

# Reprapsource Opto Endstop

## Revision 1

This PCB has been designed to be a flexible update to the [Reprap Opto Endstop 2.1](#), supporting many kinds of optocouplers without cutting traces on the PCB. A screw-on terminal was added for easy assembly. The RJ45 jack was removed because of space and cost reasons. It has an optional 2,54mm header for easy integration on a stripboard.

### Features:

- Supports both 5-pin digital and 4-pin analogue optocouplers
- LED debug output works with both kinds of optocouplers
- Easy configuration by one solder bridge
- 3-pin screw-on terminal for easy installation
- 3-pin optional header for alternative mounting or direct soldering
- License: GPL Version 2

**Download Eagle files:** [rrs\\_opto\\_endstop\\_r1.tar.gz](https://github.com/Reprapsource/rrs_opto_endstop_r1.tar.gz)

## Required parts

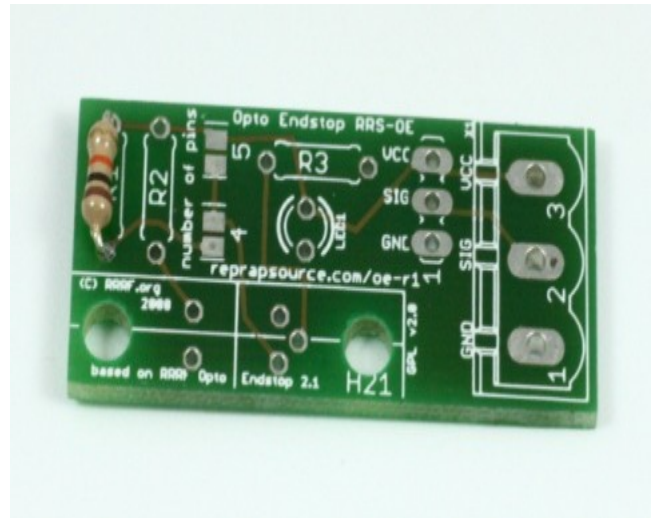
Part ID	Part name	Quantity
R1	10k Ohm Resistor	1
R2	220 Ohm Resistor	1
R3	1k Ohm Resistor for LED	1
LED1	3mm LED	1
X1	3 pin 5.08mm pitch screw terminal	1
	Opto Switch	1

# Build it!

**R1 - 10k Ohm**

**Color Code: brown - black - orange**

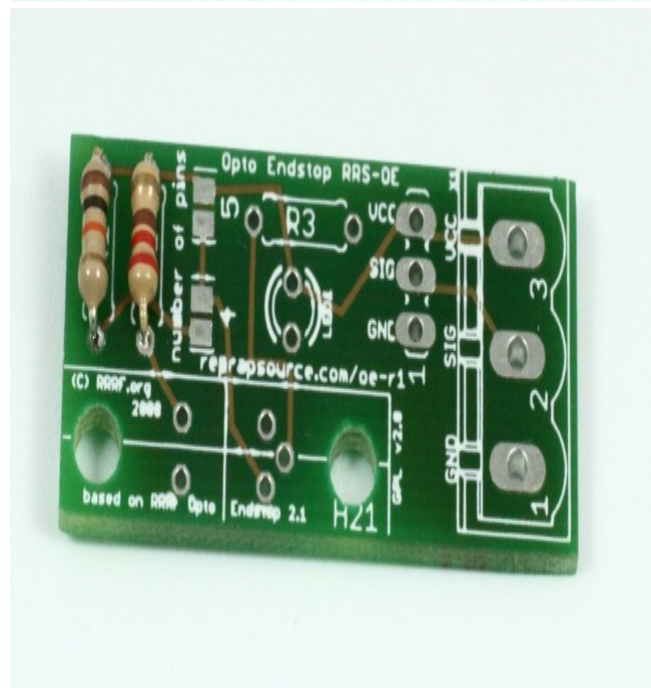
You can insert the resistor in any direction.



**R2 - 220 Ohm**

**Color Code: red - red - brown**

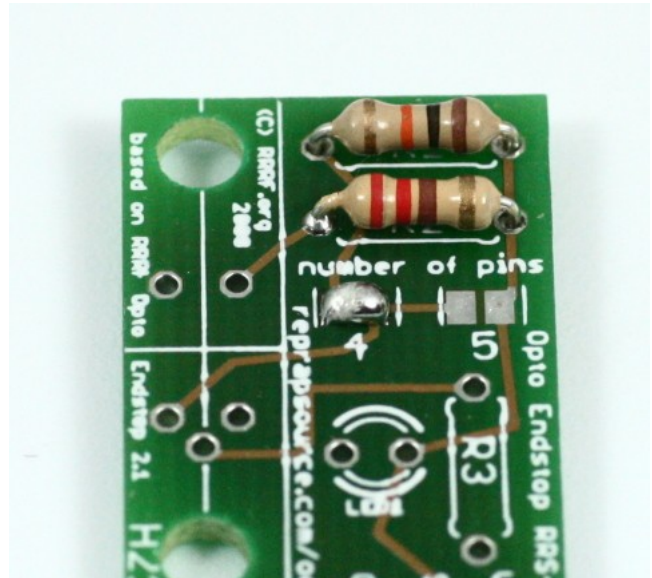
You can insert the resistor in any direction.



## Configure

Count the pins on your optocoupler and solder the corresponding jumper. Simply use solder to create a bridge.

(Note: We used lead-free solder. If you use solder containing lead, this bridge should look much smoother)



## R3 - 1k Ohm

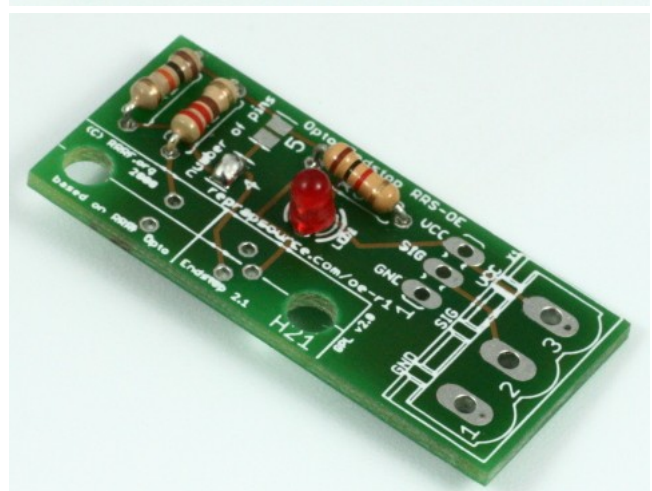
**Color Code: brown - black - red**

This is the resistor for the LED. You can insert the it in any direction.



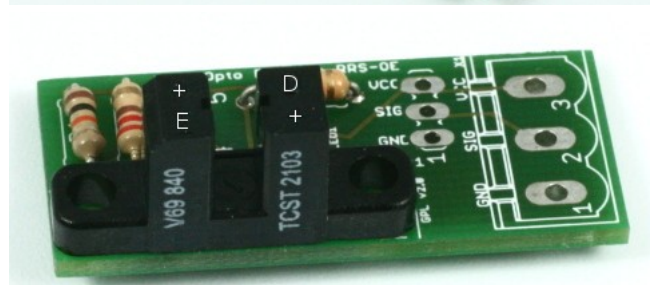
## LED1

Make sure to install the LED with the short leg to the wide open side on the silkscreen.



## Optocoupler

Insert the Optocoupler. If you have a digital 5-pin optocoupler, you can only insert it in one direction. On 4-pin optocouplers, check the markings on the top side. Insert it according to the picture.



## X1 - 3-pin 5.08mm pitch screw terminal

Solder the screw terminal to the position shown on the picture.

