minute, all the keys will be locked, “LOCK” displays

on LCD; Press any key for 3 seconds to unlock the keys.

5 Ozone

5.1 When the system is on, press "、

select "", press "

to turn on the ozone, ozone icon on LCD blinks, press "

again to turn off the ozone, ozone icon stops blink.

5.2 Ozone function works for 10 minutes and then it will stop automatically.

6 Blower

6.1 When the system is on, press "、

select "", press "

to turn on the blower, Blower icon on LCD blinks,

press "

again to turn off the blower, blower icon stops blink.

7 Pump

7.1 The water checking device of this controller protects the water pump from burning out.

7.2 When the system is on, press "、

select "", press "

to turn on the pump, pump icon on LCD blinks,

press "

again to turn off the pump, pump icon stops blink.

7.3 When the water level lowers than the setting value, pump will not work.

7.4 When the pump is working and the water level sensor checks the water level lower than the setting value, pump stops working automatically, pump icon on LCD blinks. If any time the level sensor checks the water level achieves the setting value, pump will work automatically.

8 Thermostatic Heating

8.1 This function works only when the water pump function is on.

8.2 When the system is on, press "、

" to choose the HEAT function, when cursor select ", press "" to turn on the heater:

8.2.1 2 Thermostatic heating function starts or stops according to the temperature(the temperature that the system defaults is 37°C):

Controlling rule is as follows:

If the temperature \geq setting temperature+1°C, stop heating;

If the temperature \leq setting temperature -1°C, start heating.

8.3 Press "

" again to turn off the heater.

8.4 Temperature adjustment

8.4.1 When the thermostatic heating function is on, press "

" till temperature value

blinks, then press " " or "

" once, temperature shall be increased or

decreased 1 °C; if press " " or "

" over 2 seconds, temperature will increased or decreased at the speed "1°C/0.5 s"; Without any operation for 5 seconds, LCD will display the water temperature.

8.5 Temperature setting range: 30°C--45°C.

8.6 When the temperature sensor error, LCD shows "E1" and the buzzer sounds: di...di..., thermostatic heating function will not work.

9 FM digital turning radio (when the ozone is on, FM function will be turned off automatically)

9.1 The FM frequency scope is 87.5MHz—108.0MHz.

9.2 When the system is on, press "、

" till cursor select ", press "" to turn on the FM radio, LCD displays the present frequency and "FM"; Then press ""

again to turn off the FM radio, the present frequency and "FM" will not show on LCD.

- 9.3 When the FM radio is on, press " " till "FM" and " MHz" on LCD blinks to adjust the frequency:

9.3.1 Press " " to increase the length of one step (the length of one step =100KHz): Press this button over 2 seconds, the system searches the radio stations of larger frequencies automatically; the digital phase locked loop will lock the FM station automatically and the LCD shows the present frequency, when it reaches to the limit of 108.0MHz, press this button again and the frequency jumps to 87.5MHz.

9.3.2 Press " " to decrease the length of one step (the length of one step =100 KHz). Press this button over 2 seconds, the system searches the radio stations of smaller frequencies automatically; the digital phase locked loop will lock the FM station automatically and the liquid crystal shows the frequency of this station; When it reaches to the limit of 87.5MHz, press this button again and the frequency jumps to 108.0MHz.

- 9.4 When the FM radio is on, press " " till "VOL" on LCD blinks, then press " " to increase the volume, press " " to decrease the volume. The adjust range is 0-20.

9.5 Station storage/select

9.5.1 Station storage: when select the station frequency to be stored, press " " till "CH" on LCD blinks, then press " " or " " to choose the position to be stored (1-18,18 positions in total), then press " " the frequency shall be stored in the selected location, LCD shows the present frequency.

9.5.2 Station select: when FM function is on, press " " till "CH" on LCD blinks, then

press "" or "" to select the stored frequency (1-18, 18 positions in total).

9.5.3 When press "" to choose different functions, if no operation with "", "" for 5 seconds, system will quit from the state, or press "" again to quit from the state.

VI、 Attention

In order to guarantee the products function, prolong its lifetime and ensure the safety during using, please read the following items carefully before using:

11. The end user should carry on the load installation strictly according to the wiring diagram and parameters.
12. The ground wiring should be connected to the normal-running supply circuits, so as for the steaming.
13. The end user should use power supply cables in $3 \times 3\text{mm}^2$ or wider cable diameter. According to the National standards (GB). The socket should be of 30A or above according to the National standards (GB).
14. The end user should install air-break or leakage switch of 30A or above according to the National standards (GB).
15. Strictly check the power supply wiring of the control box. Power on to use only after no errors confirmed.
16. Please do not install the equipments of bad quality that manufactured by illegal factories to the steaming device; Disassembling, changing the fixed inner wiring or connect some wiring to the power box are forbidden.
17. The connection wire of power box should wire according to the specification, the output wires should connect correctly to avoid short-circuit.
18. After using, please cut off the power to avoid aging of the device.
19. The installation of the controller should be carried out by qualified personal according to the installation manual.

20. Do not try to repair of the modifier parts of the controller, and the high-voltage might cause danger.

All the maintenance and repairing should be carried out by qualified personal.

For any consequences caused by wrong operation, the user should bear the responsibility.

VII、 Declaration

1. Any maintenance or repairing should be handled by qualified maintenance personal authorized by the manufacturer or agent of this controller. Otherwise, the products cannot enjoy free maintenance and any results will be bore by the customer.
2. This manual is just for reference. If there are any changes or modifications on the design or explanation, please excuse for no further notice. If there are any mistakes or unclear points, the explaining right belongs to the manufacturer.