

# LED RF Controller RGBW User Manual



Remote  
black: LC-002-002  
white: LC-002-003



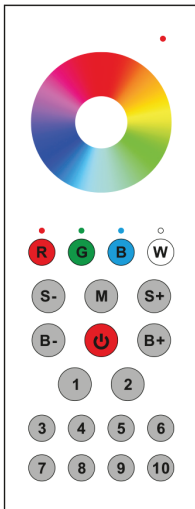
Receiver: LC-002-001

## 1. Product introduction

LED RF remote controller RGBW is a wireless color controlling system that consists of a sender and a receiver or several receivers, as shown in Figure 1, 2:

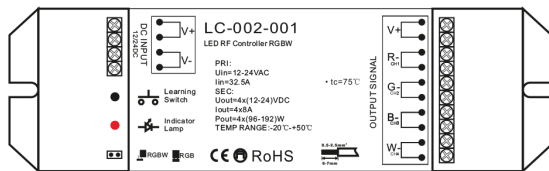
By selecting switch status, you can set the system as RGB 3-channel output, or RGBW 4-channel output. Using LED RF remote controller RGBW, you can get whatever color you want; you can choose any color from RGB(W) to adjust so as to mix more than 100 million kinds of colors. With built-in 10 kinds of color changing modes, you can easily switch color changing modes and adjust speed and brightness. "Function Pause" enables RGBW LED to stay at your favorite color under the situation of color changing modes, which operation is simple but functional.

There are three working frequencies for option: 434MHZ,868MHZ or 915MHZ,they are suitable for Europe, Americas and all global market demands .All products completely comply with European CE regulations and American FCC regulations.



Sender

Fig.1



Receiver

Fig.2

## 2. Performance Parameter

2.1 Black sender: (model: LC-002-002)/White sender:(model:LC-002-003)

Working temperature:4.5V(3×1.5V 7 AAA battery)

Working current:<22mA

Dormancy current: <20 μA

Working frequency: 434MHZ/868MHZ/915MHZ( optional )

Transmit power : ≥5dBm

## 2.2 Receiver(model:LC-002-001)

Input Voltage: 12-36VDC

Output Voltage:12-36VDC

Input Current:4CH×8A

Output power:4CH×(96-288W)

Working Frequency: 434MHZ/868MHZ/915MHZ ( optional )

## 3.Components description:

### 3.1 Sender(model:LC-002-002/LC-002-003)



"R"button and indicator



"G"button and indicator



"B"button and indicator



"W"button and indicator

- Working status indicator, the sender is in dormant status when the indicator is off. The sender is under working when the indicator is flashing rapidly. If the indicator continues flashing at the frequency of 1 second, it indicates that the sender batteries low and needs to replace new batteries.



Slow down the speed when color is changing



Speed up when color is changing



Multifunction button, used for selecting, Synchronous or asynchronous mode



Brightness down



Brightness up



Multifunction button, used for turn ON/OFF and white output

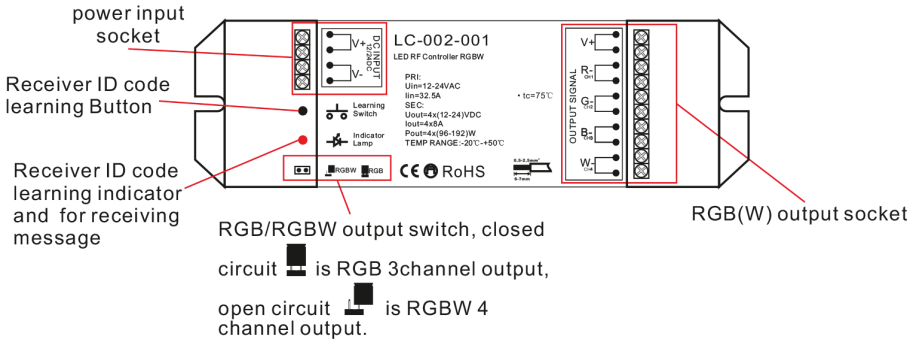


Figure 1-10 is for selecting receiver's ID and ID itself to turn ON/OFF



Touch wheel for selecting R/G/B colors

### 3.2 Receiver (Model: LC-002-001)



## 4. Basic Usage

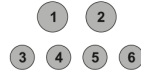
### 4.1 Install battery

Initial using LED RF remote controller RGBW, open the battery cover on the back of the sender, load 3pcs 7 AAA (1.5V) batteries. Please pay attention to the battery's negative and positive, otherwise it will fail to work.

### 4.2 Receiver learning ID

Initial using LED RF remote controller RGBW must learn the ID of the receiver, the purpose of learning ID code is to make a certain receiver which can correspond the sender.

The method of Receiver learning ID is as follows: press the ID learning button ● on the sender,






the ID learning indicator ● is on, then press one of the number button on the sender, press the number that you want this receiver to be, E.g. If you want this receiver to be No. 1, please press button first, then touch the wheel , or you can press any functional button on the sender, such as , , , , , etc. to transmit signal to the Sender, after Receiver receives the signal from the sender, the indicator will flash a few times and then turns off, then receiver ID is activated. If the ID activation is failed at the first time, please repeat the previous procedures.


**Attention:** The receiver ID learned by touching color wheel is different from the receiver that learned by pressing function button . The receiver ID learned by touching color wheel that we define it as SLAVE receiver, the receiver ID learned by pressing function button that we define it as MASTER receiver. The purpose of learning these two kinds of receivers is to ensure the receivers and color changing synchronously to avoid the color changing out of order. This point will be noted later.

### 4.3 Delete ID and ID re-learning






If you need to delete the ID learned in the receiver, press ID learning button ● for more than 5 seconds, when learning indicator is off, then the learned ID is deleted. If you need the receiver learn a new ID, repeat the operation of 4.2 (Receiver learning ID).

#### 4.4 Choose color by touching color wheel








After the receiver learned the ID, you can change each receiver's color by touching color wheel. If you want to change the color of receiver NO. 1.. Press button , then make rotating touch on color wheel  by your figures, at this time, the color of receiver No. 1 will be changed constantly, when your favorite color appears, stop rotating and leave the color wheel .




If you need change color of several receivers at the same, just choose a number for these several receivers first, then touch color disc . For example, change color for receivers NO. 1, 2, 3, 4, 5, 6





at the same time, you need press number 1 to 6 button     first, then touch the color wheel .





#### 4.5 Select or adjust color by R, G, B, W button

In addition to change the color by touching color wheel , but you can also select the single color through R, G, B, W buttons  or adjust the color by color wheel to get your wanted color. For example, you choose a color by touching color wheel  and still want add a bit more brightness to red color, just press R button  for over 2 seconds, then the indicator of R will be on and red is selected, make clockwise rotation  on the color wheel  by finger, then the brightness of red will be increased. If you want the red color to be darker, just make counter clockwise rotation  on the color wheel . If need to adjust the color brighter or dim several colors at same time, also just choose the colors, such as R, G, then make clockwise rotation  or counterclockwise rotation , it can simultaneously adjust the brightness for both colors. If you want to cancel the selected color, just press selected button for 2 seconds, the corresponding color will be off, this color is abandoned.

By pressing of R, G, B, W button , you can turn on/off the corresponding single color. For example, if you want LED lightings to get red, press R  for over 1 second, then the red color will be turn on. If you want to turn off red again, press R  for 1 second, the red will be off again. The same operation is for other colors.

*Note that: If you select a color output, such as red, then you select another color output, such as green. So red and green are output at the same time. If you only need to separate out the second output "green", just turn off the front color "red".*

In short, using R, G, B, W buttons  and operating color wheel , you can mix more than 100 million colors or any color you want.

*Attention: The receiver is under single or multi-color adjustment condition when any single or multi-color is selected. Under this condition, you can only make clockwise rotation  or counterclockwise rotation  operation to adjust the color. A direct touch on color wheel  will not work. Only after exiting from the single or multi- color condition, a direct touch on color wheel  will work.*

#### 4.6 Choose color changing mode

Selecting the mode button **M**, receiver change colors according to different modes, a total of 10 built-in color changing modes. If you want one or several receivers under color changing mode,



press number button **7** **8** **9** **10**, and choose receiver number, then press button **M** again. For first press of button **M**, receiver will change according to mode 1, one more time press of button **M**, the receiver will be paused, it will stay at one color under mode 1 condition. Press button **M** again, the color will change according to mode 2, press button **M** one more time, it will be paused at one color under mode 2. Press button **M** for seconds, the receiver will keep changing as follows:

MODE1—STOP---MODE2---STOP---MODE3---STOP---MODE4---STOP---MODE5---STOP---  
MODE6---STOP---MODE7---STOP---MODE8---STOP  
P---MODE9---STOP---MODE10---OFF---MODE1.....

The receiver will be at one of static colors by touching the color wheel in color changing modes. Then press M button, receiver will be changed as Mode 1 again.

#### 4.7 Brightness adjustment

Under the static color status or color changing status, you can adjust the brightness by press **B-** and pressing button **B+** to increase the brightness. The brightness is divided into 8 levels, the minimum is 10%, and the maximum is 100%.

#### 4.8 Changing speed adjustment

Under color changing mode, you can slow down the changing speed by pressing button **S-**, or speed up changing speed by pressing button **S+**, 16 speed levels in total are available. The maximum changing cycle is 4 seconds; the minimum changing cycle is 256 seconds.

## 5.Expanded Usage

### 5.1 Color changing for multiple same ID receivers under same mode

One receiver of the sender can be learned (unrestricted) by multiple receivers, a receiver can be only defined one ID No. from one sender. If one of senders is learned by several receivers, all these receivers will share the same ID No. When all these receivers are changing color at the same time, to ensure long-time changing in order, one of the receivers from this groups is needed to be set as Master receiver and other receivers need to be set as Slave receivers. How to set Master receiver and Slave receiver, please refer to 4.2(Receiver learning ID code.) Notice: Only one receiver(Master) can be set amont a group of receivers, otherwise it may cause chaotic phenomena.

When Master receiver is set, this group receivers are changing color at same time, synchronized signal will be emitted so as to ensure this group receiver will be in order no matter how long the color changes and keep changing forever. For example, 10 receivers are learned to be ID 1., these 10 receivers will change according to one mode, in order to avoid chaos of working units after a long time, one of the receivers is needed to be set as Master, the Master will launch synchronized signal when color is changing, thus ensure this group of receivers are in good order no matter how long the color is changing.

## 5.2 Color changes of multiple-different ID receivers in the same mode

In order to avoid chaotic phenomena after a long time, when multiple-different ID receivers are changing the color under the same mode, one MASTER receiver is needed to be set in this group .How to set MASTER receiver and SLAVE receiver , please refer to 4.2 (Receive learning ID code).

*Notice: Only onemaster receiver can be set among a group of receivers, otherwise it may cause chaotic phenomena. , the Master will launch synchronized signal when colour is changing to ensure this group of receivers will be in good order no matter how long the color changes. For example, Receiver 1,2,3,4,5 move color under the same mode 1, at this time, you need to set one of the receivers as Master receiver , if receiver 1 is set as MASTER, then receiver 1 will launch synchronized signal to other receivers 2,3,4,5, meantime they will keep changing constantly without chaos according to the synchronized signal from receiver 1. In addition: if there are several receiver 1, only one of them can be set as MASTER receiver, others must be set as SLAVE receiver, otherwise it will cause chaos .*

## 5.3 The usage of button M ---the switch between Synchronous color changing and asynchronous color changing

Press button **M** for 2 seconds to switch between Synchronous color move and Asynchronous color changing when multiple different receivers are in the same mode. Synchronous color changing means the starting point and ending point are at the same time, Asynchronous color changing means there is certain time delay of the starting point and ending point, the later receiver start or ending point is always later than the previous receiver. For example, Receiver 1,2,3,4,5 changing together under mode 1, if it is Synchronous color changing, all of the receivers change will start and end at the same time. If it is Asynchronous color changing , then receiver 1 will start change firstly , then follows by receiver.2 , and later by receiver 3 and receiver 4 and receiver 5 ...and recycle to receiver 1 .....The purpose of asynchronous color change is to achieve the color changing effect which looks like water chasing .

## 5.4 Usage of ON/OFF **⏻**

5.4.1 Press of ON/OFF button **⏻** for turning ON/OFF receiver.

5.4.2 Press ON/OFF button **⏻** for more than 2 seconds, it can reveal white light output, each channel is 100% output.



## 5.5 The usage of number button **7 8 9 10**

5.5.1 Press on number button for choosing the corresponding receiver, E.g. to adjust the brightness of receiver 1, you need to press 1 button **1** , then press button **B-** or button **B+** to adjust its brightness.

5.5.2 Pressing number button can turn on/Off the corresponding single receiver, E.g. If you need to turn off receiver 1, press button **1** more than 2 seconds, if you need turn it on again, please press button **1** again for more than 2 seconds.

*Notice: If you turn off the extension by pressing the corresponding number button, you must turn on this receiver in the same way, The receiver can not be switched on through button ON/OFF.*

## 6.Symptoms and solutions

Symptom	Analysis	Solution
The Receiver cannot be learned to the sender	<ol style="list-style-type: none"> <li>1. Exceed learning time, every learning time is 5 Seconds only.</li> <li>2. Sender is under dormancy status.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press receiver learning button, LED indicator is ON , press the number button before led indicator is OFF , then press function button or touch color wheel.</li> <li>2. Press On/Off to make the sender under working status.</li> </ol>
The sender cannot control the receiver	<ol style="list-style-type: none"> <li>1. Receiver isn't learned to the sender.</li> <li>2. The receiver isn't learned to the sender correctly.</li> <li>3. Remote distance is out of range.</li> <li>4. Incorrect receiver.</li> </ol>	<ol style="list-style-type: none"> <li>1. To learn the receiver by the sender.</li> <li>2. When receiver is learned to the sender, press number button first, then press function button or touch color wheel.</li> <li>3. Shorten the remote distance.</li> <li>4. Choose correct receiver ID.</li> </ol>
Color changing isn't synchronized	<ol style="list-style-type: none"> <li>1. MASTER receiver isn't set.</li> <li>2. More than two MASTER receivers are set.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset a new MASTER receiver.</li> <li>2. Relearn all the receivers with one MASTR receiver</li> </ol>
Wrong color	Wrong connection of RGB(W) electric wires.	Reconnect RGB(W) electric wires
LED flashing	The power is not enough	Change a higher power supply

## 7.Precautions

- 7.1 Please unload the batteries if the send is not used for a long time.
- 7.2 Don't fall the sender from a high place or don't squeeze it.
- 7.3 Please replace new batteries if there is a warning indicator of insufficient power, otherwise it would cause damage to the sender..
- 7.4 Receiver is non-waterproof, not for outdoor use.