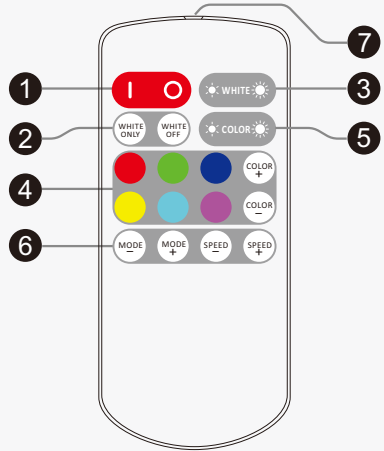RF Remote Control

4-CH LED Controller

RQ210 Series

User's Manual

- Full Protection
- Waterproof Option
- RGBW 4-ch Output
- RF Remote Controller
- Independent White Control
- Ultra Slim Design
- Plenty Preset Color
- Dynamic Color Mode

Rayrun

Introduction

Thank you for purchasing our products. RQ210 4-ch RGBW LED controller is designed to drive constant voltage LED products with common anode connection in voltage range of DC6-24V. It contains a main unit and a RF remote controller, user can setup white brightness or RGB color and brightness independently, to get flexible mixing of RGB and white or run color dynamic modes.

Functions

1. Turn On/ Standby

Press 'I' key to turn on unit or press 'O' key to turn off. At power on moment, unit will automatically restore to previous status before power cut.

2. White Mode

These two keys control white LED working mode. Press 'WHITE ONLY' key, all RGB color will turn off and only white LED lights up. Press 'WHITE OFF' key, the white LED will turn off and RGB LED remain it's previous status.

3. White Brightness

Adjust white LED brightness. Press the right side key to increase white LED brightness and the left side key to decrease.

4. Static RGB Color Selection

These keys control the RGB static color.
a) Press color printed keys will set the RGB LEDs to correspond color light as the key. There are 6 shortcut color keys to make direct color selection.
b) Press 'COLOR+' and 'COLOR-' to scroll over all preset static colors, including the 6 shortcut key colors.

5. Color Brightness

Adjust RGB color brightness. Press the right side key to increase RGB LED brightness and the left side key to decrease.

6. RGB Dynamic Modes Control

These keys control the RGB dynamic modes.
a) Press 'MODE+' and 'MODE-' key to select preset dynamic modes.
b) Press 'SPEED+' and 'SPEED-' to control the dynamic mode running speed.

7. Remote Controller Indicator

This blue indicator will blink when remote controller works. The remote controller works at radio frequency, the signal can pass through barrier, so it's not necessary to aim at the controller when operate the remote.

Installing

8. Power Supply

The red power cable should be connected to power positive and black to negative. The controller unit can work from DC 6V to 24V, Please make sure the power supply voltage is same as the LED load and the power is capable for the load wattage.

9. LED Output

RQ210 supports constant voltage driving LED products with common anode connection. The black cable on the output side is the common node, it connects to the power supply positive inside the controller. The white, green, red and blue cable runs the driving signal of relevant LED color, please connect the color cables to the cathode of relevant color LED loads and the black cable to the common node.

10. Status Indicator

This is a full color status indicator. It displays all working status of the controller. It indicates different events as following:
Blue: normal working.
Short single white flash: new command executed.
Long single white flash: reach mode or color cycle edge.
Long single yellow flash: reach speed or brightness limit.
Red flash: overload protected.
Yellow flash: overheat protected.

Operation

11. Using Remote

Please pull out the battery insulate tape before using. The RF wireless remote signal can pass through some nonmetal barrier. For proper receiving remote signal, please do not install the controller in closed metal parts.

12. Pairing New Remote

The remote and RQ210 is 1 to 1 paired as default. Further more, one master unit can be paired to 5 remote controllers and every remote can be paired to any master unit.

Please do following steps to pair new remote to RQ210:
1). Plug off the power of RQ210 and plug in again after 5 seconds.
2). Press remote 'ON' and 'White Bright +' key together in 5 seconds after RQ210 power on, and then press 'RED' key in another 5 seconds.
After this operation, the RQ210 indicator will flash white for 3 times to display the command is accepted, the master unit now recognizes the new remote. Only 5 latest paired remote controllers can be recognized by RQ210.

Advanced Features

13. Waterproof

RQ210 is a standard version which can be used in dry environments. RQ210-S is fully waterproof with IP68 standard, and can be used under water within depth of 30 meters.
Note: The remote receiving sensitivity will decrease when controller installed in wet environment.

16. Protection

RQ210 series controllers have full protection function for output short circuit, overload, and overheat. The controller will automatically recover from protection when working status is good.

Please ensure the LED loads are in rated range, outputs are not shorted and the controller unit is in a good heat dissipation environment to avoid protection.

Specification

Model	RQ210	RQ210-S
Dynamic mode	34 modes	
Static Color	30 colors	
PWM Grade	256 steps	
White Brightness Grade	10 levels	
Color Brightness Grade	5 levels	
Speed Grade	10 levels	
Direct Color Select	6 direct keys	
Overload protection	Yes	
Overheat protection	Yes	
Working Voltage	DC 6-24V	
Remote frequency	433.92MHz	
Remote control distance	>15m at open area	
Rated Output Current	3x2.5A + 4A	
IP Grade	IP-63	IP-68