

# Rayrun P30 RGB Wireless Remote LED Controller User Manual

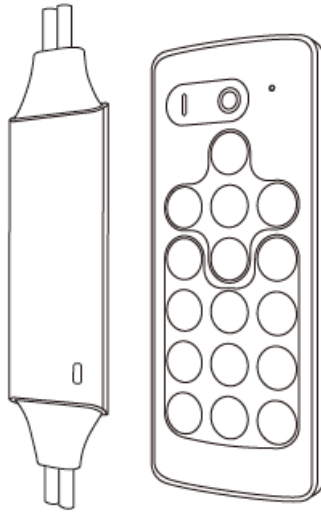
[Home](#) » [RayRun](#) » Rayrun P30 RGB Wireless Remote LED Controller User Manual 

## Contents

- [1 Rayrun P30 RGB Wireless Remote LED Controller](#)
- [2 Introduction](#)
- [3 Wiring & Indicator](#)
  - [3.1 Power supply input](#)
  - [3.2 LED output](#)
  - [3.3 Work status indicator](#)
  - [3.4 Wiring diagram](#)
- [4 Functions](#)
  - [4.1 Turn ON / OFF](#)
  - [4.2 Static RGB color setting](#)
  - [4.3 Dynamic mode setting](#)
  - [4.4 Remote indicator](#)
- [5 Operation](#)
  - [5.1 Using the remote controller](#)
  - [5.2 Pair a new remote controller](#)
  - [5.3 Keep current remote only](#)
- [6 Advanced features](#)
  - [6.1 Waterproof \(-S version\)](#)
  - [6.2 Protection function](#)
- [7 Dynamic effects](#)
- [8 Specification](#)
- [9 Documents / Resources](#)
- [10 Related Posts](#)

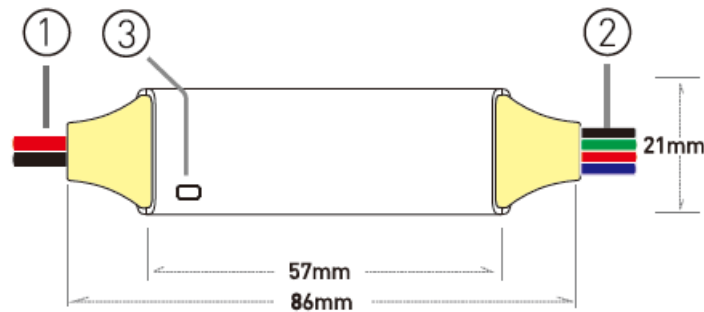
**Rayrun**

**Rayrun P30 RGB Wireless Remote LED Controller**



## Introduction

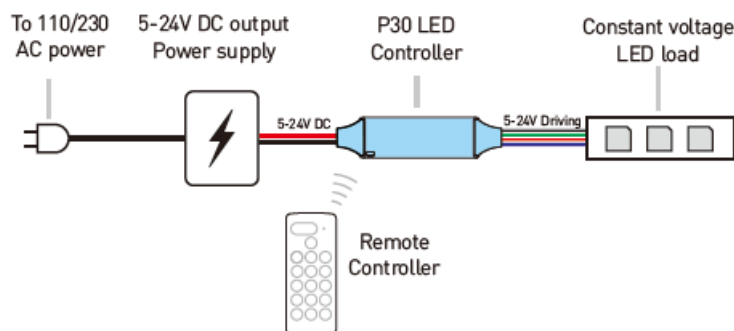
P30 RGB LED controller is designed to drive constant voltage LED products in voltage range of DC5-24V. The main unit works with a RF remote controller, user can setup LED color, brightness and dynamic effects from the remote controller. The main unit is powered by DC power supply and receives remote controller commands to drive LED fixtures.



## Wiring & Indicator

### Power supply input

The controller supply voltage range is from DC 5V to 24V. The red power cable should be connected to power positive and black to negative. (For other cable color, please refer to the labels). The LED output voltage is at same level as the power voltage, please make sure the power supply voltage is correct and the power rating is capable for the load.



### LED output

Connect constant voltage LED loads. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is in range of the controller rated current. The black cable should be connected to LED positive, the green, red and blue cable should be connected to the LED negative cable with the same color.

## Work status indicator

This indicator shows all working status of the controller. It displays different events as following:

- Steady blue: Normal working.
- Short white blink: Command received.
- Long single white blink: Mode or color cycle edge.
- Single yellow flash : Edge of the content.
- Red flash: Overload protection.
- Yellow flash: Overheat protection.
- White blink for 3 times: New remote paired.

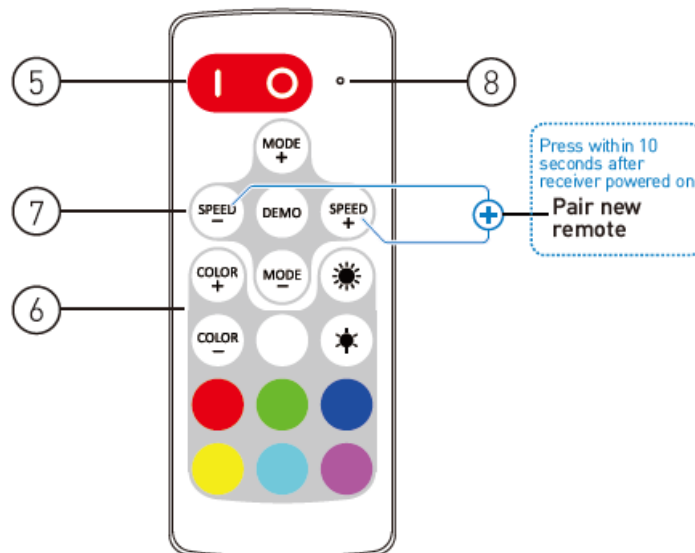
## Wiring diagram

Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.





## Functions

### Turn ON / OFF






Press 'I' key to turn on unit or press 'O' key to turn off. Main unit will memorize the on/off status and will restore to the previous status on next power on. Please use remote controller to turn on the unit if it was switched to off status before power cut.



### Static RGB color setting

The keys in this area set the RGB static color and brightness. Press the colored keys to set the RGB LEDs to correspond color as shortcut. For other static colors, please press  and  keys to select from the preset library colors. Press  and  keys to adjust color brightness

### Dynamic mode setting

These keys control the RGB dynamic modes. Press  and  keys to select dynamic modes and press  and  keys to set the running speed of the dynamic modes. Press  key to play the dynamic modes in loop with each mode repeating for 3 times.

### Remote indicator

This indicator blinks when remote controller is working. If the indicator flash slowly when pressing keys, it means the remote battery is nearly empty and please change the battery in this case. The battery model is CR2032.



## Operation

### Using the remote controller

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.

### Pair a new remote controller

The remote controller and main unit is 1 to 1 paired as factory default. It's possible to pair maximum 5 remote controllers to one main unit and each remote controller could be paired to any main unit. User could pair a new remote controller to main unit by following two steps:

1. Plug off the power of main unit and plug in again after more than 5 seconds.
2. Press  and  key simultaneously for about 3 seconds, within time of 10 seconds after the main unit powered on.

### Keep current remote only

In some cases, one main unit might be paired with several remote controllers but extra remote controllers are no longer needed. User could simply pair the current using remote to main unit again, then the main unit will dis-pair all other remote controllers and recognize current one only.

## Advanced features

### Waterproof (-S version)

The IP-68 waterproof feature with glue injection finish is available on -S version controllers. For overall waterproof performance, the cables must be waterproof treated separately.











































**Wireless signal degrade :** The wireless communication ability could degrade when using at wet environment, please be aware that the wireless control distance will be shortened in such case.

### Protection function

The controller has full protection function against wrong wiring, load short circuit, overload and overheat. The controller will stop working and the indicator will flash with red / yellow color to indicate the malfunction. The controller will try to recover from protection status in a short time when the working condition is good. For protection issues, please check the situation with different indicator information:

- Red flash: Check the output cables and load, make sure no short circuit and the load current is in rated range. Also the load must be constant voltage type.
- Yellow flash: Check the installation environment, make sure in a rated temperature range and with good ventilation or heat dissipation condition.

## Dynamic effects

Dynamic effects	Effect Pattern
Multi-color fade	  
Single color fade	      
Dual-color fade	              
Multi-color flash	  
Single color flash	      
Single color strobe	      

## Specification

Model	P30	P30-S
Dynamic mode	34 modes	
Static color	30 colors	
PWM grade	4000 steps	
Color brightness grade	5 levels	
Speed grade	10 levels	
Direct color select	7 direct keys	
Overload protection	Yes	
Overheat protection	Yes	
Working voltage	DC 5-24V	
Remote frequency	433.92MHz	
Remote control distance	>15m at open area	
Rated output current	3x5A	
Waterproof	IP63	IP68

## Documents / Resources

