Mini IP68 Multi-Zone

RGBW LED Controller

rgbw-mini-RF / rgbw-mini-RF-receiver

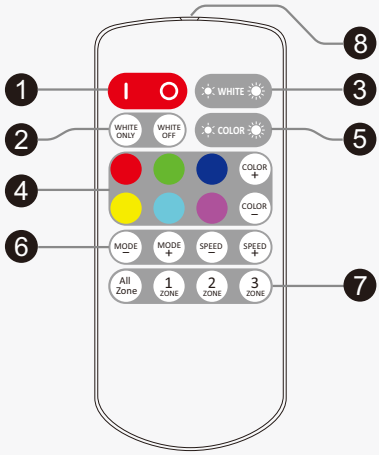
User Manual

- RGBW 4-Ch Output
- Wireless Sychronization
- Multi-Zone Control
- Full Circuit Protection
- IP68 Waterproof
- RF Remote Control
- Ultra-Slim Design
- Easy Setup

Environmental Lights

Introduction

The Mini IP68 Multi-Zone RGBW LED controller and matching receiver are designed to drive constant voltage LED products from 6-24VDC. The rgbw-mini-RF is the master controller with an RF remote. The rgbw-mini-RF-receiver acts as a slave receiver and can be used to set up wirelessly synchronized multi-zone systems.



Functions

1. Turn On/ Standby

Press the 'I' key to turn the unit on press the 'O' key to turn it off. The controller and receiver feature power-on memory and will return to the previous setting when powered back on.

2. White Mode

These two keys enable/disable "WHITE ONLY" mode, which enables only the W channel and "WHITE OFF" mode, which enables only RGB channels.

3. White Brightness

Adjusts the W channel brightness. Press the right side key to increase and the left side key to decrease brightness.

4. Static RGB Color Selection

These keys control static RGB LED colors.

a) The six colored shortcut keys will set the RGB LEDs to red, green, blue, yellow cyan or magenta.
b) The 'COLOR+' and 'COLOR-' scroll over all preset static colors, including the 6 shortcut key colors.

5. Color Brightness

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

6. RGB Dynamic Modes

These keys control RGB dynamic color-changing modes.
a) Press 'MODE+' and 'MODE-' key to cycle through preset dynamic modes.
b) Press 'SPEED+' and 'SPEED-' to control the speed of the dynamic mode.

7. Zone Control

The zone control buttons allow the user to select the specific zone they want to control at any time. Simply press the corresponding zone button and adjust the desired settings. The rgbw-mini-RF controller unit is always zone 1 and the rgbw-mini-RF-receiver units can be programmed to any zone. At power-on, the remote default setting is "All Zones".

8. Remote Controller Indicator

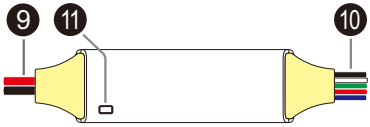
This blue indicator will blink when the remote is sending a command. The remote operates using an RF signal, so it does not need to be aimed at the controller or receivers.

Installation

The rgbw-mini-RF is a master controller that receives signals from the remote and sends out wireless commands to any paired rgbw-mini-RF-receiver units. The rgbw-mini-RF-receiver can only be programmed through the rgbw-mini-RF controller and must be within the wireless coverage area, about 15 meters (50 feet) in open space.

9. Power Supply

The rgbw-mini-RF and rgbw-mini-RF-receiver work from 6-24V DC. The red power input cable should be connected to power supply positive and black to negative. Always make sure the power supply voltage is the same as the rated LED voltage.



10. LED Output

The controller and receiver support constant voltage LED products and control the load using a PWM output. The black cable connects to LED positive. The red, green, blue and white cables connect to the respective colored LEDs

11. Status Indicator

The indicator light displays the current status of the unit. It indicates the following:
Blue: normal operation.
Short single white flash: new command executed.
Long single white flash: the user has cycled through all modes or colors .
Long single yellow flash: The unit has reached maximum speed or brightness.
Red flashing: overload protection active.
Yellow flashing: thermal protection active.

Operation

12. Using the Remote

Remove the battery insulation tape from the remote before using. The RF wireless signal can pass through most non-metallic barriers, although range may be reduced. Do not install the controller or receiver inside a closed metal box.

13. Pairing New Remote

The remote and rgbw-mini-RF come already paired. One rgbw-mini-RF can be paired with 5 remotes. Each remote can be paired to an unlimited number of rgbw-mini-RF units.
To pair a new remote:
1). Power-off the rgbw-mini-RF for at least 5 seconds.
2). Power-on the rgbw-mini-RF, then press the 'ON' and 'White Bright +' key simultaneously within 5 seconds. Press the 'RED' key immediately afterward.
The indicator will flash white 3 times to acknowledge the pairing.

14. Programming Slave Receivers

The rgbw-mini-RF-receiver slave receiver can be programmed to use zone 1, 2 or 3. Each zone can have an unlimited number of receivers.
To pair a slave receiver:
1). With the controller powered-on, power-off the rgbw-mini-RF-receiver for at least 5 seconds.
2). Power-on the rgbw-mini-RF-receiver, then press the 'ON' and 'White Bright +' key simultaneously within 5 seconds. The indicator will flash blue.
3). Press the zone key for the desired zone. The indicator will flash white 3 times to confirm zone assignment.

Advanced Features

15. Waterproofing

When installing at wet environment, the cable connections must also be waterproofed. Waterproofing glue and heat-shrink are recommended, but waterproof connectors may also be used.
Wireless signals are attenuated by water, so wireless range may be reduced if the receivers are installed underwater. Be sure to test the wireless range before permanently installing the receiver in water or very wet locations.

16. Protection

The rgbw-mini-RF and rgbw-mini-RF-receiver have full protection circuitry for short circuit, output overload, reversed power polarity and overheating. The indicator will flash red for overload or short circuit protection and flash yellow for thermal protection. The controller will automatically recover from protection when conditions return to normal.

Specifications

Model	rgbw-mini-RF	rgbw-mini-RF-receiver
Dynamic Modes	34 modes	
Static Colors	30 colors	
Color Resolution	256 levels	
White Brightness	10 levels	
Color Brightness	5 levels	
Speed Adjustment	10 levels	
Overload Protection	Yes	
Thermal Protection	Yes	
Working Voltage	6-24VDC	
Remote Frequency	433.92MHz	None
Synchronization Frequency	2.4GHz ISM band	
Remote Control Distance	>15m in open area	None
Synchronization Distance	>15m in open area	
Zone Control	3 zones, infinite receivers in each zone.	
Rated Output Current	3x2.5A + 4A	
IP Grade	IP68	IP68