

RGB LED Touch Controller
(Remote Control-1 Zone) - 12 or 24 VDC
Part No. RGB1



The RGB LED Touch Controller ([RGB1](#)) is an easy way to mix colors seamlessly in real-time, using any 12 or 24 volt RGB LED product. Customize the color of your RGB LED product by simply touching the color wheel. Apply the correct DC voltage to the inputs and the controller will generate pulse dimming signals on three separate output channels (red, green and blue). Output is 12 or 24 VDC, matching the driver you use. Pre-programmed with 11 modes, this three channel RGB LED Touch Controller is ready to use.

Features

- RF hand-held remote controller lets you select operating modes and custom colors:
- Touch sensitive color wheel allows real-time custom control of colors. Simply touch the desired color on the color wheel and your RGB LED lights will sync to match the color.
- 11 pre-programmed modes:
 - Static red, green, yellow, blue, magenta, cyan, and white.
 - RGB color change mode.
 - Seven color change mode (red, green, yellow, blue, magenta, cyan, and white).
 - RGB color fade mode.
 - Seven color fade mode (red, green, yellow, blue, magenta, cyan, and white).
- Remote controller works through walls. Over 100 foot range in benign electromagnetic environment.
- High output frequency enables a large color spectrum and pulse width modulation dimming.
- Power off memory function.

Operation

Use 12 VDC or 24 VDC, depending on your lights. Controller accepts either, and generates maximum output voltage equal to the input voltage. Apply voltage using the 2.1mm jack at the side, which is compatible with our adapters and power cords, or use the terminal blocks provided for bare-wire power connection.

The four output lines (red, green, blue cathodes and common anode) are available on a terminal block, so use bare wires to connect your lights. Power and signal lights on the controller indicate and display if the controller is receiving power and/or signal transmissions.










Output and power terminal block



2.1 mm jack DC IN port

Remote control functions:

- : Power on/off.
- : Toggles between the pre-programmed modes.
-  or : Increases or decreases the speed of dynamic modes.
-  or : Increases or decreases the brightness when in static modes (12 levels).
- : Indicates signal transmission when green.



RGB1 RF touch sensitive remote

Specifications

Controller Dimensions:	5.10" x 2.21" x 0.95" 130 mm x 65 mm x 24 mm
Remote Dimensions:	4.50" x 1.57" x 0.93" 114 mm x 40 mm x 24 mm
Channels:	3: Red, Green and Blue
Output Frequency:	3875 Hertz
Operating Temperature:	-4 to 140°F (-20 to 60°C)
Voltage:	12 or 24 Volts DC
Sustained Power:	108 watts at 12 VDC output. 9 amps total. 3 amps per channel. 216 watts at 24 VDC output. 9 amps total. 3 amps per channel.
Peak Power:	144 watts at 12 VDC output. 12 amps total. 4 amps per channel. 288 watts at 24 VDC output. 12 amps total. 4 amps per channel.

Applications

- A sleek and seamless solution for full color LED control systems. Use with 12 or 24 Volt DC Red-Green-Blue LED lights, including strips and modules.
- Downlighting and uplighting features.
- Hotels, restaurants, office buildings, homes and casinos, wine cellars, bars, home entertainment centers.

Detailed Wiring Instructions

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 [LED Color-Mixing Linear Lighting Manual](#). Please be sure to check this document for relevant information for your installation. 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:

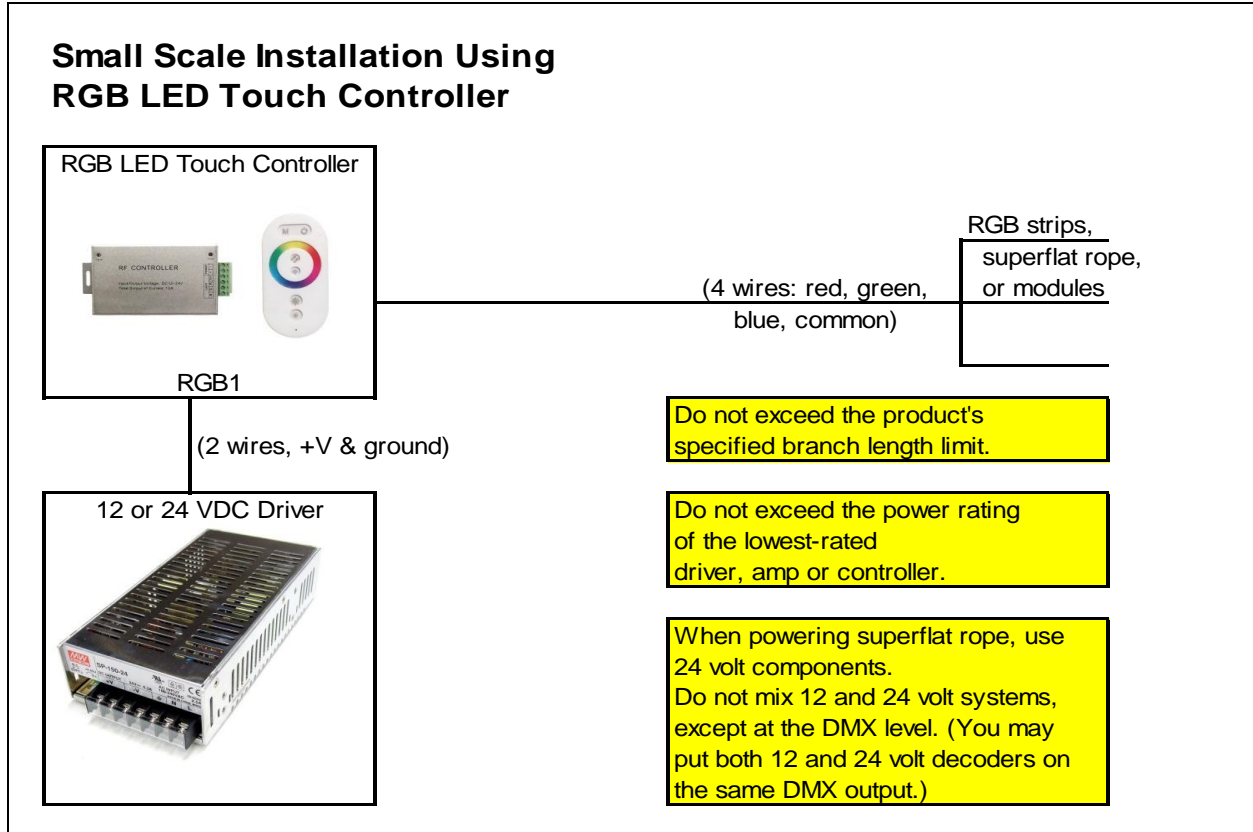
1. Be sure you have everything you need before you start.
2. Lay out your lights and power supply on the floor or table.
3. There is some resistance in the LED lighting. If you see any color fading or dimming at the end of a long run, you may have too many LEDs for your power supply and you might need 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 with the RF remote, 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.

Extend your installation almost without limits using amplifiers, also called “boosters” or “repeaters.” Amplifiers require their own power supplies (drivers.) They work with 12 or 24 volt drivers. With these amplifiers as building blocks, you can build an installation that is very large. Refer to the diagrams at the end and contact us if you are unsure how to engineer the system.

Circuit Diagrams for Controllers

Detailed wiring instructions for our LED linear lights are available in “rgb_manual.pdf.” Ask for it, if you haven’t seen it.



Circuit Diagrams for Controllers (Continued)

