

PROGRAMMING INSTRUCTIONS

1.Illustration

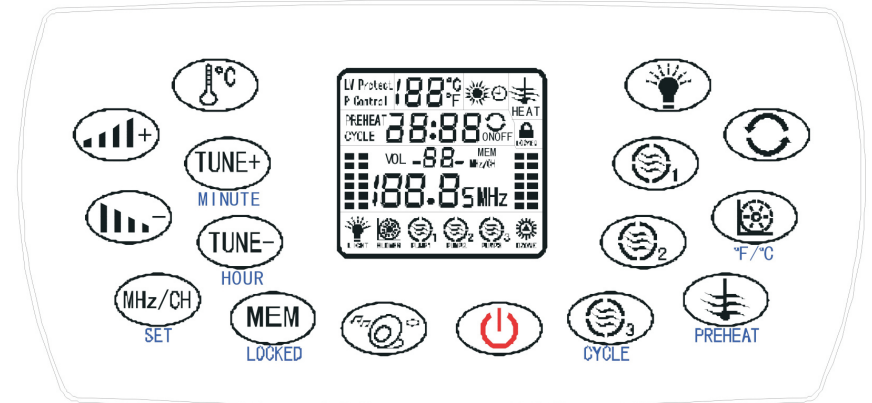


















Fig . 1: 1: sketch map of outdoor spa

 TUNE+ MINUTE	Frequency up- searching / Minute		System ON/ OFF & Enter
 TUNE- HOUR	Frequency down- searching/ Hour		Radio & CD Input ON/ OFF
	Volume up		Blower ON/OFF Fahrenheit/ Celsius °F/°C
	Volume down		Bottom light
 MEM LOCKED	Radio memory/ Key Lock		Water pump1 ON/OFF
 MHz/CH SET	Radio searching/ circulation of preheat setting		Water pump2 ON/OFF
	Long Circulation Cleaning ON/OFF		Setting of circulation cleaning & water pump3 ON/OFF CYCLE
 PREHEAT	Preheat setting & Heater ON/ OFF		Temperature setting
Note: Function of buttons with blue parts only works under the Standby Mode Status .			

2. Function

- (1) Pre-heat and thermostatic (6KW maximum), temperature and function setting.
- (2) Not more than three water pumps, one circulating pump and one air blower.
- (3) Colorful bottom light and ozone sterilization.
- (4) CD audio input, radio and ten channels access
- (5) Volume adjustable
- (6) circulation cleaning
- (7) 24 hours time setting
- (8) Memory could be remain if power be cut off and restart again within 10 seconds
- (9) Fahrenheit & Celsius switch
- (10) Unfrozen protected
- (12) Control panel locked
- (13) Both of single-phase and three-phase adapt to 220-240AVC (OPTION)
- (14) When select CD working, there have an output AC line for DVD or TV (OPTION)
- (15) Current control (OPTION)

(1) **1.Prower connect:** LCD shows real time and water temperature. If temperature sensor not install well, the LCD shows “E1”. Radio frequency shows “---”,then the system is in standby status, pre-heating and circulation cleaning are off.

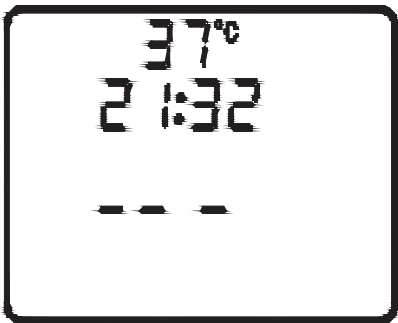


Fig . 3: :Normal status of temperature.

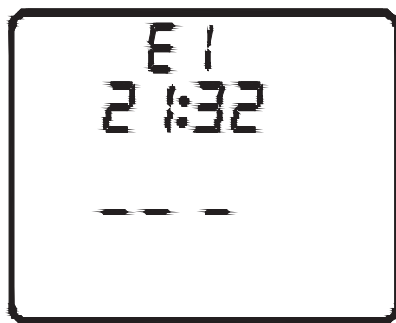
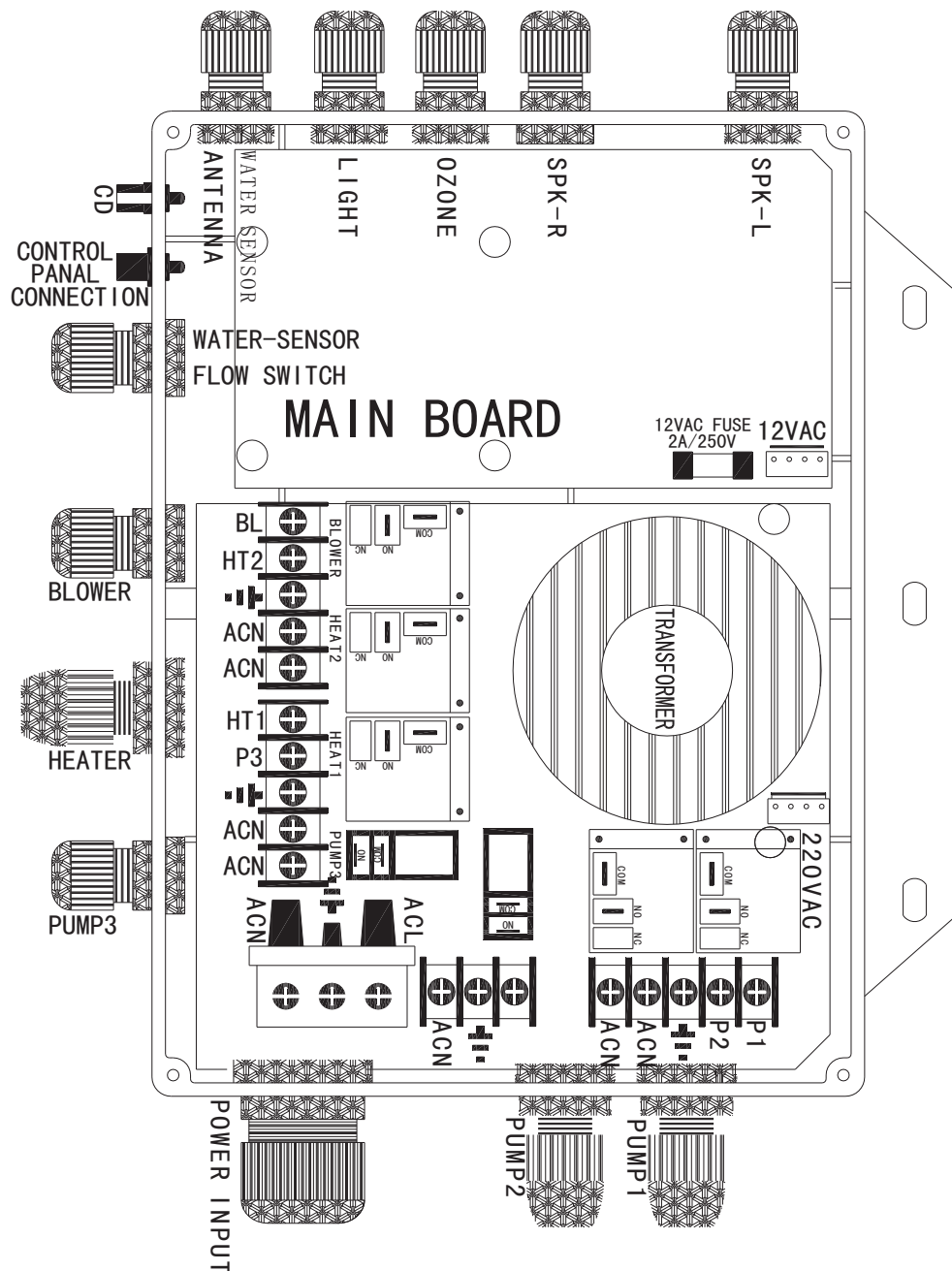


Fig . 4: temperature sensor not install well



(2) The Locked(Option):

30 minutes no any operate or press “**MEM** LOCKED” in standby status, the control panel would be locked. Press “**MEM** LOCKED” twice, and unlock the panel..

(3) Time setting:

Press “**TUNE-** HOUR” or “**TUNE+** MINUTE” to enter time setting status, hour and minute would flicker. The setting should be in standby status and pre-heating & circulation cleaning are shut down.

Press “**TUNE-** HOUR” to increase hour (0-23)

Press “**TUNE+** MINUTE” to increase minutes (0-59)

Setting status would exit automatic when finished all operation.

(4).The setting of circulation cleaning

The circulation cleaning could be set once everyday .

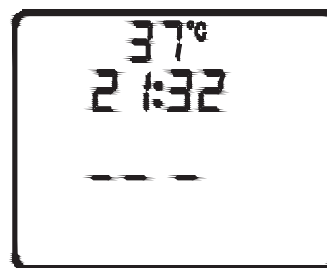


Fig . 5: Circulaiton-cleaning off

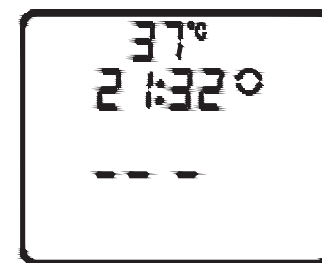









Fig . 6: Circulation-cleaning on

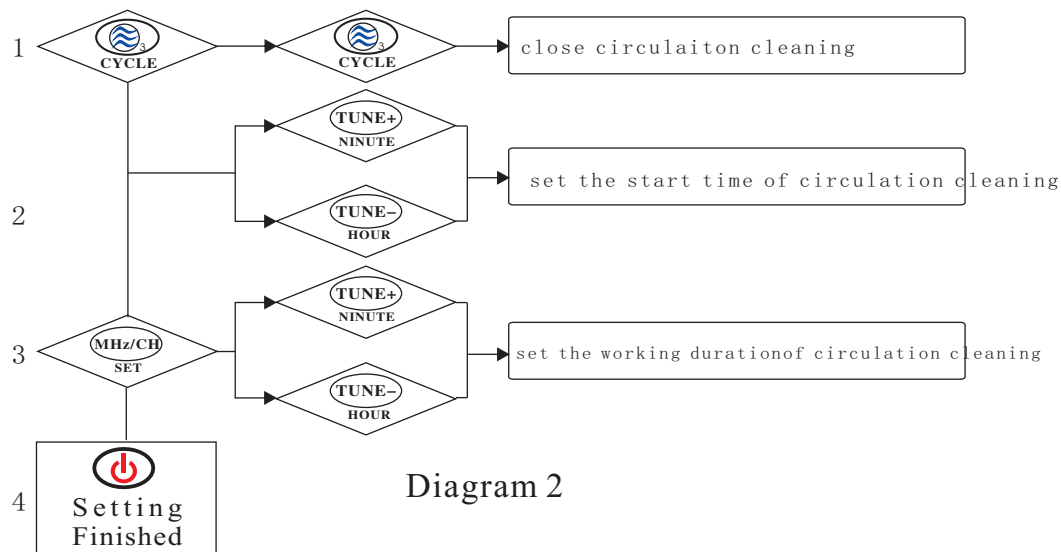
All setting of Circulation cleaning should be done in standby status and LCD shows “---”




1) Press “” to enter circulation cleaning setting status, then LCD shows “”, the mark of “CYCLE” would flicker. Circulation cleaning is “ON” and start to setting start working time at the meanwhile.

Press “” again, circulation cleaning be turn off and exit the setting.

2) Press “” (hour) and “” (minute) to adjust the start working time.

Press “” each time increase 1 minute (0-59). Press “” each time increase 1 hour(0-23). Setting will exit after finish in 6 sec .



3) Press “” to enter durative working setting status of circulation cleaning (diagram 2). LCD shows the duration minimum 5 minutes. Press “” each time increase 5 minutes, press “” each time increase 1 hour. The longest working time last 19 hours and 55 minutes.

4) After all setting well, press “” to save the data and exit automatically.

NOTICE

- 1 All setting should be done in standby status.
- 2. The circulating pump and Ozone would not working during the process of setting..

4. Electric parameter

(1) Performance index:

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

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

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

Isolative resistance : >=200MΩ

Water resistance grade: IPX5.

Electric shock resistance: first grade

(2) Output loading(MAX) index

Heater: AC220V/6KW. .

water pump: AC220V/3 HP

(AC110V/3KW)

(AC110V/2HP)

circulating water pump: AC220V/1HP.

Blower: AC220V/1HP

Hot tub under water lamp: AC12V/10W.

Ozone: AC12V/15W

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

2) Maximum Output Power: 20W

3) Speaker: 8Ω damp proof speaker

13. Bottom light:

Press “” turn ON/OFF of the bottom lamp



14. Operation of thermostatic.

A) When the pre-heating time is come (if the pre-heating had been set) or press the “” also could start thermostatic heating system.


B) After the startup of thermostatic heating, the circulating pump would be on at the same time.

C) For example: if temperature is setting at 35° C, when the water temperature reaches or over 36° C, the heater will be off automatic and the circulating pump would stop after 5 seconds. When the water temperature lower than 34° C, heater would be on again.

D) When the temperature sensor is not install well. The auto thermostatic system is not available.

E) If the circulating pump is off, press “” the first time to turn it on, press “” the twice to run thermostatic system

15. Blower

Press “” to turn ON/OFF the blower. It could keep working in 20 minutes each time and then stop.

16. Fahrenheit & Celsius switch

In the standby status, press “” to change Fahrenheit & Celsius

17. Except the blower, all of the water pumps, circulating pump and thermostatic could not work when the spa has no water, the icon would flicker on the display.

18. Unfrozen protected.

The heater & circulating pump will auto-start when water temperature is lower than 5° C and they will stop when water temperature reaches 10° C. Unfrozen protected is effective while the system on standby mode.

(5) The operation of pre-heating:

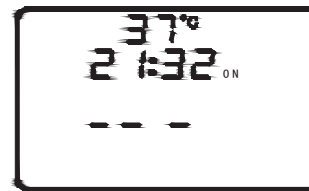




Fig . 7: Pre-heat ON








Fig . 8: Pre-heat OFF

The pre-heating could be set once everyday. Figure 7 shows pre-heating ON and Figure 8 shows off. Pre-heating should be setting in standby status. LCD shows “---”

1) Press “” to enter setting status, LCD shows “ON” and “PREHEAT” would flicker. It would enter to start time setting (diagram 3). Press “” again, turn off and exit pre-heat setting.

2) Press “” & “” to setting time:

Press “” to set hour increase; press “” to set minute increase.

3) Press “” to enter duration setting of pre-heater. LCD shows the duration minimum 10 minutes. Press “” each time increase 10 minutes, press “” each time increase 1 hour. The longest working time last 19 hours and 50 minutes.

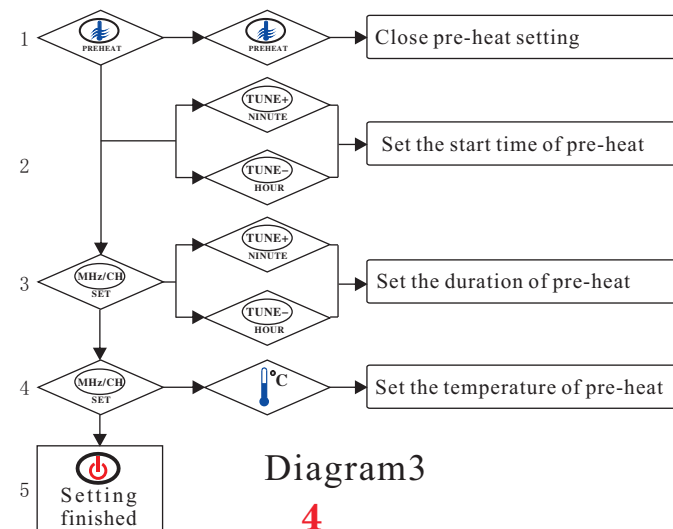




Diagram 3


4) Press  to enter temperature setting status (diagram3), LCD would showing SET. Press  could adjust the setting temperature (15-42° C).

5) After all setting well, press “” to save the data.

****NOTICE****

1. All setting should be done in standby status.
2. Please make attention of the shows on LCD. The pre-heating is on, it would start to work when the real time is consistent with the setting time if LCD shows “ON”. It won't do anything if LDC shows “OFF”
3. The heater and circulating pump would not work during the process of pre-heating.

6. Pre-heating


When the certain time consistent with the pre- heating, and pre-heating is on and there is enough water in spa. The circulating pump and thermostatic will work at the same time, count down will be showed on the LCD (: would not flicker). During the pre-heating process, it hold not turn off until the count down finished automatic or press 

****NOTICE****



- A) If the water temperature is higher than the setting temperature, the heater and circulating pump would not start.
- B) If use the heater in “I” frame, the horsepower can not less than 1 HP. The valve of water press needs enough water press to push the heater on.

7. Circulation clearing

When the certain time consistent with the circulation clearing time, the system would be start if there is enough water in spa, and the LCD would shows the count down.. All water pumps and blower could work every 30 minutes and would be turned off after 30 seconds. Circulating pump works all the while. The ozone would start every 15 minutes and turn off after 15 minutes.

During the circulation clearing process, it would not turn off until the count down finished automatic or press “”.

8. The operation of Power ON/OFF

At the standby status, press the “” to enter power on status. At the power on status “” to enter standby status. Status would be shown on the LCD.

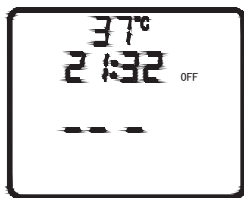


Fig . 9: standby status

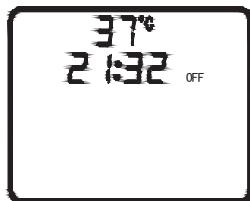


Fig . 10: Power ON status

9. Temperature setting

In the status of power-on and HEATER is working. Press or keep pressing to adjust, the temperature, from 15° C to 42° C range.

10. Radio & CD

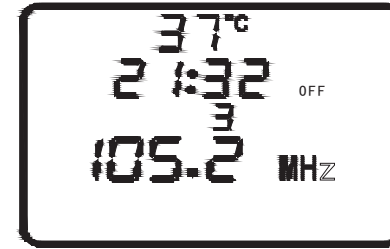





Fig.11 Radio frequency is 105.2MHz, save the present frequency to channel 3(save channel) or exchange the frequency from channel 3 to the present(searching channel)

I) Press “” to turn ON/OFF radio and CD at power on status. Press the first time to turn on the radio, Press the twice to turn on the CD and radio would be off at the meanwhile. Press the thrice to turn off CD.

II) Frequency and volume could be show on the LCD

III) Turn on the radio, press  &  to adjust the frequency

IV) Press  to read the memorized frequency, keep pressing  could read the different memorized frequency which had saved. If there is empty of channel, it shows --- on LCD


V) Press the  could be save the present frequency (0-9) 10 channels maximum.

VI) Press the  &  to adjust volume.

11. The operation of pumps:

KEY of “Pump 1/2/3” are control water pump 1/2/3

12. The operation to long Circulation:

Press the key “” to turn on/off the long circulation. After startup of long circulation. the water pumps and blower will work in every 30 minutes, and last 30 seconds; The ozone would work in every 15 minutes, and last 15 minutes.

A) Thermostatic start automatic when turn on the long circulation at the meanwhile.

B) Only when turn on the circulation cleaning can ozone work Ozone will work with circulating pump. If one of the water pump or blower was be turn on. The ozone will stop working.