**TIPS AND TROUBLESHOOTING (continued)**

Actual operational distance and performance may vary based on type of walls and other nearby electronic devices. Be sure your battery is good. When any key is pressed, you should see the red LED at the front of the unit light. If not, replace battery. The receiver may need to be paired again with your remote. Please revisit the pairing instructions.

**LEDs display uneven brightness or color shifts**

This may be due to voltage drop or the RGB LED tape may be oriented in two different directions. To reduce voltage drop, reduce the length of 12V and RGB power wires and/or use thicker wires. Refer to your RibbonFlex Pro specific model’s Installation Guidelines for options on other installation configurations that may help reduce voltage drop.

For help with larger LED lighting installations, visit armacostlighting.com/RGB or email support@armacostlighting.com.

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>12V or 24V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max lighting load</td>
<td>5 Amps</td>
</tr>
<tr>
<td>Working temperature</td>
<td>10 to 130°F (-12 to 55°C)</td>
</tr>
<tr>
<td>Wireless working frequency</td>
<td>433.92MHz</td>
</tr>
<tr>
<td>FCC ID</td>
<td>2ACFYHHRGB14</td>
</tr>
<tr>
<td>Transmitter battery type</td>
<td>Coin style CR2025</td>
</tr>
<tr>
<td>Country of origin</td>
<td>China</td>
</tr>
</tbody>
</table>

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.

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**WIRELESS TOUCHPAD**

*Model RGB14REM*

- Beautifully blends with existing designer switches and dimming décor.
- Conventional 2-way lighting control – works in unison with your existing handheld remote as an additional RGB lighting controller.
- Full-function RGB LED controller with extended range – works up to 100 feet away through walls and doors.
- RF wireless and pairing technology offers ease of expandability without having to run extra cabling, touchpad can control multiple RGB receivers in the same area.

**Diagram**

- Surface mount
- Easily mount to any wall or flat surface, no hole required.
- Install in wall
- Can be installed in wall in an electrical box.

To buy online, or to learn more, visit armacostlighting.com/RGB14REM

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**SLIMLINE WIRELESS RGB LED LIGHTING CONTROLLER**

*Model HHRGB14*

Professional grade, component-based RGB lighting controller

This low voltage, easy-to-use RGB LED controller works with RibbonFlex Pro Custom Color RGB LED Tape Lighting to deliver professional, colorful lighting results. The controller blends the light from red, green and blue LEDs to create a full spectrum of 30 designer colors, from pastels to vibrant hues to five shades of white that range from very cool to very warm white color temperatures. Also includes six dynamic color-changing effects. Extremely small receiver fits almost anywhere, easily direct wire for custom installations.

The Slimline color controller will work with other 12V or 24V DC RGB LED tape light strips and modules with 4-wire hook-up.

**Package contains:** Installation Guidelines, Handheld Remote with CR2025 battery, Slimline Controller and 6-twist-on wire connectors.

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**CONNECTIONS**

**IMPORTANT – Read and follow the Installation Guidelines provided with your RGB LED lighting and power supply. Do not connect controller directly to 120V AC household current, 12-24V DC only. 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.**

**Diagram**

- AC WALL SWITCH
- 120V AC
- STANDARD 12-24V DC OUTPUT POWER SUPPLY TRANSFORMER
- SLIMLINE RGB CONTROLLER
- 12 or 24V DC
- RGB LED TAPE LIGHT
- The 2-conductor red/black wire connects to the output of your power supply. Red connects to red (+), black to black (-).
- Maintain polarity for correct color sequencing. Be sure red connects to red, green to green, blue to blue. The white wire from the controller always connects to the positive (+) indicator or white wire on the RGB LED tape light.
- The RGB wires on the Slimline controller direct wire to your RGB LED tape light. The 2-conductor red/black wire connects to the output of your power supply. Red connects to red (+), black to black (-).
- The RGB wires on the Slimline controller direct wire to your RGB LED tape light. The 2-conductor red/black wire connects to the output of your power supply. Red connects to red (+), black to black (-).
- Remote works through walls up to 50 ft. away.

**WARNING**

Disconnect power before cutting or connecting LED tape lighting. Do not allow the positive (+) white wire on the Slimline controller direct wire to come in contact with the red, green or blue wire. If the white wire touches other wires while controller is energized, the unit may fail to operate.
Important
- Maximum load is 5 amps – 60 watts when used with 12V LEDs or 120 watts when used with 24V LEDs.
- Do not connect more than one RGB color controller receiver to a power supply in the same circuit.
- Do not install Class 2 low voltage wiring in the same runs as AC household power. If AC and low voltage wires cross, keep them at 90-degree angles.
- Do not connect more than one RGB color controller receiver to a power supply in the same circuit.
- 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.
- All colors are arranged in common color groupings for easy navigation, colors are fully dimmable. Pressing the Colors and effects key will take you to the #1 color position, which is a very warm white, and will automatically return the brightness settings of all colors to 100% full brightness. Any programmed effect speeds will return to the medium speed setting.
- Orient LED tape strips in the same direction to experiment with tape light positioning to achieve your desired results.
- Temporarily mounting the LED light strip allows you to experiment with tape light positioning to achieve your desired results.

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 or color 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).

Power ON/OFF key
When you press any key, the red LED on the front of the remote will light to indicate the unit is sending an RF signal.

Reset function key
Press the reset key will take the RGB controller to the first color position, which is a very warm white, and will automatically return the brightness settings of all colors to 100% full brightness. Any programmed effect speeds will return to the medium speed setting.

Brightness arrow up or down keys
For dimming static colors, or use preset quick-keys (100%, 50%, 25%).

Color/Mode key
Press forward arrow to advance to next static color or color-changing effect. Press back arrow to return to previous color or effect displayed.

Effects speed
Controls the speed of all color-changing effects. Hold arrow down to archive ultra slow cross-fade dissolves for professional lighting results.

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

<table>
<thead>
<tr>
<th>Shades of white</th>
<th>Shades of red</th>
<th>Shades of blue</th>
<th>Shades of purple</th>
<th>Shades of green</th>
<th>Shades of yellow</th>
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<tbody>
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<td>1-5</td>
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<td>6-12</td>
<td>27-30</td>
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<tr>
<td>18-21</td>
<td>22-26</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
</tr>
</tbody>
</table>

MULTI-ZONE LIGHTING AND PAIRING
Each Slimline RGB controller comes factory set with a Unique RF Code. Multiple sets can work in the same area without interference to control multiple zones of RGB LED lighting.

The controller features RF pairing technology which can help expand lighting. Pairing allows one remote to control multiple receivers. For best results, all receivers should be within 25 feet of each other. Pairing along with RF wireless technology can greatly reduce the need for extra wiring.

Note: When using one remote to control multiple receivers, only static colors will synchronize. Color-changing effects will not sync due to different cycling speeds.

For larger RGB LED lighting installations, where colors as well as color-changing effects must synchronize, use an Armacost RGB signal repeater.

To learn more about large installations or to purchase additional RGB receiver controllers, transmitters or signal repeaters, visit armacostlighting.com/RGB.

You can also call or email Armacost technical support.

Pairing instructions
1. Connect the Slimline controller to your power supply and RGB LED lighting. Make sure everything is working properly using the remote control.
2. Remove power to the controller receiver for at least 5 seconds (unplug or turn off the AC switch to your power supply).
3. Restore power and within 2 seconds press and hold the 100% and 50% brightness touch keys simultaneously on the remote that you wish to be paired. The LED tape light will blink once to confirm successful pairing.

To pair multiple receivers to the same single remote, simply repeat the steps above with each additional receiver. The transmitter’s Unique RF Code will be programmed to the additional receiver units. It is also possible to pair up to three different transmitters to control one zone of lighting.

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 white color position.

Important
- Never connect multiple RGB controller receivers to one power supply. Each receiver must have its own power supply.
- If you repeatedly press any of the remote 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 wireless remote.

TIPS AND TROUBLESHOOTING
Temporarily install LED tape
Using painters or masking tape, temporarily place the RGB LED light strip into your desired mounting position. Power on the LEDs to make sure you are achieving the desired lighting effect before removing the 3M paper backing for final installation. Temporarily mounting the LED light strip allows you to experiment with tape light positioning to achieve your desired results.

Orient LED tape strips 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 strips oriented in the same direction, e.g., logo markings on each tape should always be pointed or facing the same way.

LEDs flicker, limited or inconsistent colors
Check all connections. Confirm you have maintained correct polarity on all wire connections (white to white, red to red, etc.) when joining LED strips, as well as when connecting wires to the color controller. Press the reset key. If any other color appears other than a warm/yellow white color, color is not correct. Check to be sure all connections are secure. If you have a failed connector, you can solder wires to the LED tape and solder splice connections. Soldering is a good method for making reliable electrical connections. To learn about best soldering practices visit armacostlighting.com/installation. Note: Always solder connections in RV and boat applications.

The wireless remote is not working
Be sure you are in range of your receiver. The transmitter is a radio frequency (RF) device and, as such, the range is dependent on many factors.
**Important**
- Maximum load is 5 amps – 60 watts when used with 12V LEDs or 120 watts when used with 24V LEDs.
- Do not connect more than one RGB color controller to a receiver in the same circuit. Doing so will cause the RGB LEDs to flicker.
- 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 household power. If AC and low voltage wires cross, keep them at 90-degree angles.

**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 or color 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.

**OPERATION**

The Slimline color controller will remember the last setting for brightness and speed for each color and each effect you select. For instance, if one color is dimmed, the unit will maintain that setting for that particular color until changed, even if the power is turned off, goes out unexpectedly, or is disconnected from the power supply.

**Power ON/OFF key**
Pressing the reset key will take the RGB controller to the #1 color position, which is a very warm white. Colors and effects you select. For instance, if one color is dimmed, the unit will maintain that setting for that particular color until changed, even if the power is turned off, goes out unexpectedly, or is disconnected from the power supply.

**Reset function key**
Resetting will take you to the #1 color position, which is a very warm white.

**Brightness arrow up or down keys**
For dimming static colors, or use preset quick-keys (100%, 50%, 25%).

**Color/Mode key**
Press forward arrow to advance to next static color or color-changing effect. Press back arrow to return to previous color or effect displayed.

**Effects speed**
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**Pairing instructions**
1. Connect the Slimline controller to your power supply and RGB LED lighting. Make sure everything is working properly using the remote control.
2. Remove power to the controller receiver for at least 5 seconds (unplug or turn off the AC switch to your power supply).
3. Restore power and within 2 seconds press and hold the RF LED on the front of the remote to control multiple zones of RGB LED lighting. The controller features RF pairing technology which can help expand lighting. Pairing allows one remote to control multiple receivers. For best results, all receivers should be within 25 feet of each other. Pairing along with RF wireless technology can greatly reduce the need for extra wiring.

**TIPS AND TROUBLESHOOTING**

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**TIPS AND TROUBLESHOOTING (continued)**

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**LEDs display uneven brightness or color shifts**

This may be due to voltage drop or the RGB LED tape may be oriented in two different directions. To reduce voltage drop, reduce the length of 12V and RGB power wires and/or use thicker wires. Refer to your RibbonFlex Pro specific model’s Installation Guidelines for options on other installation configurations that may help reduce voltage drop.

For help with larger LED lighting installations, visit armacostlighting.com/RGB or email support@armacostlighting.com.

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## SPECIFICATIONS

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<th>Details</th>
</tr>
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<tbody>
<tr>
<td>Input voltage</td>
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</tr>
<tr>
<td>Max lighting load</td>
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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.

---

**Slimline Wireless RGB LED Lighting Controller**

Model HHRGB14

Professional grade, component-based RGB lighting controller

This low voltage, easy-to-use RGB LED controller works with RibbonFlex Pro Custom Color RGB LED Tape Lighting to deliver professional, colorful lighting results. The controller blends the light from red, green, and blue LEDs to create a full spectrum of 30 designer colors, from pastels to vibrant hues to five shades of white that range from very cool to very warm white color temperatures. Also includes six dynamic color-changing effects. Extremely small receiver fits almost anywhere, easily direct wire for custom installations.

The Slimline color controller will work with other 12V or 24V DC RGB LED tape light strips and modules with 4-wire hook-up.

**Connections**

**IMPORTANT – Read and follow the Installation Guidelines provided with your RGB LED lighting and power supply. Do not connect controller directly to 120V AC household current, 12-24V DC only. 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.**

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**WARNING**

Disconnect power before cutting or connecting LED tape lighting. Do not allow the positive (+) white wire on the Slimline controller direct wire to come in contact with the red, green or blue wire. If the white wire touches other wires while controller is energized, the unit may fail to operate.

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**TIPS AND TROUBLESHOOTING (continued)**

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.