

# .: Model Railroad Signal Systems

## Search Light Controller - Installation Instructions

Please read these instructions before you begin to ensure the installation is done correctly. Failure to properly connect the board may result in damage to the circuitry or other electronic components on your layout. Ensure all power is turned off before you begin the installation.

### Handling of the circuit board

Use care when handling the circuit board. Most electronic circuits are sensitive to static electricity and can easily be damaged. Be sure work in an area where static is not an issue.

### STEP 1 – Mounting the SLC-1 board

Choose an area under your layout that is suitable for mounting the SLC-1 board. Keep in mind the length of your signal leads.

### STEP 2 – Signal Connections

There are two types of signals that can be connected to the SLC-1 board. Refer to the information sheet that comes with your signals to determine which kind you have. Figure 1 below shows how to connect the two types. If yours is not shown, please send me an email with your details.

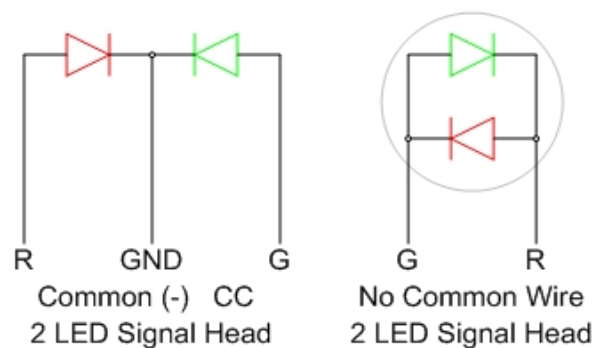


Figure 1

### **Connections for the signals are as follows:**

**R1** – Red led, east signal.

**G1** – Green led, east signal.

**GND** – Common signal wire for both west and east signals.

**R2** – Red led, west signal.

**G2** – Green led, west signal.

### **STEP 3 – Other Connections**

Other connection needed to the SLC-1 board are as follows:

**Y1in** – (+) 5 volts input to display a yellow aspect facing east. From the previous board.

**Y2in** – (+) 5 volts input to display a yellow aspect facing west. From the next board.

**DET** – A grounded or (-) input to display a red stop aspect for both signals.

**GND** – Common ground wire.

**YOUT** – This output connects to adjacent boards with **Y** inputs.

**+5v** – 5 volt DC input needed to power the circuit board.

**ALM** – Output is grounded when a yellow aspect is detected in both directions.

**555** – An input signal from an oscillator so the board can display a yellow aspect.

### **STEP 4 – Applying Power**

The last step is to turn on the power and test your signals. Double check all your connections prior to applying power. A second look can save you a lot of frustration if connections are made incorrectly. The input voltage is 5 volts DC only.

### **NOTES – Power Supply**

The power supply for this circuit needs to be 5 volts, filtered DC. This means a good quality power supply that not only rectifies the voltage but has capacitors to provide a smooth 5 volts with no AC ripple.

Some small wall plug adapters provide a crude dc voltage and are not recommended. A power supply from a computer is an excellent source of several different voltages that is perfect to power almost everything on a model railroad.

### **NOTES – 555 input**

The 555 terminal is an input that needs to be tied to an oscillated signal that toggles the red and green leds to produce a yellow aspect when an approach signal is required. This can be generated from a 555 timer or an SLC-2 board which has a 555 timer built into the circuit.

## **NOTES – Inputs**

Other wiring options and documentation for this board is available on the SLC-1 web page.

## **Disclaimer**

All the circuits designed and posted on the Model Railroad Signal Systems website have been designed and created as a hobby. Many hours of research and development have gone into the design of each circuit so that they will operate as described without any problems.

The circuits will work as designed and will not be dangerous to persons or property when used in their intended manner. However, if you choose not to follow the installation instructions as stated above and use the circuits in any other fashion, you may pose a risk to yourself and property.

I am not responsible for any injuries or damages whatsoever that may arise from the use or misuse of these circuits as I have no control over the actions of the user or installer.

## **Warranty**

All the circuits here are inspected and tested before they are shipped. If there is a defect due to manufacturing or programming, I will gladly replace your board for a new one within 90 days of purchase.

Misuse, abuse, or the use of cheap power supply to power these circuits which will cause damage to the board, is not covered by warranty. If you have any doubts about the use of any type of power supply, please contact me before applying power to your board.

## **Questions or Comments**

If you have any questions or comments please send them to me by using the email address on the Model Railroad Signal Systems Website.