

## **Programmable RGB LED Touch Controller (Remote Control) and RGB LED Touch Controller (Receiver)**

Part numbers: RGB-T3X  
RGB-T3-5A or Dim-T1-T2-T3-Receiver



The Programmable RGB LED Touch Controller is a simple and easy way to customize and control 4-wire Red-Green-Blue 12 or 24 volt DC LED strips or other RGB LEDs. The RGB-T3X remote allows you to create and store the perfect ambiance for any occasion, up to 8 custom color sequences. Choose whether to fade, step, or strobe through the color cycle, and adjust the speed and brightness. Custom colors can also be displayed in real time by simply touching the color wheel. There are 256 levels for each Red, Green, and Blue color, which results in over 16 million available color options on the color wheel. With 32 pre-programmed modes, this controller is ready to use out of the box. Simplify your RGB LED installation and eliminate wires by pairing multiple RGB-T3-5A or Dim-T1-T2-T3-Receiver receivers with one remote. We recommend the RGB-T3-5A receiver for larger installations, because this receiver automatically syncs with other RGB-T3-5A receivers in the area to create seamlessly matched RGB LED lighting effects.

Both the remote and receiver utilize 2.4 GHz radio frequency for wireless communication and synchronization. Each has an effective range of up to 30 meters (100 feet) and works through walls. There is a mini-USB port to charge the internal battery (mini-USB to USB cable included). A single remote can control an unlimited number of receivers within the effective range, coordinating all modes and color changes.

The RGB-T3-5A receiver can be operated independent of the remote control, however this eliminates the ability to access or create custom color sequences. Pre-programmed modes are available on the receiver and can be paused at any point to hold a static color. When powered on, all receivers within the effective range will synchronize, even if no remote is present. In other words, if you set a mode to run on one receiver, all other receivers in the area will display the same mode.

The RGB-T3-5A receiver is rated at 5 amps per channel which is 180 watts per receiver at 12 volts or 360 watts per receiver at 24 volts. Our regular density RGB LED strip uses up to 30 watts per 5 meter reel and the double density RGB LED strip uses up to 50 watts per 5 meter reel. Therefore, you can control 6 reels of regular density RGB LED strip or 3 reels of double density LED strip at 12 volts.

The Dim-T1-T2-T3-Receiver cannot be operated without a remote. A Dim-T1, Dim-T2M, or RGB-T3X remote is required to operate the Dim-T1-T2-T3-Receiver. The Dim-T1-T2-T3-Receiver is rated at 6 amps per channel, which is 90 watts per receiver at 5V, 216 watts per receiver at 12 volts, or 432 watts per receiver at 24 volts. Our regular density RGB LED strip uses up to 30 watts per 5 meter reel and the double density RGB LED strip uses up to 50 watts per 5 meter reel. Therefore, you can control 7 reels of regular density RGB LED strip or 4 reels of double density LED strip at 12 volts.

## Features

- Color wheel on remote gives over 16 million color options at the touch of a finger.
- RGB-T3-5A receiver can operate independently or by remote.
- Radio frequency remote can control the receiver from up to 30 m (100 feet) away, through walls.
- 32 pre-programmed modes, 7 static and 25 dynamic.
- Using the remote, create and store up to eight custom scenes.
- Each remote can control an unlimited number of receivers.
- Remote is charged via mini-USB port, USB to mini-USB cord included.
- Speed and brightness controls on both remote and RGB-T3-5A receiver.
- If no remote is used, RGB-T3-5A receivers within effective distance of each will sync their output.
- RGB-T3-5A receiver has ability to pause modes at any point to hold a static color.
- Indicator light on remote gives confirmation feedback and shows current color of RGB lighting.
- 3 signal outputs: Red, Green, and Blue. Common anode takes 12 or 24 VDC.
- Power off memory function.
- -20 to 130°F operating temperature range.
- 1 year manufacturer warranty.

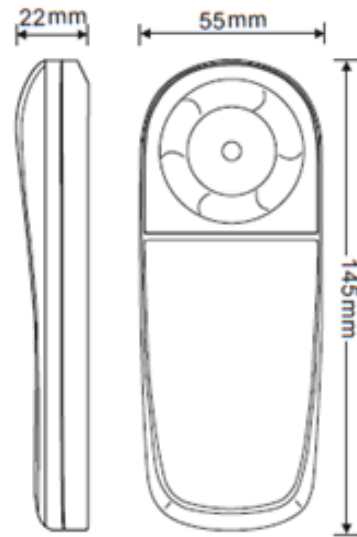
## Applications

- Create the perfect ambiance for any home or business.
- Customize and store color scenes for sporting events, holidays, or custom displays.
- Hotels, restaurants, bars, clubs, retail stores, businesses.

## Specifications

### Remote

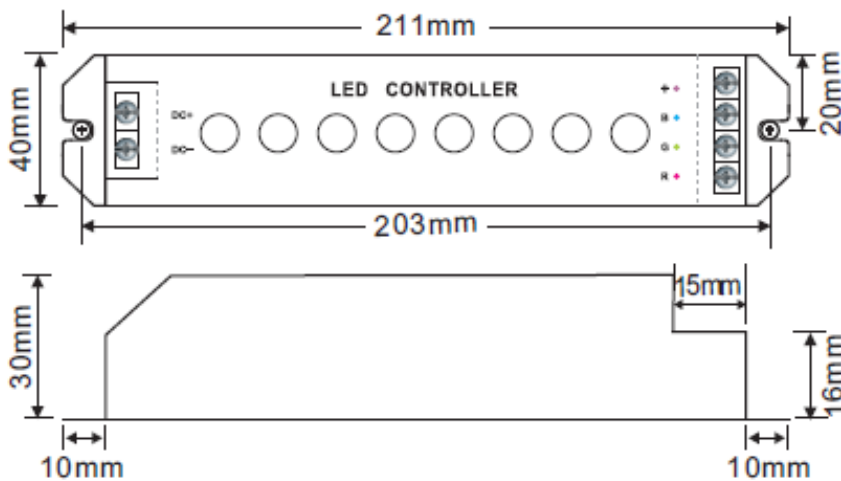
|                          |   |
|--------------------------|---|
| Dimensions:              | 5.71" x 2.17" x 0.87"<br>145 mm x 55 mm x 22 mm |
| Input voltage:           | 5 VDC built-in lithium-ion battery              |
| Charge method:           | Mini-USB port (cable included)                  |
| Working current:         | <30 mA  |
| Working frequency:       | 2.4 GHz   |
| RF remote distance:      | 100 ft (30 m)                                   |
| Transmitting rate:       | 500 Kbps  |
| Battery capacity:        | 1000 mAh  |
| Standby time:            | 1 year  |
| Normal use time:         | 30 days   |
| Charge time:             | <4 hours  |
| Number of charge cycles: | 500+  |
| Weight:                  | 9.6 ounces                                      |
| Max. number receivers:   | Unlimited (within effective range)              |



### Receivers

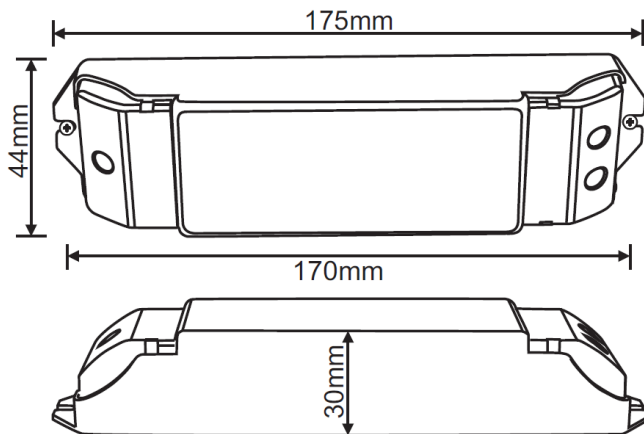
#### RGB-T3-5A

|                    |   |
|--------------------|---|
| Dimensions:        | 8.31" x 1.57" x 1.18"<br>211 mm x 40 mm x 30 mm |
| Channels:          | 3: Red, Green, and Blue                         |
| Input voltage:     | 12 or 24 Volts DC                               |
| Max. current load: | 5A per channel                                  |
| Max. output power: | 180W/360W (12V/24V)                             |
| PWM Frequency:     | 480 Hz  |
| Weight:            | 8.0 ounces                                      |



## **Dim-T1-T2-T3-Receiver**

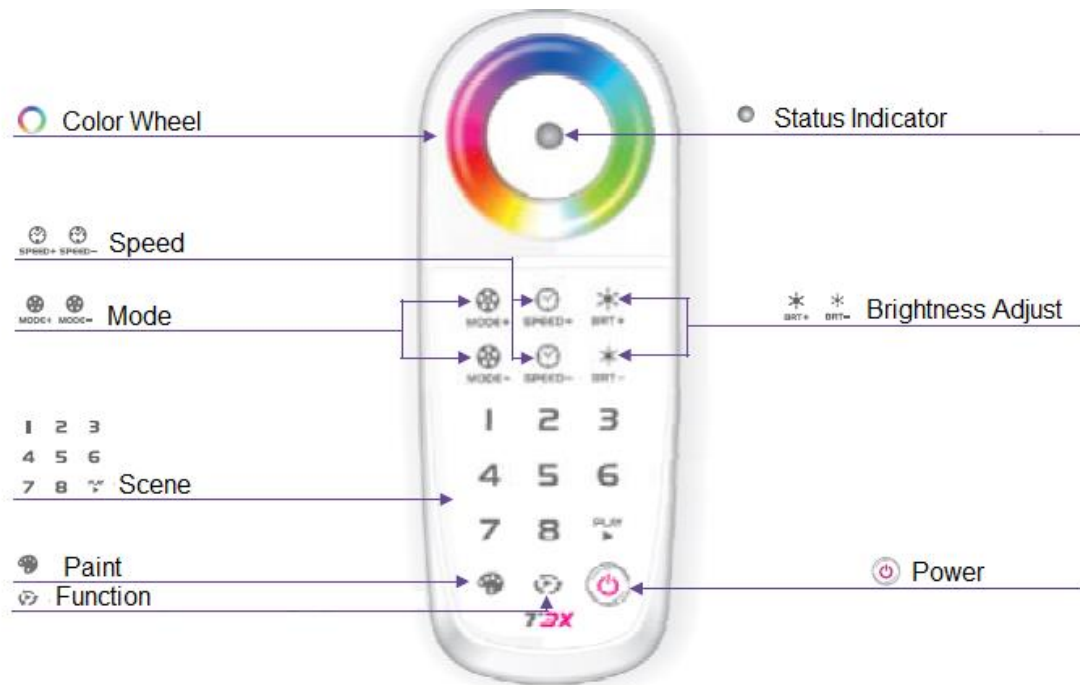
|                    |   |
|--------------------|---|
| Dimensions:        | 6.89" x 1.77" x 1.18"<br>175 mm x 44 mm x 30 mm |
| Channels:          | 2: Warm White and Cool White                    |
| Input voltage:     | 5, 12, or 24 Volts DC                           |
| Max. current load: | 5A per channel                                  |
| Max. output power: | 50W/120W/240W (5V/12V/24V)                      |
| PWM frequency:     | 1920 Hz   |
| Dimming range:     | 5-100%  |
| Weight:            | 5.8 ounces                                      |



# Operation

## Remote

Charge the remote using the provided mini-USB to USB cord. If the remote is on while charging, the indicator will flash blue. A solid green light indicates that the charge is complete.








To choose a custom static color, simply touch the desired color on the color wheel. The status indicator will change color in confirmation. Modes are listed on the next page, and can be accessed using the Mode +/- buttons.

Each time a command is made on the remote the indicator light will flash and there will be a response beep from the receiver. **To turn off the default beep settings simply press the Play button for three seconds at any time.** Note that this will disable the “routine” beeps for commands such as brightness adjust or mode change, but it will not turn off the “confirmation” beeps for commands such as entering the scene function. Generally “confirmation” beeps are only emitted when you hold a given button for three or more seconds.

**Lowered sensitivity of the touch wheel is a symptom of low battery charge. If you notice this happening, charge the remote.**

## How to Customize a Color Scene

Creating and saving custom scenes is easy with the RGB-T3X remote.

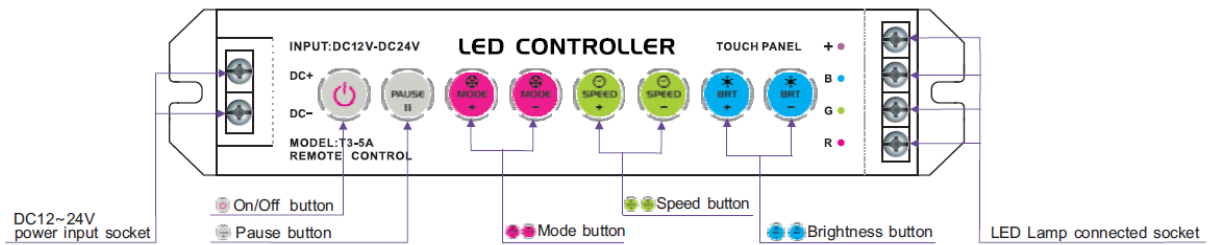
1. Hold the Paint  button for several moments to enter the scene function.
2. Select any color on the color wheel.
3. Press paint  to save.
4. Select up to ten colors, pressing paint after each to save.
5. By pressing the mode key   while in the scene function, black (full dark), true red, green, blue, magenta, cyan and white can be accessed. A full dark may also be chosen as part of your custom scene, or can be used to overwrite unwanted colors in the scene storage queue.
6. After the final color selection, press the Function  key to choose your fade, step, or flash effect.
7. Hold the scene number you wish to save your scene to for several seconds until the indicator light blinks green to confirm.
8. Access and play your scene at any time by pressing the scene number.
9. To create another scene or to save over an old one, simply repeat the above steps.

\*\*Please note: Scene storage memory must be overwritten each time you create a new scene. If your new scene is shorter than the previous customized scene, then you will need to write over the old colors.

| Mode   | Description              |
|--|--------------------------|
| <i>Static - Brightness Adjustable</i>        |                          |
| 1  | Static Red               |
| 2  | Static Green             |
| 3  | Static Blue              |
| 4  | Static Yellow            |
| 5  | Static Magenta           |
| 6  | Static Cyan              |
| 7  | Static White             |
| <i>Dynamic - Brightness/Speed Adjustable</i> |                          |
| 8  | RGB Jump                 |
| 9  | 7 Colors jump            |
| 10   | White Flash              |
| 11   | 7 Colors Flash           |
| 12   | Red/Dark Fade            |
| 13   | Green/Dark Fade          |
| 14   | Blue/Dark Fade           |
| 15   | Yellow/Dark Fade         |
| 16   | Magenta/Dark Fade        |
| 17   | Cyan/Dark Fade           |
| 18   | White/Dark Fade          |
| 19   | RGB/Dark Fade            |
| 20   | Red/Green Fade           |
| 21   | Red/Blue Fade            |
| 22   | Green/Blue Fade          |
| 23   | Red/Yellow Fade          |
| 24   | Green/Cyan Fade          |
| 25   | Blue/Magenta Fade        |
| 26   | Green/Yellow Fade        |
| 27   | Blue/Cyan fade           |
| 28   | Red/Magenta Fade         |
| 29   | Blue/White Fade          |
| 30   | Yellow/Magenta/Cyan Fade |
| 31   | RGB Fade                 |
| 32   | 7 Color Fade             |

## Receivers

### RGB-T3-5A



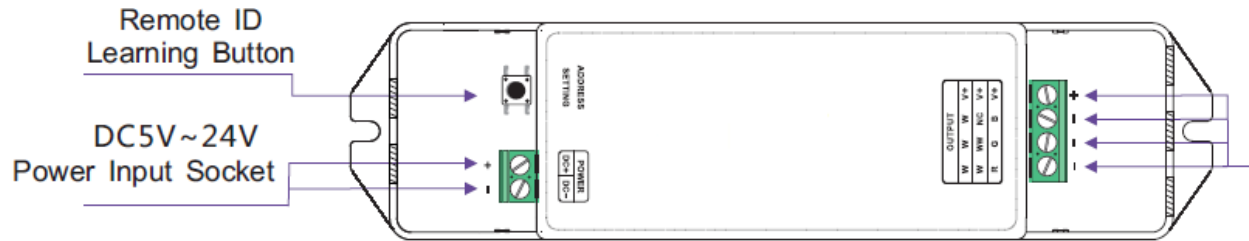
Connect the LED load to the receiver using the R (red), G (green), B (blue), and + (common) sockets. Apply 12 or 24 VDC, depending on the requirements of the LED strip, to the power input socket. As shown below, receivers may be connected to the same or different power sources, as long as power needs are met.

The receiver is ready to use as soon as both power and load are connected. If no remote is to be used, simply touch the mode button up or down to cycle through the modes. Speed and brightness adjustments work as with the remote. The pause button will stop the mode and hold its current color static. Simply press again to continue the dynamic mode.

If there is more than one receiver within effective range all of the receivers will automatically sync. This means that any setting adjusted on one receiver will be carried out on all receivers in the effective range.

**To pair a remote to the receiver,** hold down the On/Off button on the receiver (see above diagram of receiver) for several moments until it beeps. While continuing to hold down the On/Off button, press any key on the remote. The green indicator light on the remote will flash green 3 times and receiver will beep to confirm. **To disable a pairing between the remote and a receiver,** repeat the same steps as to create the pairing. This time the indicator light will flash red to confirm the deletion.

## Dim-T1-T2-T3-Receiver



Connect the LED load to the output of the receiver using R (red), G (green), B (blue), and + (common). Apply 12 or 24 VDC, depending on the requirements of the LED strip, to the power input socket. **Please note that either the Dim-T1, Dim-T2M, or RGB-T3X remote is required to operate the Dim-T1-T2-T3-Receiver.**

## Pairing the RGB-T3X remote to the Dim-T1-T2-T3-Receiver

Pairing the RGB-T3X remote with the Dim-T1-T2-T3 receiver is easy. Simply follow these steps:

1. Turn on the remote and power up the receiver.
2. Press the Remote ID Learning Button on the receiver.
3. Press any key (except for the on/off button) on the remote. The buzzer on the receiver will beep and the green indicator light on the remote will flash 3 times, indicating that the receiver was paired correctly.

## How to unpair a Dim-T1-T2-T3-Receiver from the RGB-T3X remote

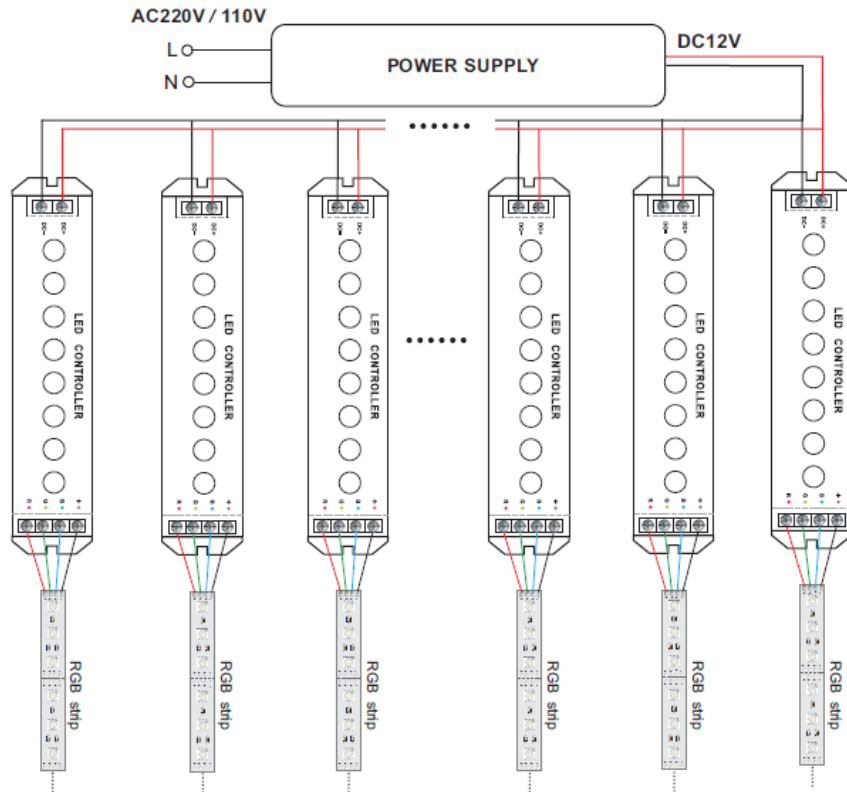
To remove a Dim-T1-T2-T3-Receiver pairing from a RGB-T3X remote simply do the following:

1. Turn on the remote and power up the receiver.
2. Press the Remote ID Learning Button for several moments until it the receiver beeps twice. This indicates that the receiver has been disassociated from the remote.

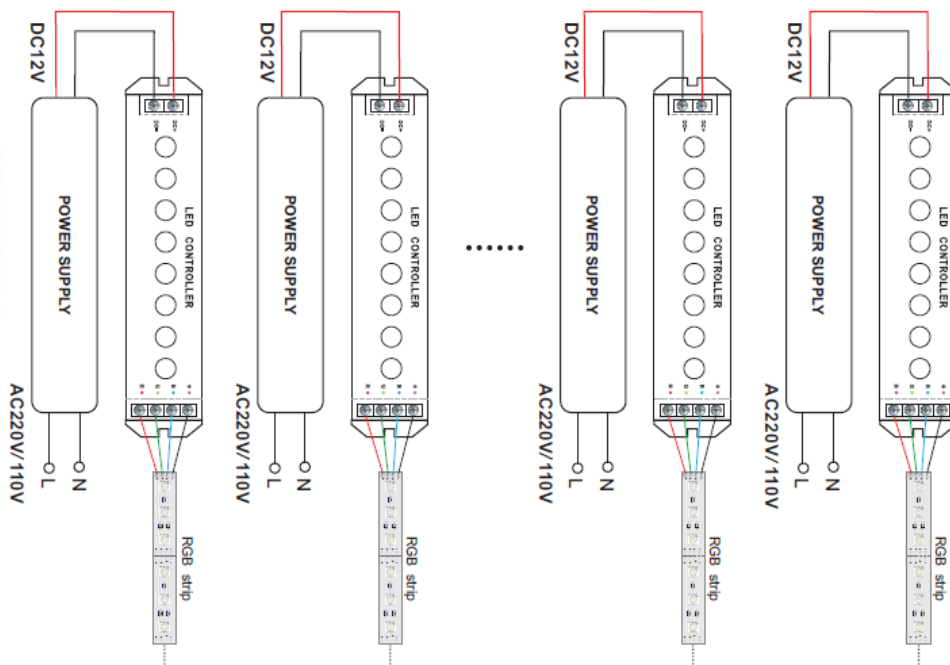


# Detailed Wiring Instructions

*Single power supply supporting multiple receivers*



*Individual power supply for each receiver*



EnvironmentalLights.com provides detailed wiring instructions for our LED linear lighting (flex strips, superflat rope, modules and rigid strips). In addition, we provide the design criteria charts that tell you how many feet, LEDs, modules, reels or other units you can put on a) each branch and b) each drive unit. A drive unit can be a controller, decoder, or amp. This document is called `rgb_manual.pdf`, and it should have been emailed to you when your order shipped. Please be sure to check this document for relevant information for your installation. If you have not seen this document, please call us at 888-880-1880 and we will provide it. This controller is fairly easy to wire. For larger installations, you need to follow our basic guidelines to get the outstanding results you seek.

## **Instructions**

Please take the following precautions:

1. This equipment, like all electrical equipment, should be installed by a qualified person.
2. Do not expose these LEDs, dimmers or power supplies to intense electro-magnetic fields, including lightning.
3. The controllers and power supplies are not waterproof. Keep them dry.
4. Always observe proper polarity.

When installing LED lighting, it is a good idea to follow this “dry-run” procedure:

1. Be sure you have everything you need before you start.
2. Lay out your lights and power supply on the floor or table.
3. There is some resistance in the LED lighting. If you see any color fading or dimming at the end of a long run, you may have too many LEDs for your power supply and you might need a bigger supply or shorter runs. Use a bus structure as described in `rgb_manual.pdf`. Call if you need assistance with larger projects.
4. Connect everything and test it to be sure it works and you have it connected properly. It is unlikely, but possible, that some part of your system is defective or was damaged during shipment. If that is the case, it will be very helpful to you to know that before you do all the work involved in installing custom LED lighting systems. You will also know if you damage anything during installation, which is really helpful in trouble-shooting because manufacturing defects and installation damage typically have very different solutions.

Once you have tested the system successfully, you are ready to install it. We recommend you install LEDs, electronic controls and dimmers in such a way that you have access to them in case they fail. All electrical components can fail.