

Manual Content

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Product Description

Solid Apollo's 120V AC DMX to RGB Controller is an advanced device that converts DMX signal to RGB. It is the perfect choice for controlling 120V LED fixtures such as Solid Apollo's RGB Flex Neon LED Strip Lights and Driverless RGB LED Strip Lights.

This controller has two operational modes - DMX Control and Standalone modes. Thanks to a built-in display screen, you can easily select the operation mode and adjust the settings in each mode to suit your application.

Compared to other DMX to RGB controllers in the market, this Controller operates at high voltage (100V - 240V AC) and does not need any transformer for powering. It can safely and directly be connected to the standard 120V AC line and it can drive up to 600W at 120V AC.



Product Features

- Converts DMX signal to RGB
- DMX address settable from 1 – 512
- Connects directly to any 120V AC line
- Operates at 100V – 240V AC
- Maximum power of 500W – 1200W
- User-friendly numeric display
- DMX in and out terminals
- Dual function: DMX Controller & Decoder
- DMX standalone control function

Product Specs

- Dimmable : Yes
- Input Voltage : 100 - 240V AC
- Max Power : 500W - 1200W
- Max Amp : 3 x 1.67A
- Control System : DMX512
- DMX Channels : 512
- Weight : 0.40 lbs
- Dimension : 7.6" x 2.3" x 1.1"
- Product Color : White
- Product Material : Plastic
- Working Temp. : -4°F – 122°F
- IP Rating : IP20
- Warranty : 3 Years
- Certificates : CE, RoHS

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120V AC DMX to RGB LED Controller



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Product Installation Guide

Installation

In order to successfully and effectively be able to use Solid Apollo's 120V AC DMX to RGB Controller, it will have to be properly installed with the correct power, data, and LED fixture connections made.

Pre-installation

- A. This is a high voltage product, installation should only be done by qualified electricians and according to your local electric code requirements.
- B. Make sure to turn off the circuit breaker and ensure that power to the wires that will be used in the installation process is completely shut off before installation starts.

1. Verify that the Power Supply has the right voltage and Wattage required for your application.

2. To connect power to the decoder:

- A. Direct hard wiring: The controller can be hard wired directly to any standard 120V line. All you have to do is, securely connect the live wire to the **L** screw-terminal of the controller's "**AC INPUT**" side, and the neutral wire to the **N** screw-terminal.
- B. Using AC power cord: If using an AC power cord such as *Solid Apollo's 5 Foot AC Power Cord*, strip-off about ¼" of the cover jacket of the wires in the open end of the power cord. Then securely connect the live wire to the **L** screw-terminal of the controller's "**AC INPUT**" side, and the neutral wire to the **N** screw-terminal. **Note: You only need to connect the Live and Neutral wires.**



3. Connect the RGB fixture's wires to the "**DC OUTPUT**" screw terminals of the controller with **Red** connected to **R-**, **Green** to **G-**, **Blue** to **B-**, and the positive (could be black or another color) to **V+**.



4. If using a DMX Control System, connect its data cables to the "**DMX512 Signal**" screw-terminals of the controller with the positive data cable securely connected to **D1+**, the negative data cable connected to **D1-**, and the ground cable to the **GND** screw-terminal.



5. If cascading/daisy-chaining multiple units, connect one end of a positive data cable securely to **D2+** of the first unit (the unit connected to the DMX Control System) and the other end connected to the **D1+** of the next unit. Do the same for the negative data cable with one end connected to the **D2-** of the first unit and the other connected to the **D1-** of the next unit (*please refer to wiring the diagram - pg.3 for daisy chaining*).

6. Once the connections mentioned above are correctly done, you can now power up.

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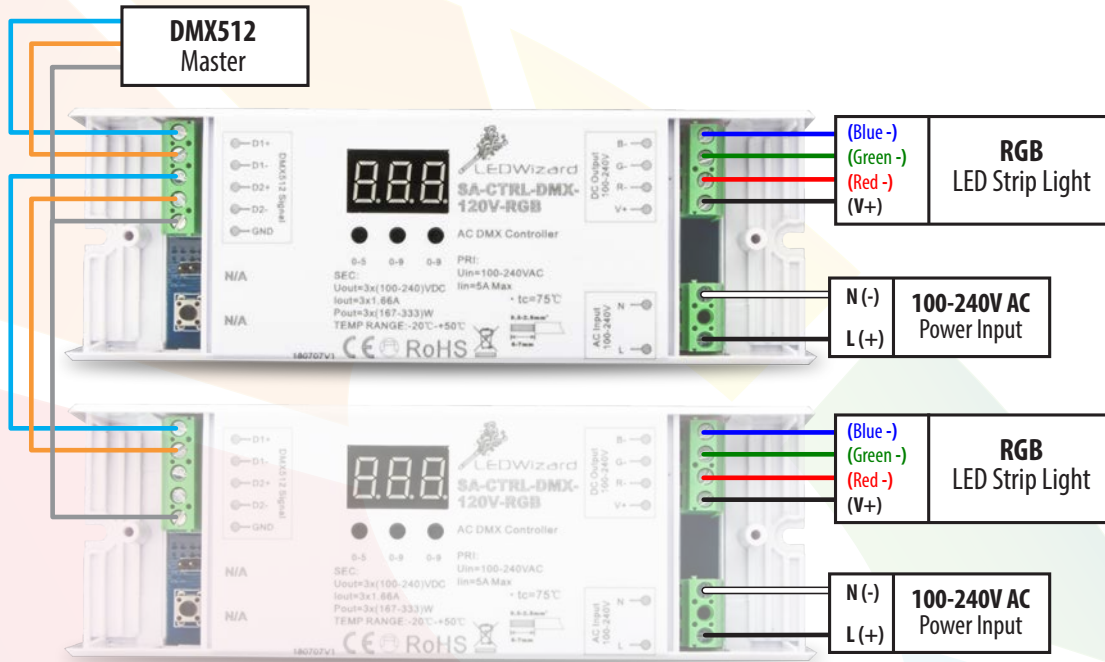
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Wiring Diagram

Wiring as DMX Decoder Mode : 



Wiring as DMX Standalone Mode : 



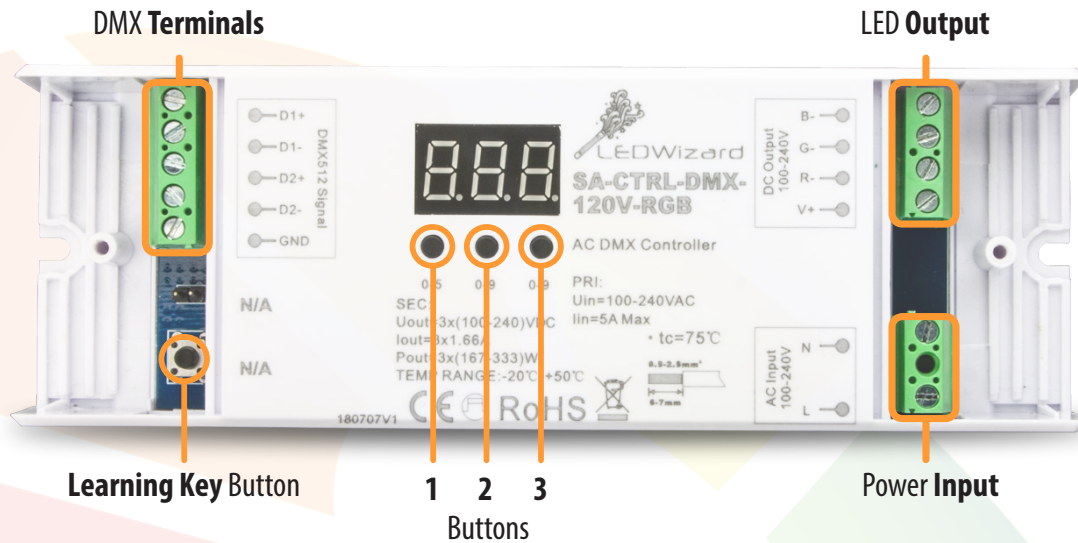
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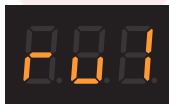
Product Operation



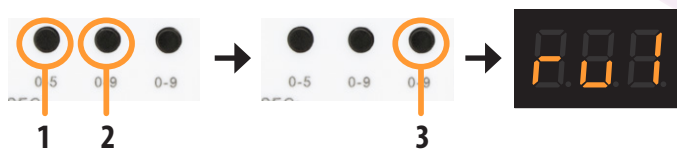
Button Configuration & Operation Modes

Standalone Mode

The 120V AC DMX to RGB Controller functions in two separate modes (Standalone mode and decoder mode). The standalone mode depicted as "ru1" on the controller is very useful for testing the controller with the LED fixtures before installation. This mode has many built-in basic functions that let you use the controller in your installation even if there is no DMX Master Controller/Console. These functions are discussed below.



To run on the standalone mode, press and hold button 1 and 2 simultaneously for three seconds and the display will start blinking with **888** shown. Use button 3 to change between "ru1" (Standalone Mode) and "ru2" (DMX Control Mode). To enter the Standalone mode, select "ru1" with button 3 and then press and hold any button for three seconds to save and enter the mode.

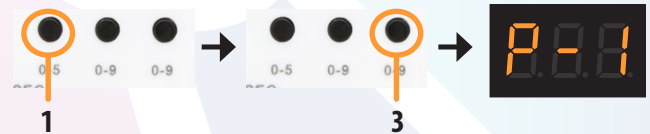


Preset Programs

This function lets you choose and play color-changing scenes from 10 preset color-changing programs.



To select any of the 10 programs, press button 1 to cycle through the functions until "P" is displayed. Then use button 3 to choose your desired program between 0 and 9.



Program Speed

This function is used to modify the color changing speed of any program played. There are 10 speeds to choose from (0 to 9 with 9 being the slowest).



To set the speed of any program, press button 1 to cycle through the functions until "S" is displayed. Then use button 3 to choose your desired speed between 0 and 9.



Product Operation

Standalone Mode (cont'd.)

Brightness

This function is used to adjust the brightness of the LED fixture. There are 8 brightness levels to choose from (1 to 8 with 8 being the highest).



To set the desired brightness, press button **1** to cycle through the functions until "b" is displayed. Then use button 3 to choose your desired brightness setting.

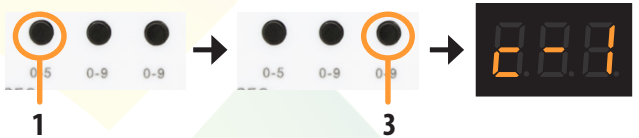


Color

This function is used to select any of 9 saved static colors in the controller. These colors include red, orange, yellow, green, teal, blue, pink, and white.



To choose a color, press button **1** to cycle through the functions until "c" is displayed. Then use button 3 to choose your desired color.



DMX Control or Decoding Mode

This is the second mode that the 120V AC DMX to RGB Controller can operate on. In this mode, the controller works as a decoder along with a DMX Master Controller/Console unit to control LED lights. The functions in this mode are mentioned in the next section below.

To enter the decoding mode, press and hold button **1** and **2** simultaneously for three seconds and the display will start blinking with "ru1" shown. Use button **3** to change between "ru1" (Standalone Mode) and "ru2" (DMX Control/Decoding Mode). To enter the decoding mode, select "ru2" with button 3 and then press and hold any button for three seconds to save and enter the mode. This mode is the default factory setting of the controller.



DMX Address

When the controller is in the decoding mode, the display shows an **001** address which is the default DMX starting address.



To set a different address, press and hold any button for 5 seconds and the display will start blinking. Then use the three buttons to set the desired address. Button **2** and **3** will change the second and last digits respectively between **0** and **9**, and the button **1** will change the first digit between **0** and **5**. Once the desired starting address is set, press and hold any button for 5 seconds to **save**.



LED Output Channel

This function allows the utilization of all three LED outputs using fewer or more DMX addresses.

To change the output channel, press and hold button **2** and **3** simultaneously for 5 seconds. The display will start blinking with a **3CH** showing. Then use button **1** to change between channels 1 and 3, and then press any button for 5 seconds to save and exit. Example of the output settings:

CH01: Combines all the outputs to 1 DMX address, ideal for single-color LED fixtures.

CH03: Each output maps to a separate DMX address for RGB LED fixtures. This is the default setting.



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Product Troubleshooting

The following recommendations can help in troubleshooting the 120V AC DMX to RGB Controller.

1. **Controller does not turn ON after powering up :**
 - a. Ensure that the correct voltage requirement of the controller is supplied.
 - b. Ensure that the wiring of the power input to the device is correctly done with the live wire connected to one of the V+ terminals of the controller and the neutral wire connected to one of the V- terminal (*refer to pg.2 - Product Installation Guide*).
2. **Controller is ON but LED fixtures are not :**
 - a. Ensure that the LED fixtures are correctly wired in the "OUTPUT" screw-terminals of the controller.
 - b. Ensure that the right operation mode is selected on the controller and functions set.
 - c. If using a DMX Control System / DMX Console, make sure that the system is compatible and correctly connected to the controller.
 - d. If using a DMX Control System, make sure the correct operation mode (ru2) is selected and the proper DMX starting address set on the controller (*refer to pg.5 - DMX Control or Decoding Mode*).
2. **Controller and LED fixtures are ON but LEDs do not respond to DMX control:**
 - a. Ensure that the correct functions are set for the chosen operation mode.
 - b. If using the DMX control mode (**ru2**), make sure that the proper DMX starting address is set on the controller (*refer to pg.5 - DMX Control or Decoding Mode*).
 - c. Ensure that the proper DMX signal connections are installed between the controller and DMX control system.

Safety Recommendations

In order to efficiently operate the LEDWizard Dimmer, it is important to correctly and safely install it.

1. Obtain the right accessories (LED fixtures, wires, connectors, etc.) beforehand.
2. Install the product according to your local electric code requirements.
3. Ensure that the product is properly installed with the right accessories and guidelines.
4. Ensure that wires or cables are correctly connected to the right ports or terminals.
5. Do not try to install the LED fixtures wires while the product is powered on.
6. Ensure that the product is placed or mounted in a dry location.
7. Ensure that peeled (bare) sections of the wires going into push-down terminals are not extending out of the terminal without the insulation.
8. Connect and test the product with the accessories to ensure everything works before final installation.
9. Install the product at an accessible area for easy settings adjustment when needed.

The product is backed by a 3-year warranty. Please refer to www.solidapollo.com for more information on warranty coverage.