



Overview

Our spooky eye LED boards are the perfect companion to our line of Spooky Eyes controllers. Each spooky eye LED board features two LEDs which are arranged to simulate the eyes of a creature lurking in the dark. LEDs can be installed in multiple positions offering varying distances between eyes. Boards also feature several different mounting methods including mounting holes for #6 screws and plastic tie wraps. The boards are colored black to provide excellent concealment in both semi-lit and dark locations.

Spooky eye LED board kits are available in both 8 board sets (SE 1.0) and 16 board sets (SE 2.0). The SE 1.0 board sets including single color LEDs while the SE 2.0 sets include bidirectional LEDs which illuminate in two separate colors.

Features

- SE 1.0 Kit (Red, Green, Blue, Yellow LEDs)
- SE 2.0 Kit (Bidirection Green / Red LEDs)
- Black color allows easy concealment
- Multiple mounting options
- Multiple eye spacings

SE 1.0 Assembly Instructions

The SE 1.0 controller requires current limiting resistors (included) for proper operation. Failure to follow the instructions below may cause damage to your SE 1.0 controller.

1. Using a utility knife, or similar, cut the trace that is directly underneath R1 on the opposite side of the board. Do this for all eight boards.
2. Solder one of the included resistors at the R1 location on each board.
3. Install and solder the LEDs using the spacing desired. Please note, one LED should be on both the right and left half of the board. The short lead of the LED will go into the square pad on the board!

4. Connect wires from the rear solder pads and connect to your SE 1.0 controller. Be sure to observe proper polarity or the LEDs will not illuminate.

5. Mount the boards using either #6 screws or plastic tie wraps.

SE 2.0 Assembly Instructions

The SE 2.0 controller does not require current limiting resistors. Do not install resistors on the boards when using the SE 2.0 controller. The R1 component location by default is shorted by a trace on the opposite side of the board.

1. Install and solder the LEDs using the spacing desired. Please note, one LED should be on both the right and left half of the board. The short lead of the LED will go into the square pad on the board!

2. Connect wires from the rear solder pads and connect to your SE 2.0 controller. Be sure to observe proper polarity or the LEDs illuminating color will be reversed.

5. Mount the boards using either #6 screws or plastic tie wraps.

Custom Selection of LEDs

All types of discrete LEDs may be used with the spooky eye LED boards. LEDs should be T-1 or T-1 3/4 sized and have no internal current limiting resistors. Please note that the maximum number of LEDs per board is two – one on the left side and one on the right side. Installing more than two would put two LEDs in parallel which would not work properly!

Current Limiting Resistors

Current limiting resistors are included with the standard SE 1.0 Spooky Eye LED board kits. However, you may wish to use your own values, especially if you use your own LEDs. R1 value can be determined using the following formula.

$$R1 = ((V_{supply} - V_{fwd}) / LED_{current}) * 1000$$

R1 = resistor value in k ohms

Vsupply = power supply voltage

Vfwd = LED forward voltage (see LED datasheet)

LEDcurrent = desired current in mA.

Mounting Options

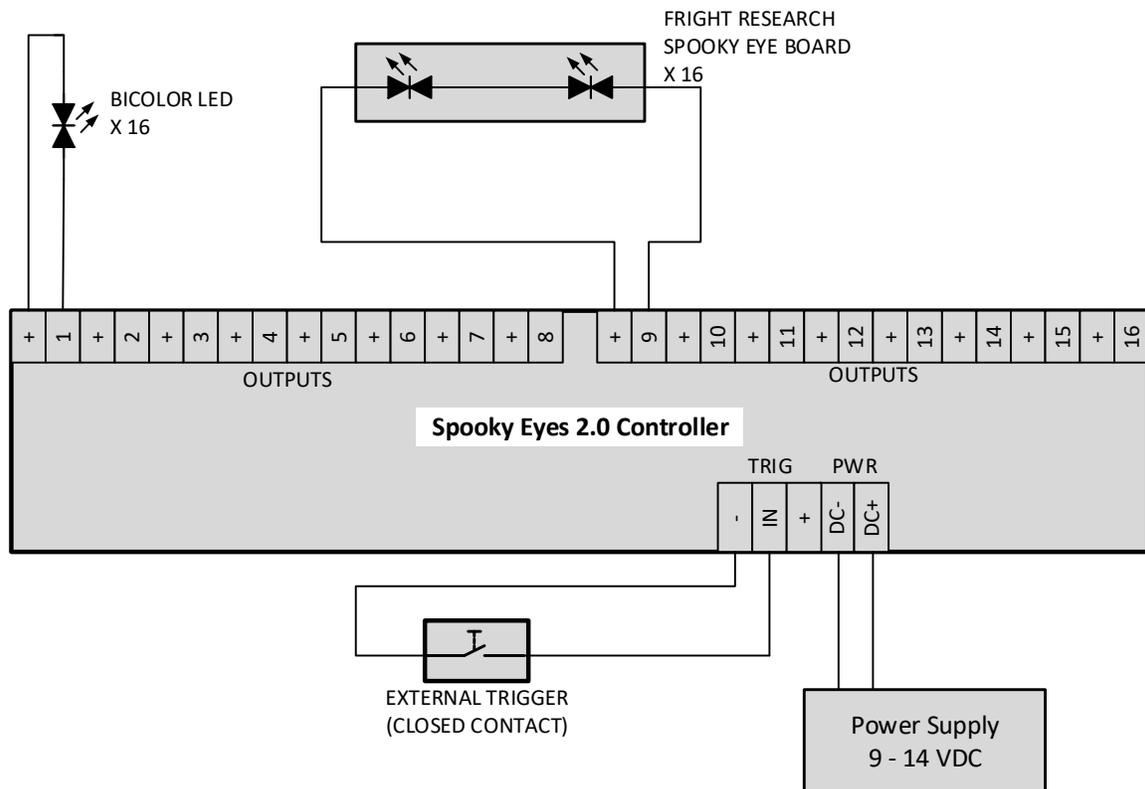
The LED boards can be mounted using several methods. The first allows the use of the #6 screws. We recommend #6 self-tapping steel screws. The second requires the use of plastic wire ties. For example, wood rods (dowels) can be placed into the ground and then a single plastic wire tie can be wrapped around the wood rod and through the horizontal holes of the LED board.

Wire selection

Because installations vary considerably, we do not include wire with these kits. For wiring, we recommend any type of twisted wire pair made up of AWG 20 through AWG 26. Larger wire can be used, but then it becomes more difficult to work with as well as hide. The twisted wire pairs inside inexpensive CAT 5 network cable work great as does alarm or thermostat wire.

Typical Application

In the application below, sixteen (16) Spooky Eye LED boards can be used with our SE 2.0 controller.



Warnings / Cautions

DO NOT mount these boards on metallic surfaces. There are exposed traces which could be shorted out if installed on metallic surfaces.

Current limiting resistors **MUST** be used with the SE 1.0 controller.