

# Rayrun P10 Single Color LED Wireless Remote Controller **User Manual**

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**Rayrun P10 Single Color LED Wireless Remote Controller** 



# overview



# **LED** output

Connect constant voltage LED loads. Please connect red cable to LED+ and black cable to LED-. 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.

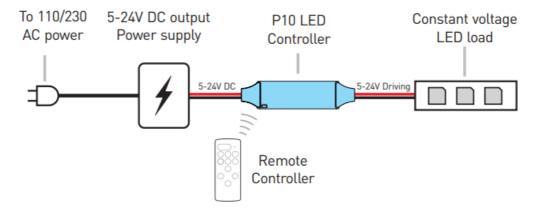
#### Work status indicator

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 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.

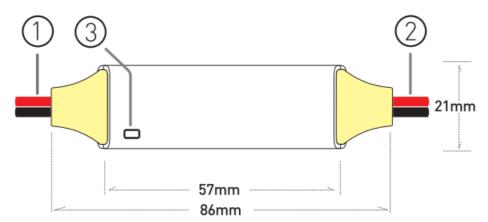
#### Wiring diagram

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.



#### Introduction

P10 single color 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 brightness and dynamic modes on 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**

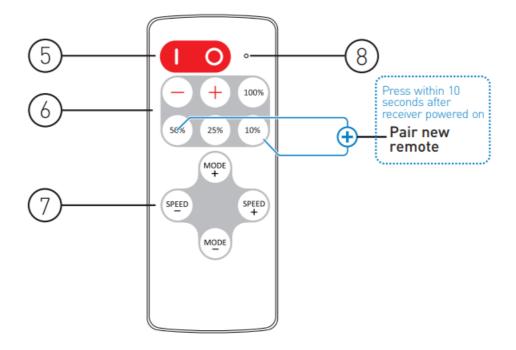
The controller supply voltage range is from DC 5V to 24V. The red power cable should be connected to power positive and black to negative. (For other cable color, please refer to the labels). The LED output voltage is at same level as the power voltage, please make sure the power supply voltage is correct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

# **Functions**

### Turn ON / OFF

Press 'I' key to turn on unit or press 'O' key to turn off. Controller 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 previous power cut.



## **Brightness control**

Press '+' key to increase brightness and press '-' key to decrease. There are 4 brightness shortcut key to set brightness to 100%, 50%, 25% and 10% of full brightness.

The controller applies brightness gamma correction on dimming control, makes the brightness tuning more smooth to human sense. The brightness shortcut level is valued to human sense, and not proportional to the LED output power.

MODE

MODE

#### Dynamic mode and speed control

These keys control the dynamic modes. Press key to select dynamic modes and press key to set the running speed of the dynamic modes.

MODE

User could set multiple dynamic modes including SOS signal and flame effects.

# **Remote indicator**

This indicator blinks when remote controller works. The indicator will flash slowly if the battery is empty, please change the remote controller battery in this case. The battery model is CR2032 lithium cell.

# Operation

#### Using the 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.

#### Paring a new remote controller

The remote controller and main unit is 1 to 1 paired for 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.

You could pair a new remote controller to main unit by following steps:

1. Plug off the power of main unit and plug in again after more than 5 seconds.

2. Press and seconds, within time of 10 seconds after the main unit powered on.

## Recognize 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:

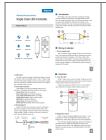
**Red flash:** Check the output cables and load, make sure no short circuit and the load current is in rated range. Also the load must be constant voltage type.

**Yellow flash:** Check the installation environment, make sure in a rated temperature range and with good ventilation or heat dissipation condition.

# **Specification**

Model	P10	P10-S
Brightness grade	10 levels	
Brightness shortcut	4 levels	
Dynamic mode	8 modes	
Dynamic speed grade	10 levels	
PWM grade	4000 steps	
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	1x15A	
IP Grade	IP63	IP68

# **Documents / Resources**



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