

# 30 Color RGB LED Controller With RF Wireless Touchpad

Model # RGB8KEY-RF

*Precision dimming and color control for RGB color-changing LED lighting.*



Professional grade, easy-to-use RGB LED color controller. Works with Armacost Lighting's RibbonFlex Pro component-based RGB LED tape lighting system. Design custom color and color-changing lighting installations to fit any need. Using radio frequency (RF) technology, the wireless touchpad transmitter works through walls and doors up to 100 ft., eliminating the need to run extra wires – useful where installing new cabling can be difficult.

**Choose from warm, radiant glows to playful accents to dynamic color-changing effects – or simply select a color to suit your mood.**

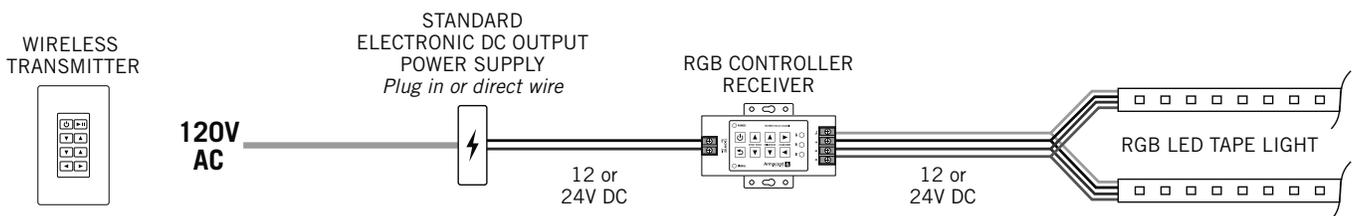
The color controller is preprogrammed with a full spectrum of 30 designer colors, from pastels to vivid bright color mixes. Colors, including five shades of white ranging from ultra warm to very cool bright white color temperatures, are arranged in common color groupings for easy navigation. All colors are fully dimmable.

The six color-changing effects are preprogrammed with desirable cross-fading of colors. Effect speed is fully adjustable, from quick changing colors to ultra slow dissolves where colors morph from one to another.

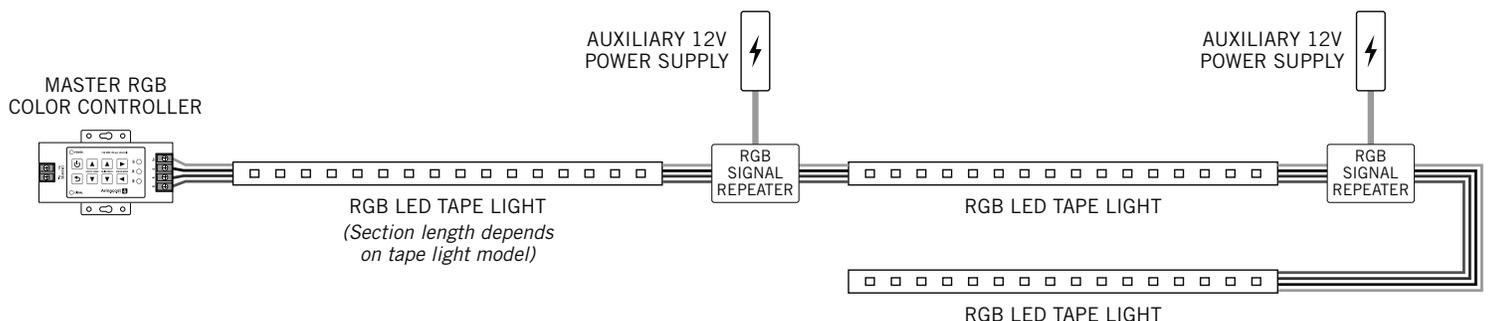
## WIRING AND CONNECTING

- For use only with 12V DC or 24V DC low voltage 3-channel RGB LED lighting requiring 4 wire connections. **Never connect this device to 120V AC current.**
- Do not connect more than one RGB color controller receiver to a power supply in the same circuit. Doing so will cause the lights to flicker.
- Suitable for RV and boat interior applications; this device can be direct wired to an on-board 12V or 24V battery. Mount in dry location, keep from spraying water.
- Do not exceed 12 amp load (144 watts when used with 12V LEDs or 288 watts when used with 24V LEDs).
- All wiring must be in accordance with national and local electrical codes, low voltage Class 2 circuit. If you are unclear as to how to install and wire this product, contact a qualified electrician.
- Use only insulated staples or plastic ties to secure cords and wires.
- Route and secure wires so they will not be pinched or damaged.
- For wire runs inside of walls, use certified CL2 or better cabling and appropriate mounting hardware.
- Do not install Class 2 low voltage wiring in the same runs as AC main power. If AC and low voltage wires cross, keep them at 90-degree angles.

Low voltage safe, the color controller receiver is direct wired inline and connects anywhere between your low voltage power supply and the RibbonFlex Pro Color RGB LED Tape Lighting. Note: The lighting can be connected and tested while the controller is installed and powered on.



Fully expandable to control virtually endless lengths of RGB LED lighting when used with Armacost Lighting's RGB signal repeaters and additional, auxiliary LED power supplies. Be sure to read and follow the instructions included with your particular RGB LED lighting to learn your model's section length limitation.



## Always maintain polarity

Low voltage wires from the power supply connect to the left side or 12-24V input as indicated on the white case. Be sure to maintain + / - polarity. Red wires are V+ (positive) black wires are V- (negative).

The V+ RGB four-conductor wires from your RGB LED tape light connect to the controller's right output side. Be sure to maintain polarity: red to red, green to green, blue to blue. The white or sometimes black wire connects to the V+ positive anode terminal screw on receiver. Tinning of stripped wire leads is always recommended. Do not leave any copper strands loose from any wires or shorting may occur. Be sure all screws are snug, but do not over-tighten.

## For better color consistency, keep RGB LED tape oriented in the same direction

RGB LED tape viewed from one side or the other will always have a color shift due to the red, green and blue chips in the LED. For better color consistency, especially when used in cove lighting, keep the LED tape strip oriented in the same direction, e.g., logo markings on tape should always be pointed or facing the same way.

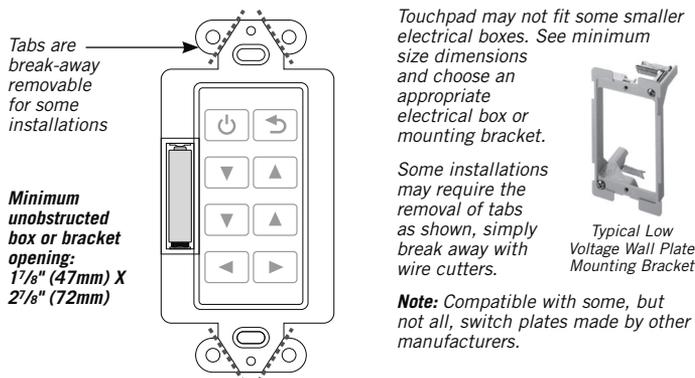
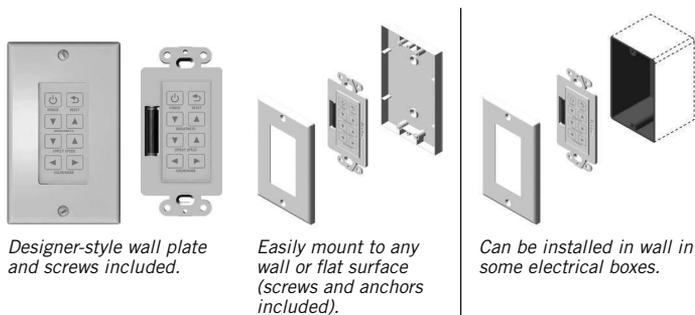
## For better LED brightness, keep voltage drop to a minimum

Voltage drop is a natural occurrence in all low voltage lighting systems. It is the gradual decrease in voltage that occurs from your power supply to your LED lighting. Voltage drop only becomes undesirable if you notice the brightness in one area of your lighting is objectionably different than in another area. As a practical approach to installing LED tape lights, test your lighting prior to final installation. If voltage drop appears to be a concern, use shorter lengths of DC power feed wires or switch to a thicker gauge wire (lower AWG number).

For an online voltage drop calculator, visit [armacostlighting.com/installation](http://armacostlighting.com/installation).

## WIRELESS TOUCHPAD TRANSMITTER INSTALLATION

Designer-style wireless touchpad transmitter can easily be surface mounted or installed in-wall. It comes with a switch plate, mounting screws and drywall anchors. Also included is one 12V alkaline battery (27A). The touchpad design will blend with existing residential and commercial switches and dimming décor.



## OPERATION

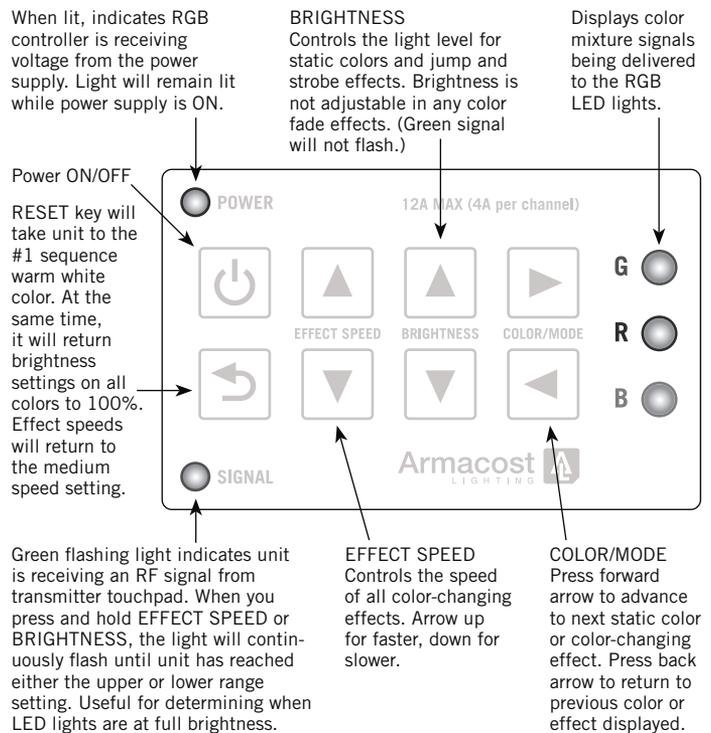
After switching on your power supply, check that the green power LED is lit on the front of the case which indicates the controller is receiving power. Press the power on/off key and the RGB lights will turn on.

Using the function keys, you can use the color controller receiver or the wireless touchpad transmitter to control your RGB LED lighting. Each unit has the same 8 function keys. The touchpad transmitter comes preprogrammed on the same wireless frequency code as the receiver and should work immediately after the battery has been properly installed. If not, please follow the instructions under Pairing and Multi-Zone Lighting to re-program your transmitter to match the receiver.

## Memory and Reset Function Key

The unit will remember the settings for brightness and speed for each color and each effect. For instance, if one color is dimmed, the unit will maintain that setting for that color until changed, even if the power is turned off.

This RGB controller is designed with a unique reset function key. Pressing the reset key will take the RGB controller to the #1 sequence position which is a very warm white color. At the same time, it will automatically return the brightness settings on all colors to 100% full brightness and any programmed effect speeds will return to the medium speed setting.



## Colors and effects

Pressing the reset key will take you to the #1 static color position which is a very warm white color. All colors are arranged in common color groupings for easy navigation, colors are fully dimmable.

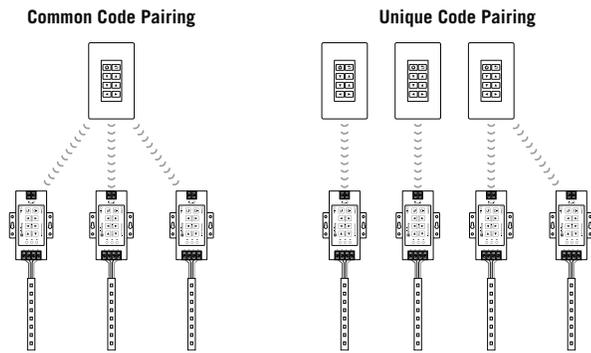
1-5	Shades of white	31	White strobe
6-12	Shades of blue	32	Full color cross fade
13-17	Shades of green	33	Red, white and green cross fade
18-21	Shades of yellow	34	Red, white and blue cross fade
22-26	Shades of red	35	Red and white cross fade
27-30	Shades of purple	36	Red, gold and green cross fade

## Power Off Memory

If the power goes out, or power is turned off to your power supply, when the power is restored, the unit will go to your last color or effects setting.

## PAIRING AND MULTI-ZONE LIGHTING

This color controller features RF pairing technology for expandability and multi-zone lighting control. One touchpad transmitter can be paired to control multiple RGB color controller receivers within the same area or range. Or, individual color controller receivers and transmitters can be programmed to work together independently in the same area without interference.

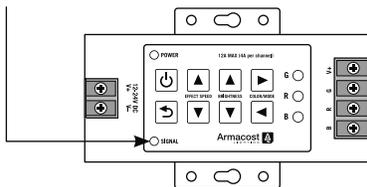
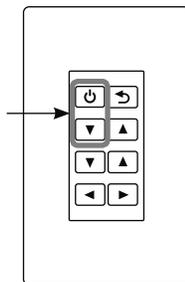


Pairing and RF code technology can greatly reduce the need for extra wiring.

### Pairing instructions

Before pairing, be sure the battery in the transmitter is strong. In a darkened room, you should see a visible red LED light glowing through the front touchpad when you press any function key. If this glow is diminished or not visible, replace battery with a 12V 27A alkaline battery.

1. Turn on the RGB color controller receiver and LED lights. Set mode to any static color.
2. Shut off power to the receiver unit by unplugging the power supply – do not use the power OFF key. Wait at least 5 seconds.
3. Restore power to the receiver unit, the LEDs should light. Within 2 seconds after restoring power, press and hold the power and brightness down keys simultaneously for about 2 seconds. This action will pair the two devices.
4. A green signal light on the receiver should flash once to confirm successful pairing.



To pair multiple receivers to the same single transmitter, simply repeat the steps above with each additional receiver. The transmitter's unique code will be programmed to the additional receiver units.

To synchronize the colors and brightness levels of all receivers, simply press the reset key on the transmitter touchpad. All RGB LED lighting will reset to the #1 warm white color position.



Note: you can also "un-pair" the RGB controller by following the process above but press the brightness up and brightness down keys.

### IMPORTANT

- Do not connect multiple receivers to one power supply. Each receiver must have its own power supply.
- Only static colors will synchronize. Color-changing effects will not synchronize due to the various cycling speeds of each unit.
- If you repeatedly press any of the touchpad keys too fast, the RGB controllers will lose their synchronization. To re-synchronize, press the reset key on the touchpad transmitter.
- For effective synchronization, all receivers must be within range of the single wireless touchpad.

If you would like to purchase additional RGB color controller receivers or wireless transmitters, visit the retailer where you made your purchase or [armacostlighting.com](http://armacostlighting.com).

## TROUBLESHOOTING

### LED tape light strip does not light, flickers, or there is limited or inconsistent colors

Make sure the power supply and RGB color controller are turned on and receiving power. Confirm you have maintained correct polarity on all wire connections (V+, red to red, green to green, blue to blue) when joining RGB LED strips as well as when connecting wires to the RGB color controller and to the power supply.

Press the reset key. If any other color appears other than a warm/yellow white, then you have a bad connection or polarity is not correct. Check to be sure all connections are secure. If you have a failed connector, you can easily solder wires to the LED tape and solder splice connections. Soldering is the surest method for making extra reliable electrical connections. Never use connectors in RV or boat applications due to possible vehicle vibrations. To learn about best soldering practices visit [armacostlighting.com/installation](http://armacostlighting.com/installation).

### The wireless touchpad is not working.

Be sure the touchpad is in range of your receiver. Try moving the touchpad closer to the receiver. The transmitter is a radio frequency (RF) device and, as such, the range of the wireless remote control is dependent on many factors. Actual operational distance will vary based on walls and line of sight obstructions, and other nearby electronic devices.

Be sure your battery is good. To check battery, press the on/off key in a dark room/location. When pressed, you should see a red LED indicator light glowing from behind the surface of the touchpad. If you do not see this glowing red light, replace the battery (Alkaline 27A 12V). A battery will last from 6 months up to 2 years, depending on usage.

The receiver may need to be paired again with your transmitter. If your dimmer receiver is functioning properly, and you know your transmitter battery is fresh, yet the transmitter will not control your lighting, please revisit the pairing instructions.

### Static colors display uneven brightness or a color shift.

This may be due to voltage drop. Shorten the length of your RGB lighting installation or reduce the length of RGB power wire and/or use thicker wires. Refer to your RibbonFlex Pro specific model's Installation Guidelines for options on other installation configurations that may reduce voltage drop.

For help with larger LED lighting installations, email [support@armacostlighting.com](mailto:support@armacostlighting.com).

## SPECIFICATIONS

Input voltage.....	12V-24V DC
Output current.....	12A (4A per RGB channel)
Max load with 12V DC lighting.....	144 watts
Max load with 24V DC lighting.....	288 watts
Working temperature (receiver only, non wireless) .....	5 to 130°F (-15 to 55°C)
Working temperature (using wireless function).....	40 to 130°F (4 to 55°C)
Wireless working frequency.....	433.92MHz
Transmitter battery.....	Alkaline 27A 12V
Listings .....	CE, RoHS, FCC, CSA
FCC ID .....	NWKHF10008
Country of origin.....	China

Limited 1-year warranty. This product is for dry location use only. Improper installation, improper powering, abuse, or failure to use this device for its intended purpose will void warranty. Proof of purchase is required for all returns. Questions? Email [support@armacostlighting.com](mailto:support@armacostlighting.com).



This item is a Radio Frequency Device (RF), and as such the range of the remote control is dependent on many factors. Actual operational distance will vary based on walls and line of sight obstructions, and other nearby electronic devices.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.



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