

# Control system connection and setting

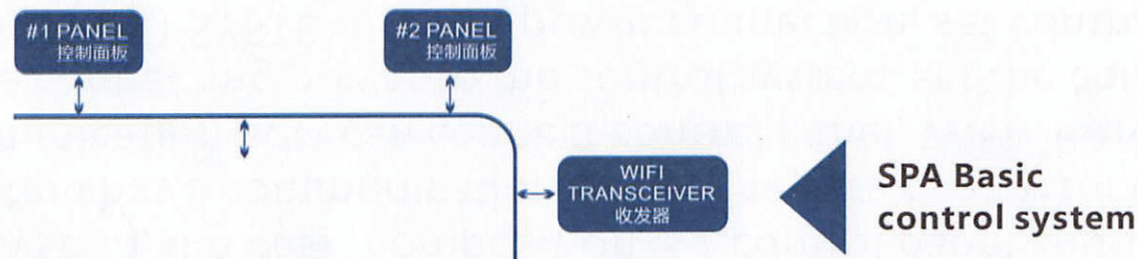
control system composition and connection

Before using the control system, please conduct the below procedures

- 1.Connecting control system. (skip this step if there is only one control system)
- 2.Connecting panel, WIFI module and RF module to control system
- 3.Set the type of control system. (SYSTEM TYPE), (HOST SYSTEM OR SLAVE SYSTEM).  
if there is only one control system, set it as HOST SYSTEM.
- 4.Set panel ID. If there is only one control panel, then it dose not need to set control panel ID.
- 5.Operate the control system function configuration on the control panel.

## Basic control system and large control system composition and connection

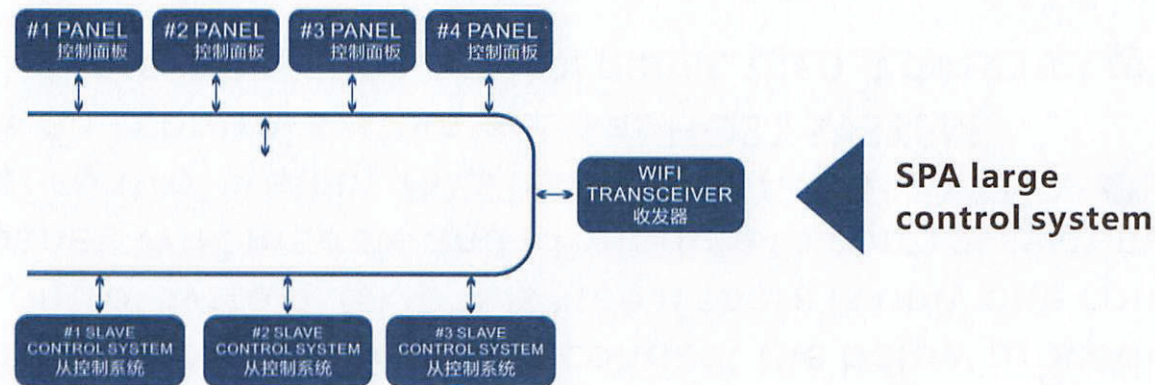
If SPA only uses one control system, then it is defined as basic control system. Basic control system can connect 1-2 control panels, I WIFI control module and 1 RF module. Basic control system composition is as below:



# Control system connection and setting

In basic control system, the basic composition is 1 control panel and 1 control system. Basic control system has 3 communication ports. They are connector CN22, CN23 and CN24. Any communication port can connect control panel, WIFI TRANSCEIVER and RF RECEIVER. Before connecting power to the control system, set the control system (SYSTEM TYPE) as (HOST SYSTEM). After power connection, set control panel ID on the control panel. Then operate control system function configuration on the control panel.

When the SPA has many loads, and the basic control system can not meet the requirement of the loads, it needs to use multi control system, i.e., large control system. Large control system is composed of 2-4 control systems which can connect 1-4 control panels, 1 WIFI control modules and 1 RF control module. Composition of large control system is as below:



# Control system connection and setting

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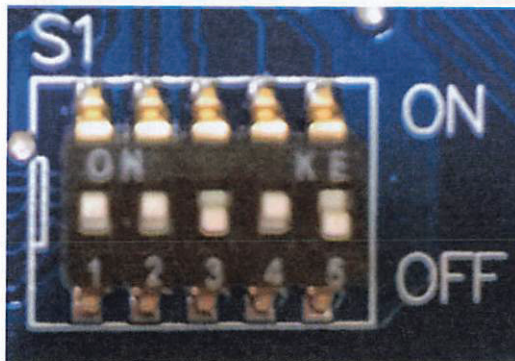
control system composition and connection

In large control system, every control system has 3 communication ports. They are connector CN22, CN23 and CN24. Control systems are in series connection among each other, and can be connected to any communication port of the respective system main board. Control panel, WIFI TANSCEIVER and RF RECEIVER can be connected to any communication port left on the control system. Before connecting power to the control system, please set the system type of the control system. Only one control system can be set as host control system. Other control systems have to be set as slave control system. After power connection to the control system, please set the control panel ID on the control panel. Then operate control system function configuration on the control panel.

## System type setting of basic control system and large control system

When the control system connection is finished, before power connecting, please set control system type (SYSTEM TYPE). (SYSTEM TYPE) includes (HOST SYSTEM) and (SLAVE SYSTEM) . Please set the (SYSTEM TYPE) with power out.

There is 5-digit dial switch SWITCHBANK S1 as the picture below:



The locations of dial switch are as following:

location 1—A1    location 2 –A2    location 3 –A3

location 4 –A4    location 5 –A5

# Control system connection and setting

control system type setting

A1 and A2 can be used to set system type (SYSTEM TYPE). As the chart below:

A1▲ and A2▲ HOST SYSTEM	A1▼ and A2▲ #1 SLAVE SYSTEM	A1▲ and A2▼ #2 SLAVE SYSTEM	A1▼ and A2▼ #3 SLAVE SYSTEM
	▲ A3 ▼		
	▲ A4 ▼		
	▲ A5 ▼		

If SPA only has one control system, i.e., the basic control system, please pull the dial switch of A1 and A2 to ON (▲) . Then the control system is set as Host system.

If SPA control system only uses 2 or 4 control system (i.e. large control system), please set one of the control system (SYSTEM TYPE) as (HOST SYSTEM) and other control systems (SYSTEM TYPE) as (#1 SLAVE SYSTEM), (#2 SLAVE SYSTEM) and (#3 SLAVE SYSTEM). As the chart above, the setting method: Pull the dial switch A1 and A2 to ON(▲). Then the control system is set as (HOST SYSTEM); pull the A1 dial switch to OFF(▼), and A2 dial switch to ON(▲), then the #1 system is set as (#1 SLAVE SYSTEM); pull the A1 dial switch to ON(▲) and A2 dial switch to OFF(▼), then #2 system is set as (#2 SLAVE SYSTEM).

# Control system connection and setting

## Basic control system and large control system control panel ID setting

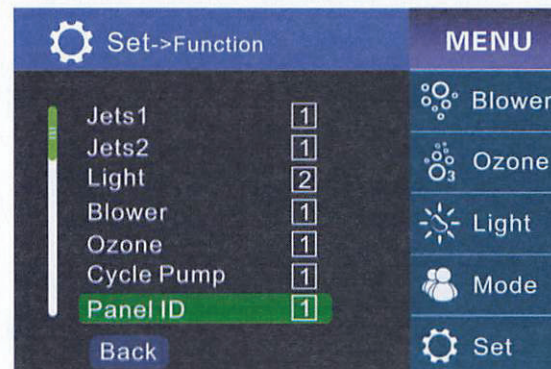
After the (SYSTEM TYPE) setting of the control system, system can be connected to power. After power connection, the first step should be control panel ID setting on the control panel.

If control system only connects one control panel, then control panel ID setting can be skipped.

If control system connects 2 to 4 pcs of control panels please set the control panel ID to 1,2,3,4, different control panel ID can not be set as the same figure.

Below is the control panel ID setting procedure:

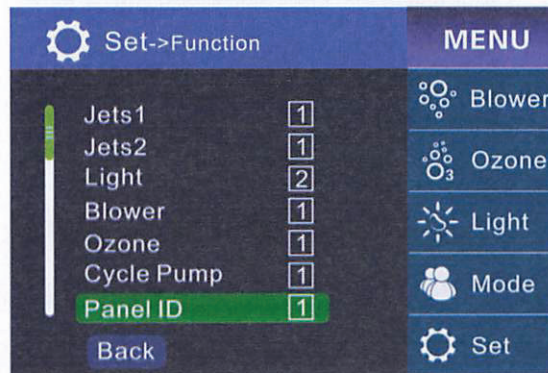
1. Disconnect the power supply to the control system of this control panel. Pull the A4 of the SWITCH BANK S1 on the main board to ON(▲) to allow control panel to do ID setting.
2. Connect power supply to the control system. When the control panel display normally, please enter into Set->Function interface as the picture below:



# Control system connection and setting

## control panel ID setting

3. Using the up and down key to move the bar-type cursor to Panel ID. Then press OK. The figure of panel ID will change to 1 or 2 or 3 or 4. This figure will be the current control panel ID as the picture below.



4. If the control system connects multi panels, please operate procedure 2 and procedure 3 on every panel. Please set the every control panel ID to different figure.

5. When the setting is finished, please exit Set->Function. Control panel will store the set ID.

6. After setting, please pull the A4 of SWITCH BANK S1 on the control system main board to OFF(▼). Control system will lock the set ID.

# Control system connection and setting

control panel correct displaying

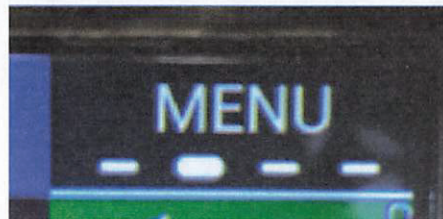
## Control panel correct displaying

Panel correct display after control system control type setting and control panel ID setting:

After control system control type and control panel ID setting, connect power to the system. Control panel display will be as the picture below.

If it is the basic control system, control panel should display date, time and temperature.

If it is large control system, besides date, time and temperature, control system number should also be displayed. For example large control system that control panel PB553 connected to has 4 control systems. Then as the picture below, there should be four bars standing for 4 control systems.



As the picture shown, the thicker bar means control panel is operating #2 slave control system. At this time, slave control system controlled by control panel can be changed with left and right keys on the control panel.

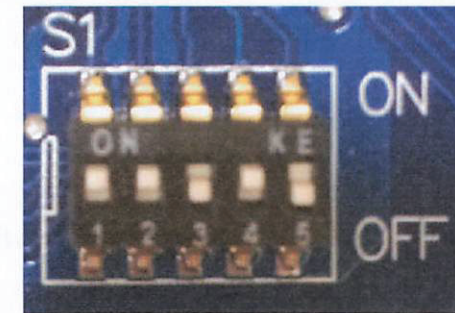


# Control system connection and setting

After control system correct connection and setting, it may be required for setting of the loads connected to the control system. The setting includes heater pump type, light type, 1 spd of the pump 2 spd of the pump or none. All the setting needs to be done on the control panel.

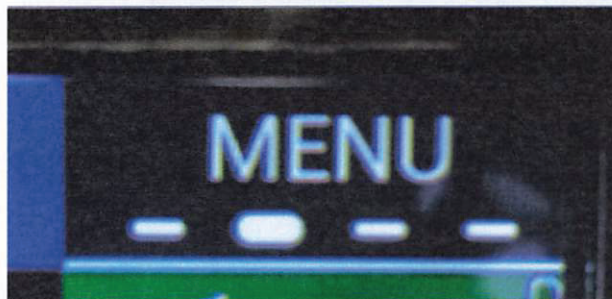
Loads setting procedures are as following:

1. Disconnect the power of the control system. If it is basic control system, please pull the A4 of SWITCH BANK S1 on the main board to ON(▲), allowing control panel to operate load setting (panel will display function menu); if it is large control system, pull the A4 of SWITCH BANK S1 on the main board of control system to ON(▲).



A4 position is as picture on the right:

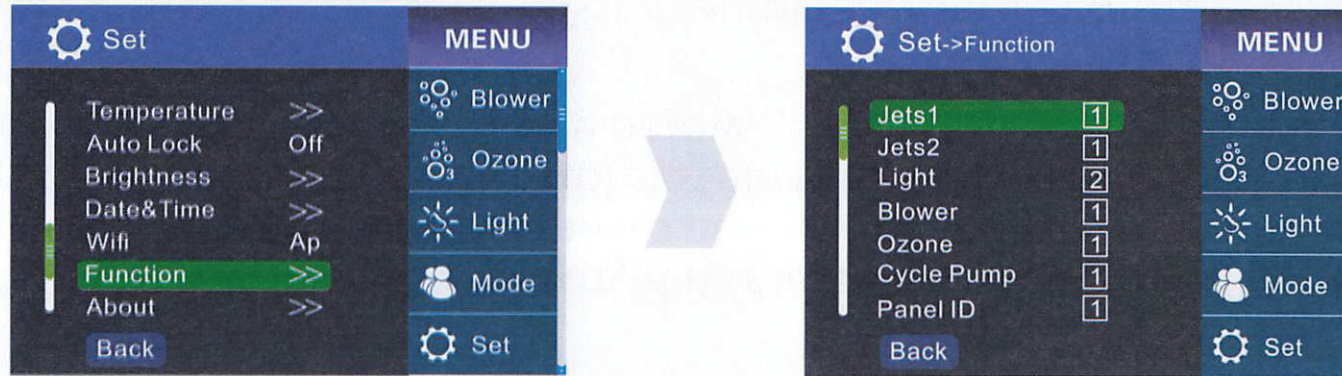
2. After power connection to the system, if it is large control system, please press the left and right key on the control panel to choose the control system needs to be set. The thicker bar represents the control system that is currently being operated by the control panel as shown in the picture below:



For example, the large control system is composed of four control systems. The current control system being set is the second one.

# Control system connection and setting

3. Entering into the interface of Set->Function, like below.



1. Choose and change every item with up, down and OK key.

4. The display and meaning of every setting is as below:

PUMP 1 setting



Set PUMP 1 as 1-speed PUMP



Set PUMP 2 as 2-speed PUMP

PUMP 1 can not be set as 0 (none),  
PUMP 1 MUST exist.

# Control system connection and setting

## PUMP 2 setting

Jets2 1

Set PUMP 2 as 1-speed PUMP

Jets2 2

Set PUMP 2 as 2-speed PUMP

Jets2 0

Set the control system as no PUMP 2

## PUMP 3 setting

Jets3 1

Set PUMP 3 as 1-speed PUMP

Jets3 2

Set PUMP 3 as 2-speed PUMP

Jets3 0

Set the control system as no PUMP 3

## PUMP 4 setting

Jets4 1

Set PUMP 4 as 1-speed PUMP

Jets4 0

Set the control system as no PUMP 4

## Light setting

Light 1

Set the light as 2-wire normal light

Light 2

Set the light as 4-wire RGB light

# Control system connection and setting

control panel load setting

## Blower setting

Blower 1

Set the control system with blower

Blower 0

Set the control system without blower

## Ozone setting

Ozone 1

Set the control system with ozone

Ozone 0

Set the control system without ozone

## Heat PUMP type setting

Cycle Pump 0

Set low speed of PUMP 1 as heater PUMP (at this circumstance, PUMP 1 automatically set as double speed)

Cycle Pump 1

Set CICR PUMP as heater PUMP.

## Panel ID setting

Panel ID 1

Setting current control panel ID. (operation method refers to instruction before)

## Power Limit Setting ( only for control system P25B37 )

Power Limit 0

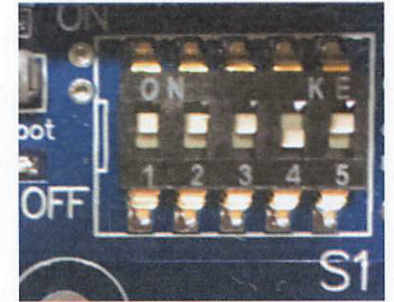
Set it as PUMP 1 (High) and HEATER can be started at the same time

Power Limit 1

Set it as when PUMP 1 (High) is started, Heater will be turned off.

# Control system connection and setting

- 5. After finishing the setting, return to main interface.
  - 6. Disconnect the control system power. Pull the A4 of SWITCH BANK S1 on main board to OFF (▼). Then control system will lock the setting. A4 position as shown right side:
  - 7. If use large control system, please repeat the above procedures.
- Till now, all the connection and setting has been finished.



With large control system, the bars number below the "MENU" on the control panel screen is the number of control systems. The bars sequence is from host system to slave system. The current control system controlled by the panel is with thicker bar. Press left and right key to switch the control system controlled by the panel.



For example, in this picture, the large control system contains four control systems. The current system controlled by panel is the second system.