

PROGRAMMING INSTRUCTIONS

1. Illustration to buttons

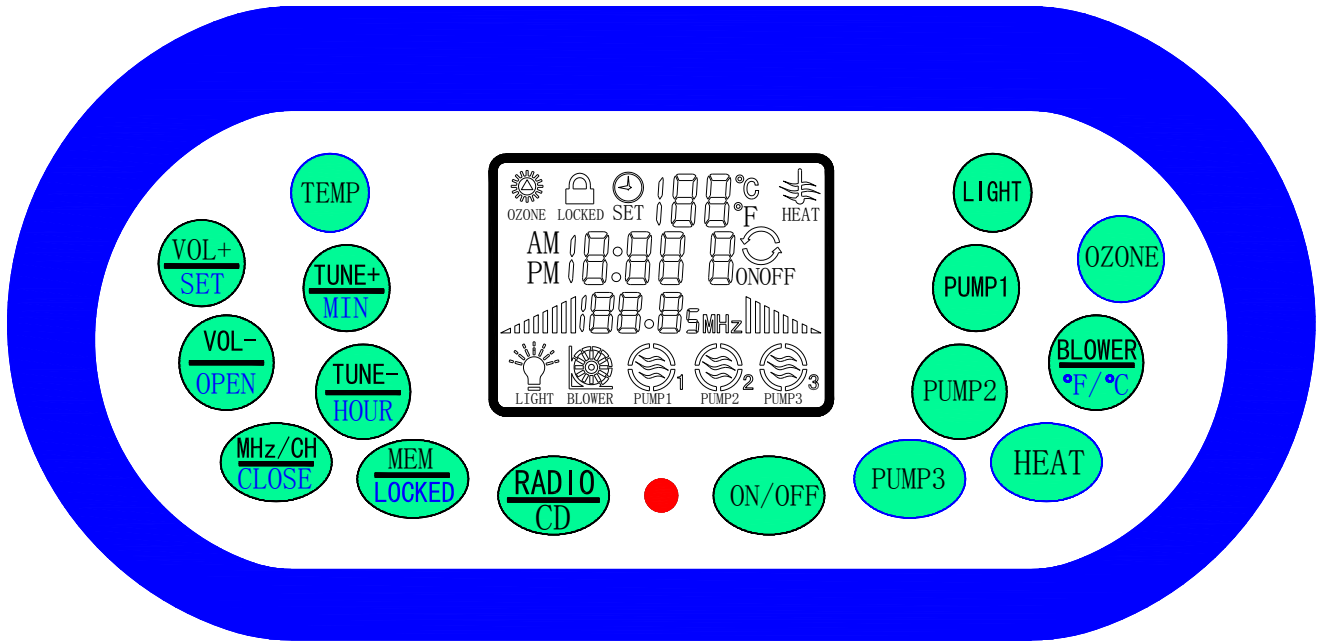



















Fig . 1: Sketch map of big massage bathtub

“  ” Radio channel up / Minute	“  ” power On/ Off or mode shift
“  ” radio channel down/ Hour	“  ” radio on/ off or CD shift
“  ” volume up/ time setting shift	“  ” blower on/ off or °C & °F Shift
“  ” volume down/ open memory channel	“  ” LED & fiber optic lights on/ off
“  ” radio channel memory/ lock channel	“  ” whirlpool pump 1&2 on/ off
“  ” select radio channel / close channel	“  ” waterfall & column pump on/ off
“  ” ozonizer on/off	“  ” whirlpool pump 3 & circulation pump on/ off.
“  ” preheat on/ off or preset	“  ” Temperature setting
Note: 1. All the functions listed on the key in blue letter only works on the “off” model. 2.  function is not available on SPA-329,312, which model without water column and waterfall.	

2. Functions Summary

- (1) Constant heating, preheating, displaying and setting water temperature.
- (2) Display time in AM & PM 12 hours mode.
- (3) Circulation cleaning and presetting circulation cleaning.
- (4) Radio, 10 channels memory or circumscribe device of CD or DVD, offering power output for DVD/CD and TV set.
- (5) Display and adjust 87 grade volume.
- (6) Infrared remote control.
- (7) Underwater multicolor LED light and ozone.
- (8) Freezing-proof protection.
- (9) Functions memory when power shut down suddenly
- (10) Fahrenheit & Celsius temperature display shift.
- (11) Three whirlpool pumps, One circulation pump, One water Column & waterfall pump, One blower.
- (12) Functions locked on panel.
- (13) Limit working watts control (optional)
- (14) Selection of 110-120V/60Hz, 220-240V/50-60Hz, or 380-415/50Hz

3. Operations

1) When the spa is connect with power, the control panel will be in dark light, and LCD screen on the panel will be displaying time and current water temperature, and the radio channel will be display “---”. Under the situation, it indicates the spa system is on off status, the preheat and circulation cleaning functions are turned off.

If the water temperature sensor is broken circuit, the screen will display“E1”, if the water temperature sensor is short circuit, the screen will display” FF”. In this case, the heater can not work normally, please check the wire of which is connecting with the water temperature sensor.



Fig . 3: normal water temperature.

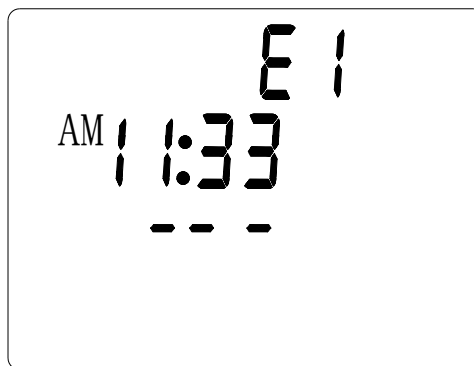






Fig . 4: water temperature sensor broken circuit


2) Lock operation :


This is a manual and automatic function. If there is no any operation on the panel in 30 minutes, all the current working functions will be locked automation.

On the “off” status, press the “” the key to lock any functions, and the screen will display the “locked” signal. To press the “” key twice to unlock the functions, once the function is unlocked, the “locked” signal will disappear on the screen.


3) Time setting operation:

On the “ off” status and the preheat and circulation cleaning without working, press “  ” or “  ” key to start time setting. The “:” signal will stop to flash, but the minute and hour will flash at this time.

To press the “  ”key one time, will add one hour, the hour number will be displaying on the screen.

Pressing the “  ” without stop, the hours will increase continually till stop pressing the key. The hours adjustment range is AM 0~PM 11.

To press the “  ”key one time, will add one minute, the minute number will be displaying on the screen.

Pressing the “  ” without stop, the minutes will increase continually till stop pressing the key. The minutes adjustment range is 0-59.

After finishing the time setting, the system will quit out the time setting mode in 6 seconds.

4) Operation to circulation-cleaning setting:



Only one circulation-cleaning program can be set in one day in a spa. The circulation cleaning working status will be displaying on the LCD screen. When it works or can not see from the screen. If the “  ” signal is displaying on the screen, it indicates the circulation-cleaning is on, and the “  ” signal is disappeared, it indicates the circulation cleaning is off. See following Fig . 5-6.



Fig . 5: Circulation-cleaning off

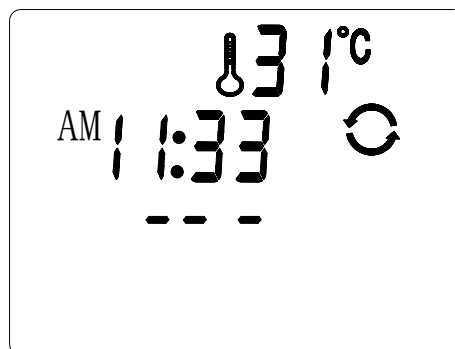











Fig . 6: Circulation-cleaning on



All the setting steps of circulation-cleaning must be operated on the “off” status, the LCD screen will be displaying “---” at this status.

(1)、Press “  ”, to enter the Circulation-cleaning setting model, and the screen will flash the “  ”signal.



(2)、Press “  ”, can start the circulation-cleaning setting (If press “  ”key, or without any pressing in 6 seconds ,the circulation-cleaning will be shut down, and the system will quit out the setting model

automatically.), And this time, “  ”signal won't flash. The system enter into the setting mode for the start time of circulation-cleaning setting, the screen will flash a time number (this time is the start time of the circulation-cleaning.), at this moment, press the “  ”and“  ” key to set the time.





To press the “” key one time, will add one hour, the hour number will be displaying on the screen. Pressing the “” without stop, the hours will increase continually till stop pressing the key. The hours adjustment range is AM 0~PM 11.


To press the “” key one time, will add one minute, the minute number will be displaying on the screen. Pressing the “” without stop, the minutes will increase continually till stop pressing the key. The minute adjustment range is 0-59.

After setting the start time of Circulation-cleaning, and move on to set the working time of circulation-cleaning.

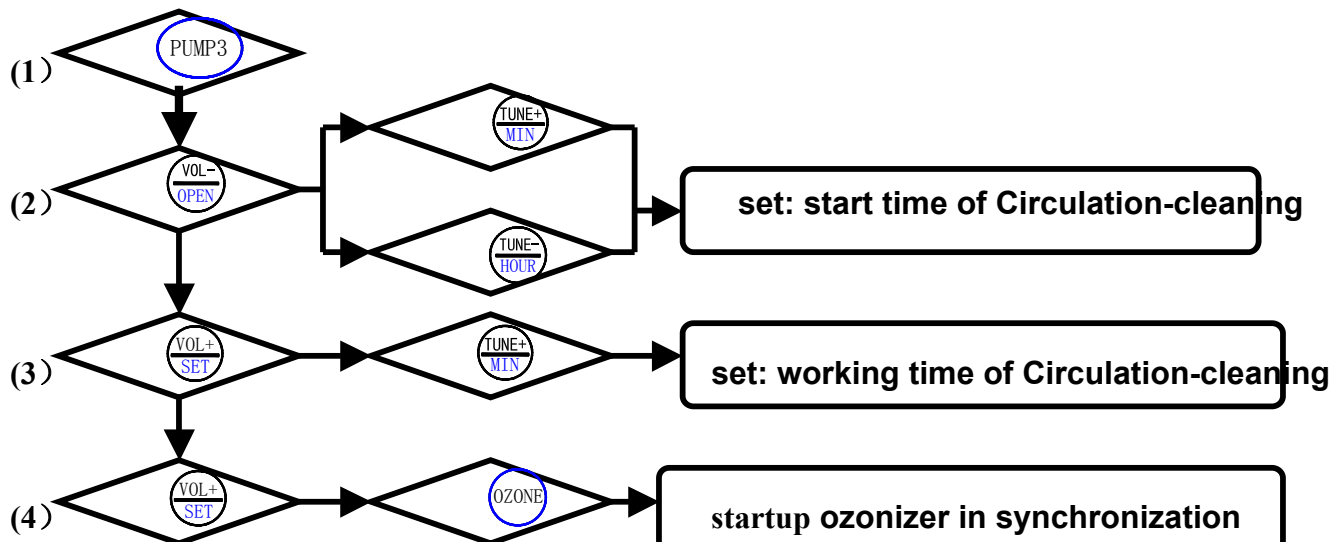
(3)、Press “” key to shift to the setting mode of the working time of circulation-cleaning. At this moment, the time displaying on the screen is at least 5 minute., the working time number on the screen won't flash. To press the “” key one time, the working time will add 5 minute. The maximum working time of circulation time is 19 hours 55 minutes (this time can be adjusted according to the user).

After setting the working time of Circulation-cleaning, and move on to set the ozone working in synchronization

(4)、And then press the “” key again to set startup the ozonizer working in synchronization, at this time, the “” signal will be flashing on the screen. This flashing signal indicates the ozonizer doesn't work in synchronization. Press the “” key to startup the ozonizer, when the ozonizer works, the “” signal will be displaying on the screen.

(5)、after the steps are done, press the “” key to confirm the setting, or wait for 6 seconds, the system will confirm the circulation cleaning setting and quit out setting mode.

Detailed steps refer to the below Fig.



(5) Press “ PUMP3 ” to confirm

*** Notice ***

- (1)、the setting steps of Circulation-cleaning must be operated on the “ off” status.
- (2)、During the whole setting process, the circulation pump and ozonizer are not working.

5、 Preheating setting:

Only one preheating setting program can be set in one day in a spa. The preheating working status will be displaying on the LCD screen. If it's work or not ,can be seen from the screen. If the “ ON” signal is displaying on the screen, it indicates the preheating is working, and the “ OFF” signal is displaying on the screen, it indicates the preheating is not working. See following Fig . 7-8.

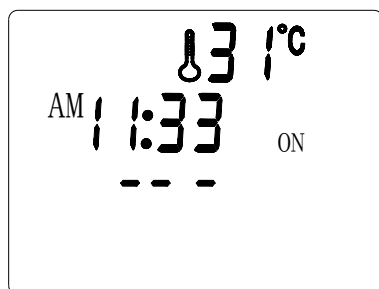


Fig . 7: Preheating On

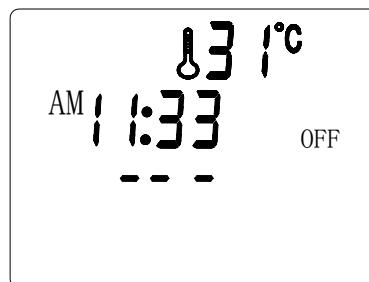


Fig . 8: Preheating Off

All the setting steps must be operated on the “ off” status, the LCD screen will be displaying “---” signal at this status.

(1)、 Press “ HEAT ”, to enter into the preheating setting model, and the screen will flash the “ON/OFF” signal.

(2)、 Press “ VOL- / OPEN ”, can start the preheating setting (If press “ MHz/CH / CLOSE ”key, or without any pressing in 6 seconds ,the preheating will be shut down, and the system will quit out the setting model automatically.), the signal on the screen will be from “ ON/OFF” turn into “ON”, won't flash, just displaying, The system is on the setting mode for the start time of preheating setting, the screen will flash a time number(this time is the start


time of the preheating. (Press on the “ MHz/CH / CLOSE ”key can turn show down preheating setting, and the “OFF” signal will be displaying on the screen).


at this moment, press the “ TUNE+ / MIN ” and “ TUNE- / HOUR ” key to set the time.

To press the “ TUNE- / HOUR ”key one time, will add one hour, the hour number will be displaying on the screen.


Pressing the “ TUNE- / HOUR ” without stop, the hours will increase continually till stop pressing the key. The hours



adjustment range is AM 0~PM 11.

To press the “” key one time, will add one minute, the minute number will be displaying on the screen.



Pressing the “” without stop, the minutes will increase continually till stop pressing the key. The minutes adjustment range is 0-59.


After setting the start time of preheating, and move on to set the working time of preheating.

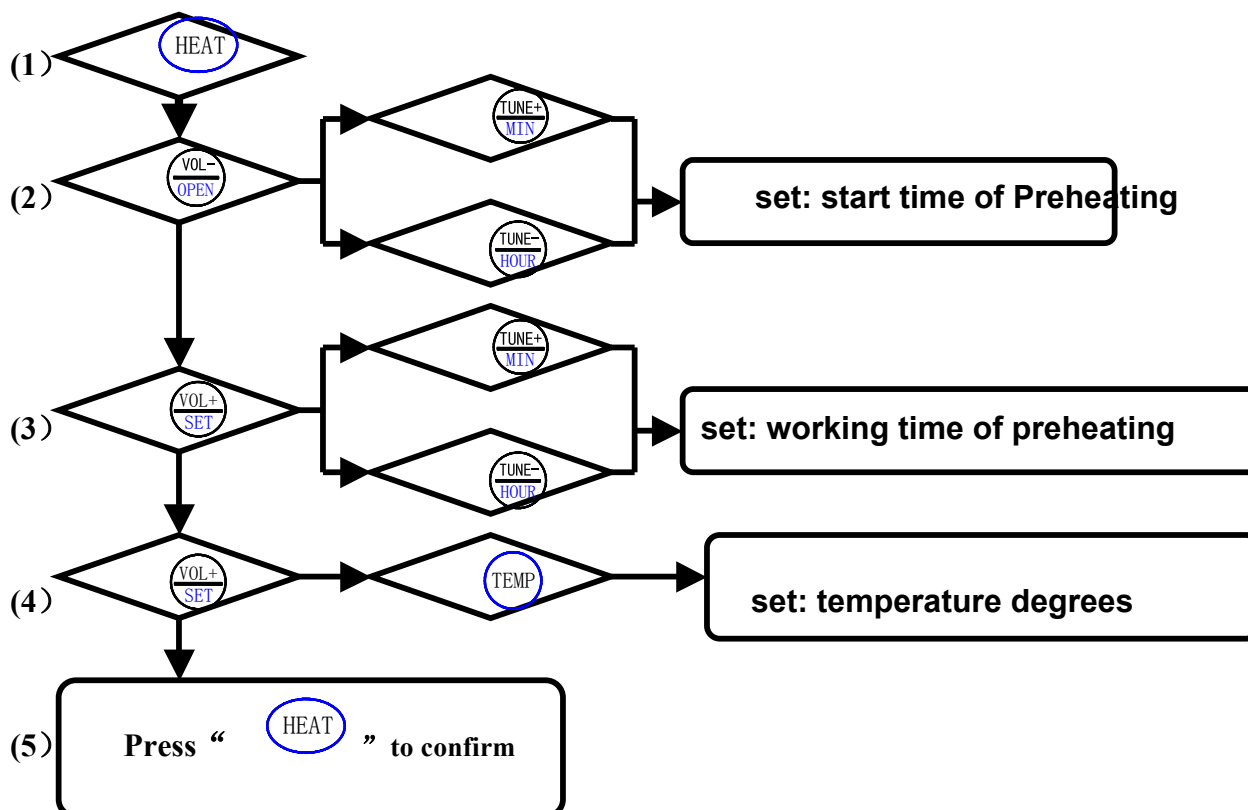
(3)、Press “” key to shift to the setting mode of the working time of preheating. At this moment, the time displaying on the screen is at least 10 minute, the working time number on the screen won't flash.

Pressing the “” key each time, the working time will add 10 minute, Pressing the “” key each time, the working time will add one hours . The maximum working time of preheating is 19 hours 50 minutes.

After setting the working time of preheating, and move on to set water temperature.

(4)、And then press the “” key to set the water temperature, at this time, the “SET” signal will be flashing on the screen. Pressing the “” key to increase the temperature, loose the key when temperature reach the require degrees. The limited temperature is 18-40℃.

(5)、after all steps are done, press the “” key to confirm the setting, or wait for 6 seconds, the system will confirm the preheating setting and quit out setting mode.







***** Notice *****

- 1、 all the setting steps of preheating must be operated on the “off” status, and the LCD displays “ --- ” .
- 2、 Please note that if the screen shows "on" or "off". If the screen showing "on" signal, indicates preheating function is on. , when the time reach to the set time of preheating, the heater will work automatically. If the screen show "off" signal, indicates preheating setting is not successfully, the heater won't start at anytime, please reset the preheating program.
- 3、 During the whole setting process, the circulation pump and heater are not working.


6、 Preheating working status:

When time reach the set time of preheating program, and the “ON” signal of preheating is displaying on the screen, meanwhile, the tub is filled with enough water. The preheating program will be startup automation, the heater beginning to heat and the circulation pump will be working at the same time. The screen is showing the countdown of preheating.

Once the temperature reach to the setting degrees, the heater will stop heating automatically. Once the temperature is below the setting degrees, the heater will begin to heat automatically. As soon as the countdown time is finished, the preheating program will shut down, and heater stop working automatically.


During the preheating process, to press the “  ” key or “  ” key to quit out the preheating program, turn off the heater.

7、 Circulation-cleaning working status:

On the “off” status, when time reach the set time of circulation-cleaning, and the “  ” signal of circulation cleaning is displaying on the screen, meanwhile, the tub is filled with enough water. The circulation-cleaning program will be start-up automatically, the circulation pump and ozonizer will begin to work at the same time. The screen is showing the countdown of circulation-cleaning.

The working time of ozonier is: works for 15 minutes and stop for one hour and 45 minutes, and then begin to works for 15 minutes and stop for one hour and 45 minutes. This working status will last till the circulation-cleaning time is finished.

As soon as the countdown time of is finished, the circulation-cleaning program will shut down automatically.

During the circulation-cleaning process, to press the “  ” key to shut down the circulation-cleaning program, the circulation pump will be off automatically.



***** Notice *****

- 1, if the setting temperature is lower than or equal with water temperature in the tub, Even the Preheating program is on, the circulation pump and heater won't be working.
- 2, For the “I” type heater, the circulation pump must be or more than 1HP, otherwise there is no enough water pressure in the heater tube to push on the valve of water pressure sensor, so the heater can't start to work.(there is a water pressure sensor in the heater tube).



3, If the above conditions are delivered, and the heater is still not working, please draw the wire of water pressure sensor from the heater, then connect two ends of this wire directly, and the heater will works normally.

8、 Turn ON/ OFF operation.

On the “off” model, to press the “”key to turn on, and press the “” key again to turn off. When all systems was turned off and the screen shows “---”signal; when it was turned on, the “---”signal will disappear. Like the following Fig.

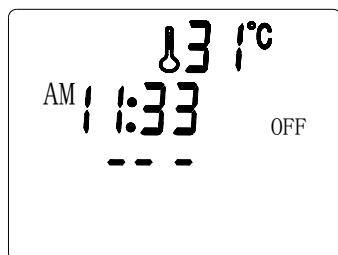


Fig . 9: OFF

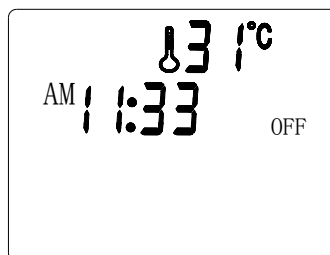





Fig . 10: ON

9、 Temperature setting

On the “on” status, meanwhile, the heater is working, the temperature can be adjusted. To press the “” key each time, the temperature will add one degree. Pressing the “” key without stop, the degree will increase continually till 45°C. When the degree is reach 40°C, to press the “”key, the degree will be 18°C again. The adjustable temperature degrees is 18-45°C.

10、 Operation of Radio & CD:

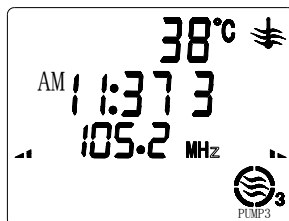








Fig.11: Radio frequency is 105.2 MHz, Save the present frequency to channel 3 (Save channel) or Exchange the frequency form channel 3 to the present (Searching channel)



I)、 Key  is the ON/OFF key for radio and CD. It is only available in the status of power on. The first pressing is turning on the radio, the second pressing will turn off the radio and turn on the CD at the same time, and the third, will turn off the radio and CD simultaneous.



II)、 LCD will show present frequency and volume of the radio after turning on the radio.

III)、 on the working of status, The volume of the present radio frequency can be changed by pressing “” & “” .



IV)、 Pressing the key “” will take out the memorized radio frequency, Pressing the key


“  ” continually will take out the memorized radio frequency from channels will be saved at present channel by pressing this key continually. If none of the channel, LCD will display “---”.

V)、Press the key “  ” could memorize the present radio channel, Pressing the key “  ” continually to select the present radio channel from memory. The channel of max is 10, situations of channel is 0-9.


VI)、The volume can be changed by pressing key “  ” & “  ”.

11、 Operation of Pump :

The “Pump1” key are controlling two whirlpool pumps for massage, the “Pump2” key is controlling for the pump for water Column & waterfall. the “Pump 3” key is controlling a single whirlpool pump for massage. When press the “pump 3” key, the screen is displaying the “  ”signal. (if the screen is displaying the signal “  ”, this signal is indicating the circulation pump is working).


12、 Operation of Ozone:

The ozone could be working on the circulation-cleaning program.

Press the key “  ” to turn on/off the ozonizer. After the ozonizer is turned on, it will last working forever till it is turn off.



The working situation is working 15 minutes every two hours, in other words, *works for 15 minutes and stop for one hour and 45 minutes, and then begin to works for 15 minutes and stop for one hour and 45 minutes.*

13、 Operation of lights:

To press the “  ” key to turn on or off the underwater light and fiber optic lights.

All the lights can be turned on on any mode, so to turn on is way to test if the spa system is connect with power successfully or not.

14、 Operation of constant water temperature:

1)、To press the “  ” key two times(the first time is to turn on the circulation pump)to turn on the heater, and press “  ” to set the temperature degrees. The heater will be working, not stop,till the temperature reach the set degrees. Once temperature is below the set degrees, the heater will begin to work again automatically . For example: if the temperature is set at 35□, when the water temperature reaches or exceeds 35□, the heater will be shut down automatically and the circulation pump will stop too in 5 seconds. However, when the water temperature reach or lower than 34□, the heater will start up automatically again to heat the water. In this way, the user can keep the same water at anytime if the spa system is with power.

2)、If the water temperature sensor is broken circuit, the screen will display “E1”, if the water temperature sensor is short circuit, the screen will display” FF”. In this case, the heater can not work normally, please check the wire of which is connecting with the water temperature sensor.

15、 Operation of blower:





1) To press the “ ” key to turn on/off blower. The blower can work without any water in tub. So it's way to test if the spa system connect with power successfully or the controller is working or not?

2) Blower will be shut down automatically after it has been working for 2 hours.

16、 Fahrenheit & Celsius temperature shift:



On the “ off” mode, to press the “ ” key to shift the Fahrenheit or Celsius degrees.

17、 If the water level in the tub is not reaching the water level sensor, no pumps, no heater, no ozonizer can be turned on, except the blower. The signals will be flashing on the screen.

18、 Frozen preventing control:

The heater & circulation pump will be turned on automatically when water temperature is below 5℃, and will be shut down when the temperature reaches 10℃. To keep this function on, must ensure the spa is connect with power well.

4. Electric parameters

(1) Performance index:

Rated voltage: 220VAC/50Hz (110VAC/60Hz)

Maximum working current: 60A (100A/110V)

Voltage-resistance: 1250V/1 minute without penetration。

Isolative resistance : $\geq 200M\Omega$

Water resistance grade: IPX5。

Electric shock resistance: first grade

(2) Output loading index

Heater: AC220V/3KW x 1

Surf Water pump: AC220V/3 HP x 1

water pump: AC220V/2HP x 2

water pump: AC220V/1HP x 1

Air pump: AC220V/0.7kw x 1

spa light: AC12V/5W x 2

Ozone: AC12V/15W x 1

water pump: AC220v/0.35HP x 1

Radio: 1) Frequency Range: FM: 87.0~108.0MHz

2) Maximum Output Power: 10W

3) Speaker: 8 Ω damp proof speaker

5. Warning Information

- Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Details concerning cleaning and other maintenance
- Maintenance of water purity, especially PH values and chlorine concentrations.
- Cleaning and disinfection
- Use and installation of a cover.
- Disposal of water
- Precautions to avoid damage due to water freezing
- Precautions to avoid damage when the appliance is left empty for extended period.

2.2 Sub-clause 7






The installation instruction shall state the substance of the following:

- Earthed appliances must be permanently connected to fixed wiring;
- The appliance should be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- The floor has to be capable of supporting the expected load.
- An adequate drainage system has to be provided to deal with overflow water.
 - Details of how to follow the wiring rules, for example, specifying that parts are installed in the correct zone and that equipotential bonding is carried out.

WARNING

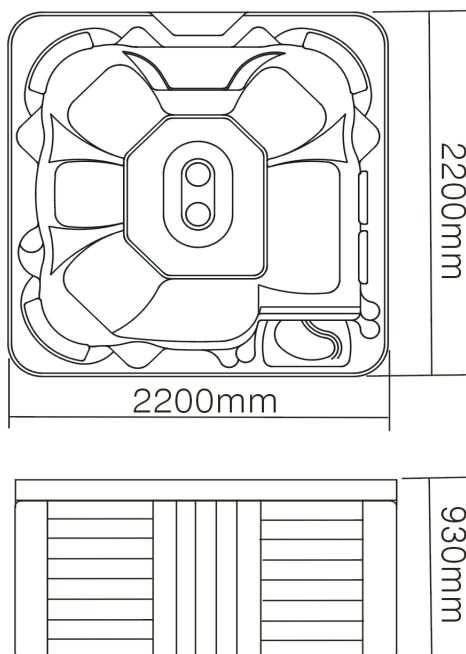
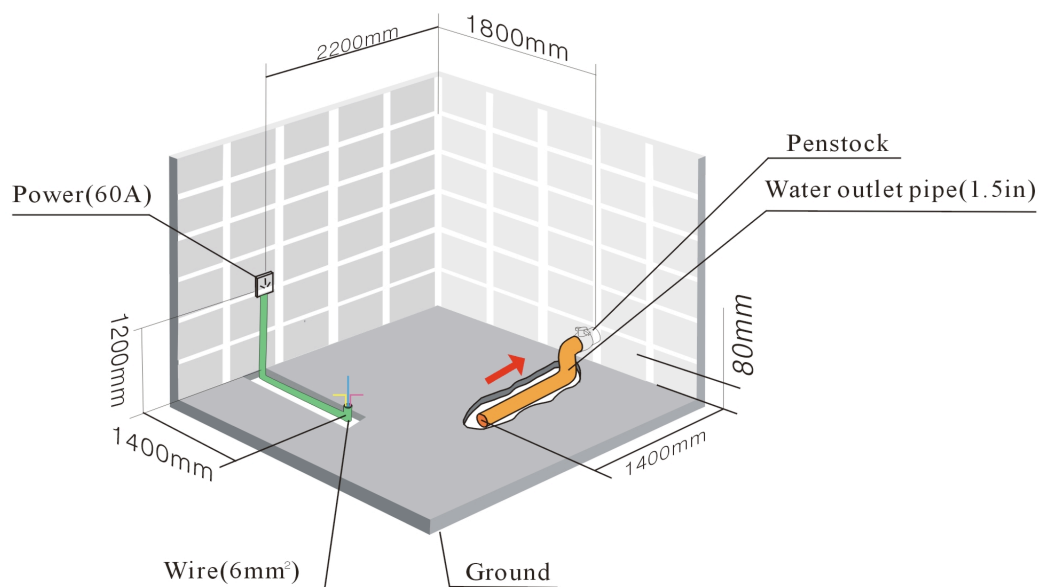


- 1、 **DANGER: RISK OF ELECTRIC SHOCK**, Connect only to a circuit protected by a Ground Fault Circuit Interrupter.
- 2、Grounding is required. The unit should be installed by a qualified service representative and ground.
- 3、**FOR YOUR SAFETY**-This product should be installed by a professional service technician,qualified in hydrotherapy bath installation.
- 4、It's prohibited to cover the instrument with something while operating.
- 5、when using at the first time ,Be sure there is water in heater pipe before staring.



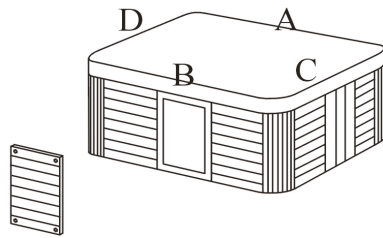
Hydromassage bathtub water and power supply installs diagram

MODEL: SPA-329
SIZE: 2200X2200X930mm

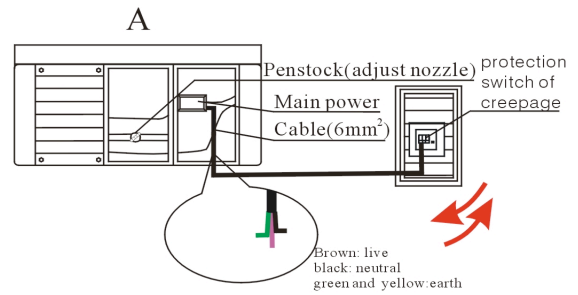


Installation Illustration

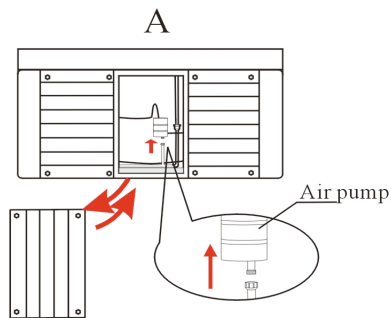
- A. Water: It needs two water-galvanized pipes. One is for water resource, another for water outlet. And they should be set on wall, 80mm above from ground,. And a device for cutting water should be set on wall.
- B. Power: The power should be 220V/50Hz, Single-phase, 36Amp The socket should be the waterproof, which is designed for bathroom and it should be placed above 1200mm from ground.
- C. The waterspout, whose radius is within 0 to 400mm, should be set at the centre of the osculum. (According to the diagram).



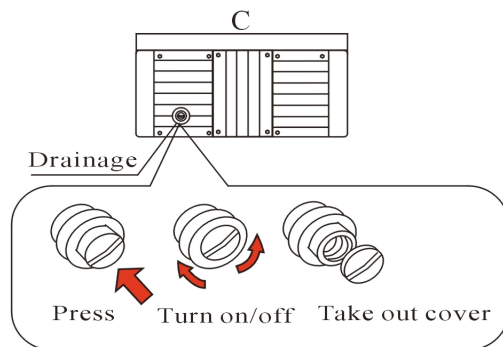
STEP1:uninstall the board which around bathtub



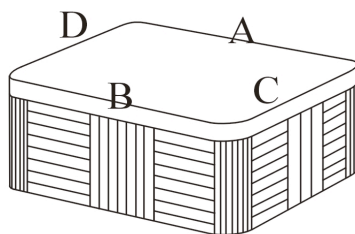
STEP2:connect the main power box to power



STEP3:install air pump



STEP4:install the drainage



STEP5:finish