



CONTROLLER RF MODULE ARC5900 -User Manual



CONTROLLER RF MODULE for wireless control module; RF Module comprises a RF receiver (ARC5900-B0) and a RF remote control (ARC5900-K0), and the receiver receives from the remote control, and the signals is transmitted up to 20 meters (* Note 1), and connect the controller via RS485.

Currently, the supported products are mini-controller of ARC3004-W, standard controller of ARC3010-B0 and medium-sized controller of ARC5001-B0. User will be able to easily remote lighting effects, brightness and speed via CONTROLLER RF MODULE.

*Remark 1: Depending on-site use of the environment, the transition is up to 20m.

*Remark 2: Depending on controller type, the definition of remote control buttons will slightly change.

1. Features of CONTROLLER RF MODULE

- Mode: Multi/Single loop control
- Remote Distance: It enables to be up to 20m via RF and 100m via RS485.
- Lighting effect mode, speed and brightness are adjustable individually.

2. Specification

Item	ARC5900-B0 / ARC5900-K0
Power Input	DC 12 ~ 40V
Control Input Signal	RF
RF Frequency	433MHz
Output Signal	RS485
Peripheral Device	Remote Control-ARC5900-K0 (2 pack AAA Replacement Battery)
Operating Environment	Temperature 0°C ~ 50°C Humidity 10%~90%RH
Dimension	Receiver: (L)138mm*(W)44mm*(H)22mm; Remote Control: (L)121mm*(W)46mm*(H)25mm

3. Pin Assignment of Receiver



Item	Pin	Description
CON 1 DC Input	1	GND: Ground
	2	V+: DC 12V~40V
Learning		It is necessary to apply with the RF MODULE then work with the receiver. Learning style: When power on, hold down the learning key, while using the remote control to observe whether it will follow the LED flashing, if flashing with the remote control, release the button to complete the study.
Mode	1	Mini Controller: ARC3004-W
	2	Medium Controller: ARC5001-B0
	3	Standard Controller: ARC3010-B0
Signal Output	1	GND: Ground
	2	-: RS485 Cathode
	3	+: RS485 Anode
Communication Indicator		The Remote Control will flash while the learning is setting done.

4. Descriptions of Remote Control- With ARC3004-W0



Item	Indication	Description
Power		Turn on/off the controller
Lighting Effect Mode	Built-in	Switch to [Built-in] 1-8
	User-defined	Switch to [User-defined] 9-16(default)
	Mode	Switch to [RGB-Mixing]
Speed	Speed	Switch to speed adjustment, and total 16 sets to adjust. (01-slow-16-fast, default is 08)
Brightness	Brightness	Switch to brightness adjustment, and total 8 sets to adjust. (01 dark-08 bright, default is 08)
Up		Switch lighting effect mode or up the speed/brightness/gray scale
Down		Switch lighting effect mode or down the speed/ brightness/gray scale
Set	SET	Adjust the mode of need and the parameter setting when needed. User is able to memorize the current status until next reboot.

5. CONTROLLER - RF MODULE

Example of connecting ARC3004-W



6. Setting of Learning Key

- Step 1: Power on the receiver and LED indicator is shown as continuous light.
- Step 2: Hold on "Learning" of the receiver.
- Step 3: Press any key of the remote control and LED indicator will flash.
- Step 4: LED indicator is setting done while the LED indicator is flash and the receiver is receiving the remote control signals of the remote control only.

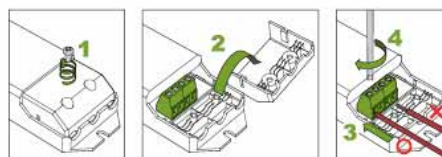
7. Setting of RGB-Mixing

- Step 1: Press [RGB-Mixing] and the light will flash one time in red color, and then press [▲] or [▼] to adjust the red level.
- Step 2: Press [RGB-Mixing] once again, and the light will flash one time in green color to adjust the green level.
- Step 3: Press [RGB-Mixing] once again, and the light will flash one time in blue color to adjust the blue level.
- Step 4: Press [SET], and enable to record the setting of RGB-Mixing.

Remark:

RGB-Mixing Scale: RED 000-255 Level; Green 000-255 Level; Blue 000-255 Level.

8. Connection of the Lock-type Connector



9. Troubleshooting

Please refer to the below problems and solutions. If the problem is still unsolved, please contact our local agency for further assistance.

Symptom	Root Cause	Solution
Receiver does not work while using RF remote control.	RF remote control is out of battery.	Please replace the battery of the remote control.
	The power of receiver does not work in normal.	Please check the power supply wiring and polarity is correct. If the power supply is normal, the receiver side of the LED indicator will be constant.
	Setting of the learning and controller is never done.	Please hold on the learning key in the side of the receiver when power on. Use the RF remote control simultaneously to make the LED flash of the receiver. Then hold off the learning key to complete the setting of the learning.
Controller cannot be controlled by the RF remote control	RS485 communication signal line does not connect well.	Please check the RS 485 connector, and the polarity is connected well between the receiver and RF remote control.
	RS485 IC is broken.	Please send back to the service center.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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