



Overview

The Spooky Eyes 1.0 is a lighting effects generator that controls the outputs of eight LEDs which can be placed in a haunted scene, haunted house, or dark attraction. When a pair of LEDs are used with each output channel, this will give the appearance of eight creepy creatures lurking in the darkness. Each LED output channel will randomly blink in a variety of different ways providing a fantastic looking display for any dark scene. The speed, delay, and brightness of the LEDs can all be adjusted by the user. There are three modes of operation which can be changed by the pushbutton. Internal memory remembers the last mode in the event power is lost or turned off to the controller.

Features

- Operating Voltage: 7VDC to 12VDC
- 8-Channels of Output
- Output current per channel: 300mA
- Reverse voltage protection
- Pushbutton mode control
- Brightness and Rate Controls
- Internal memory remembers "last" mode
- True non-repeating random algorithms
- Flange mount for easy installation
- Removable terminal blocks

Operation

Using the Spooky Eyes 1.0 controller is extremely simple. Simply connect your LEDs to the controller as shown in the example diagram, connect the controller to a 7-12VDC source, and you are ready to go. The following paragraphs describe the various user controls.

Mode Pushbutton

Pressing the mode button cycles through each of the three output modes. When power is removed, the internal memory of the controller remembers the last mode activated and restarts in that mode.

Brightness Control

The brightness adjustment knob controls the brightness of the output LEDs. Each of the eight channels is controlled through Pulse Width Modulation (PWM) for efficient dimming and variable between 0% and 100%.

Rate Control

The rate adjustment knob controls the overall rate and speed of each mode.

OFF Mode Considerations for Battery Powered Controllers

When the unit is in OFF mode, the output driver is disabled, however, the microprocessor inside is in a quiescent state which is consuming a very small amount of power. If you are using a battery source, it is recommended to use an external switch to disconnect power from the controller when not in use.

Recommended LEDs

Each output channel is rated for 300mA output current. Both discrete and 12V bulb LEDs are acceptable to use. For discrete LED, you must provide your own current limiting resistors. Current limiting resistors must be specified per the max. operational current of the specific LED you are using and that each channel's output current doesn't exceed 300mA. Most discrete LEDs are rated for only 15-20mA of continuous current! 12V bulb LEDs are acceptable provided their output current does not exceed 300mA per channel.

Please note, that the controller outputs do not incorporate short circuit protection, therefore it is very important to ensure the proper current limiting resistors are used to prevent damage to your controller.

Fright Research also has available prepackaged LED sets and Spooky Eye Mounting board kits for this controller.

Mode Descriptions

Spooky Eye Mode

In this mode, each pair of LED eyes turns on randomly until all LED eyes are ON. Once all LED eyes are illuminated, eyes will randomly 'blink' in a variety of different ways. This will occur for anywhere between 30 seconds to 2 minutes at which point, all LED eyes will slowly and randomly turn off. After a short delay, the process will repeat. The RATE adjust will control how fast the eyes wake up and blink. There is both a red and green mode of operation.

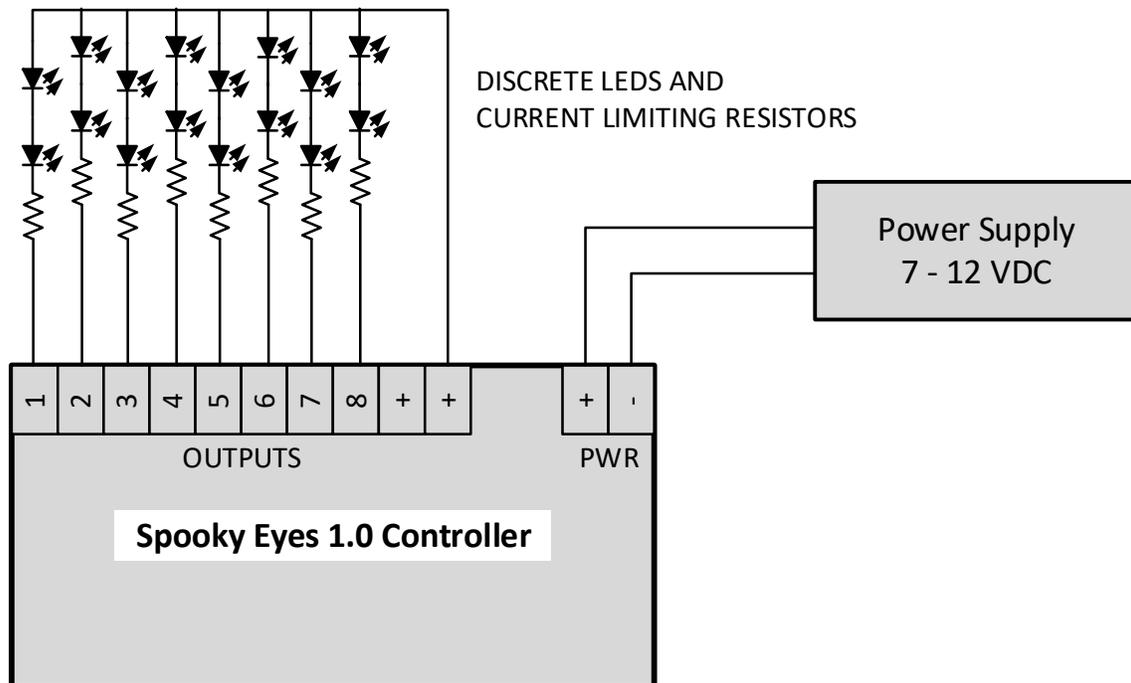
Single Eye Mode

In single eye mode, LED eyes will 'wake up' randomly and one at a time. When on, they 'blink' and then turn off. The process repeats. There are a number of different 'blink' events and they are randomized each time an LED eye 'wakes up.' The RATE adjust will control how fast this mode operates.

OFF Mode

In this mode, all LED output channels are OFF.

Typical Application



Notes:

1. In the example above, discrete LEDs are shown with current limiting resistors. However, standard LED bulbs with built current limiting resistors can be utilized as well.
2. Spooky eye dual LED mounting PCBs are also available at Fright Research for this controller.