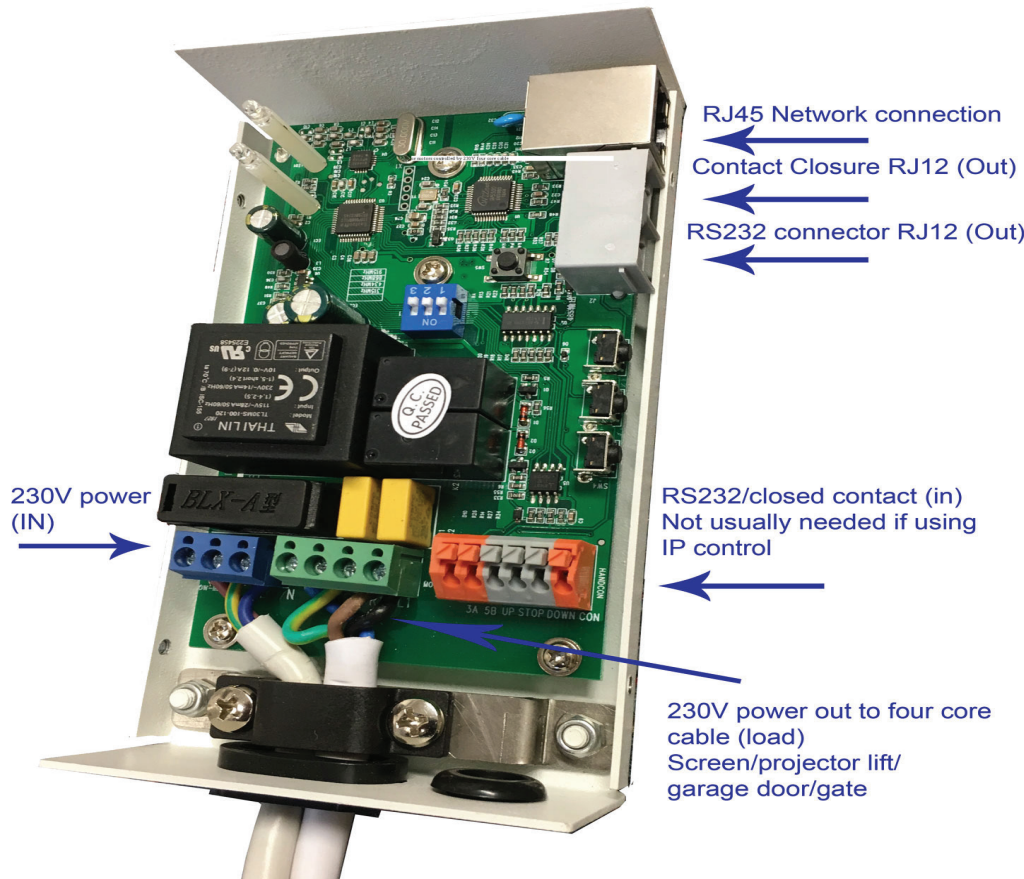


# IP Control Box

SKU - RFR-IP



Designed for ease of use with your Sapphire (or any other screen/projector lift with four core wiring to the motor)

- Simple JS commands
- Designed to replace the Sapphire 868 control box or plug directly into ATR version screens.
- Can also be used to control other devices so that the one box will control say a Sapphire projector screen and also a projector lift.
- Comes complete with a radio 868mhz remote control.
- IP control box also has manual over-ride buttons on the side of the box.

PRODUCT CODE  
RFR-IP



Ideal for use with new control systems that are moving away from RS232 to IP control options.

Can be made to work with a simple program as coding to open and close is as simple as IP address 192.168.1.2 (default option which can be changed) and open.js or close.js

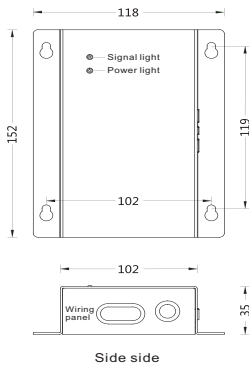
Dealers Name

Sapphire AV Manufacturing Limited  
 Units 8,9 and 11  
 Wern Trading Estate  
 Newport  
 NP10 9FQ  
[www.sapphireav.com](http://www.sapphireav.com)

# IP Control Box

SKU - RFR-IP

## ① Introduction



### Control methods:

1. IP control.
2. RF remote control.
3. Manual buttons control ◀▶▶▶.
4. Close contact control
5. RS232/RS485.

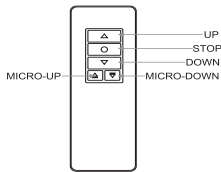
### Features:

- Automatically power cutoff after no operation for 2 minutes.
- One receiver can have max 20 RF signals for individual control.
- 1 button switch for input/output control.

### Parameters of the receiver:

- > Power source: AC230V/50Hz, 120V/60Hz  
The actual figure should refer to the parameter sticker on the box
- > Working Temperature: -20°C to +80°C
- > Maximum Load: 600W
- > Operating Frequency: 868MHz

The Remote control is compatible with the IP receiver box, transfer signal Radio wave (868MHz)



Model: 1GD-868Mn

### Programming & Clear for RF Remote control:

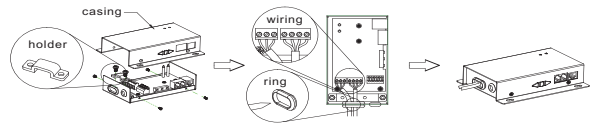
1. Press the programming key (SW5) for 3 seconds, the signal light (green) will twinkle for being in programming mode.
2. Then release the programming key (SW5), press up [▲] AND stop [■] of the remote controller until the signal light becomes solid. (Programming completed)

### Programming Code Cleaning:

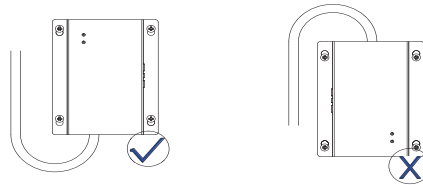
(After the Programming code is set, perform the same steps as Programming Code setting above.)

## ② Installation

- Remove the M3.5x6 screws to open the casing.
- Remove the M5x10 screws to open the holder.
- Insert through the ring.
- Wiring connection.



- Wiring is in the bottom position after installation.

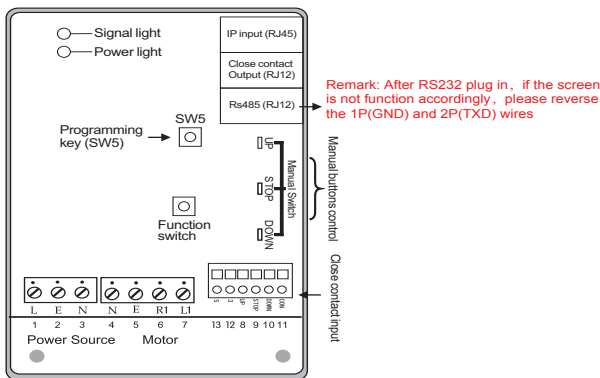


- Environment: Please prevent the IP box located/covered nearby a large metal object for RF receiver quality. If more than one IP box installed, please separate them by at least 20cm to avoid interference.

## ③ Wiring Instruction

- The power must be cut off before wiring, prevent from static electricity as damage to electronic parts.
- Please use cables that comply with local safety standard.
- The earth wire need to be connected.
- The loop resistance is less than 20ohm, if the cable lies nearby high current, please use shielded wire.

## Diagram



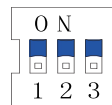
## Wiring

Model	No.	ID	Name	230V Color	115V Color
Power Line	1	L	Live Wire	Brown	Black
	3	E	Earth Wire	Yellow Green	Green
	2	N	Null Wire	Blue	White
	4	N	Null Wire	Blue	White
Motor Line	5	E	Earth Wire	Yellow Green	Yellow Green
	6	R1	Up/Down Wire	Brown	Red
	7	L1	Up/Down Wire	Black	Black
External Switch	8	Up	Up Wire		
	9	Stop	Stop Wire		
	10	Down	Down Wire		
	11	Con	Concentric Wire		
	12	B	RS485-D-		
	13	A	RS485-D+		

Attention: Please make sure the wiring is strictly following the diagram and the diagram is only base on our product.

The wiring color is based on our product reference. If it is using on other screen brand, please contact with other brand supplier for the wiring color.

### (1) Function switch



### 3 function switch:

Key 1  
RS232 Output: to control screen  
RS232 Input: controlled by RS232 input

Key 2  
RF Output: to control other RF product  
RF Input: controlled by RF input

Key 3  
Close contact output (control direction)

### (2) RS485/RS232 Configuration

Central Control Protocol  
1. Communication Protocol:

DATA BITS: 8 Digits	INITIAL DIGITS: Digit 1	STOP DIGITS: Digit 1	BAUD RATE: 2400
---------------------	-------------------------	----------------------	-----------------

2. UP: 0xFF 0xEE 0xEE 0xEE 0xDD
  3. STOP: 0xFF 0xEE 0xEE 0xEE 0xCC
  4. DOWN: 0xFF 0xEE 0xEE 0xEE 0XEE
  5. Initial Code: 0xFF 0XX 0XX 0XX 0AA
  6. Clear Code: FF XX XX XX A6
- "XX" means Hex number other than E. EE EE EE is the fixed code.

### (3) Reset to factory setting (Clear memory, IP returns to 191.168.1.2)

Press Programming key (SW5) for 5 seconds until the signal light (green) flashing faster, Release the Programming key (SW5), press again, the "signal light" becomes solid. Reset completed.

### (4) Manual control

Manual control buttons ◀▶▶▶

## Reference table

Key Direction	Key 1	Key 2	Key 3
Control:	RS232	RF control	Close contact direction
"ON" side:	Output	Output	Forward
"123" side:	Input	Input	Reverse

If a customer is using a control system like Kramer or Biamp then coding below works. Once you have access to the IP address the following codes are to be used.

GET /Open.js?a=100 HTTP/1.1

GET /Close.js?a=100 HTTP/1.1

GET /Stop.js?a=100 HTTP/1.1

Please note it is TCP access and the Port number is 80

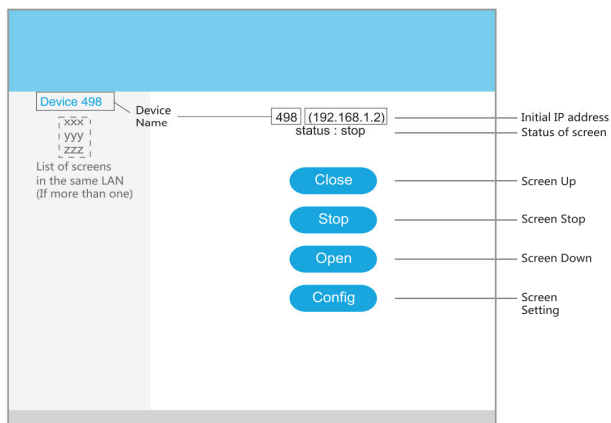
## User Manual of IP Control

### Default Setting:

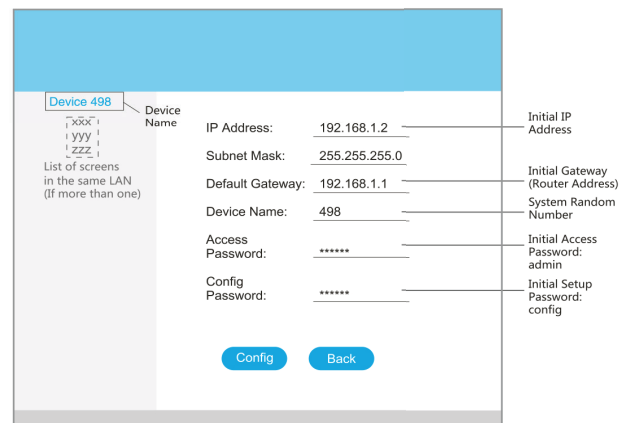
Initial IP address: 192.168.1.2  
Default gateway: 192.168.1.1  
Initial access password: admin  
Initial setup password: config

### Control Code:

Screen close: 192.168.1.2 close.js  
Screen stop: 192.168.1.2 stop.js  
Screen open: 192.168.1.2 open.js



Page 1: Control Options



Page 2: Config Options

## How to connect

**CASE 1: The IP address of your Router is "192.168.1.1", and IP address "192.168.1.2" is available.**

- ▶ **Step 1:** Connect the screen with the Router via LAN cable.
- ▶ **Step 2a:** If you are using phone, tablet or computer, make sure they are connecting to the same router through LAN or WIFI, type the IP address "192.168.1.2" in browser to visit the screen with access password "admin".
- ▶ **Step 2b:** If you are using central control system, use the control code after setting up the connection.

**CASE 2: If you need to change the IP address of the screen to fit in the destined router IP range.**

For example, your router address is "192.168.0.1" and you have "192.168.0.100" available, you would need to:

- ▶ **Step 1:** Set a new IP address for the screen.
  - a: Connect the screen with computer through LAN cable.
  - b: Set the IP address of the computer to "192.168.1.xxx" ("xxx" can be 1 to 255 except 2).
  - c: Type the IP address "192.168.1.2" in browser enter access password "admin".
  - d: Choose "Config" and enter the setup password "config".
  - e: Change the IP address to "192.168.0.100" and set Default gateway to "192.168.0.1".You can also change the access passwords, setup passwords or name of the screen on this page.

- ▶ **Step 2:** Connect the screen to the Router via LAN cable.
- ▶ **Step 3a:** If you are using phone, tablet or computer, make sure they are connecting to the same router through LAN or WIFI, type the new IP address "192.168.0.100" in browser to visit the screen with access password "admin" (or the new password you changed in Step e).
- ▶ **Step 3b:** If you are using central control system, use the control code above after setting up the connection.

## How to restore to default setting

Press the manual switch under the screen (circuit board side) for 5 seconds until you see the screen slightly move up and down once, that means the screen is restored to default setting.