

Tutorial: Glowing Eye Mask

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1. Parts Required

- Vacuum Formed Mask (Refer to Vacuum Former Inspire Project)
- A Coin Cell Battery and holder
- Two LEDs of any colour
- A sliding switch
- Jumper Wires
- A Vero board which will fit inside the mask



Figure 1: Vacuum formed mask

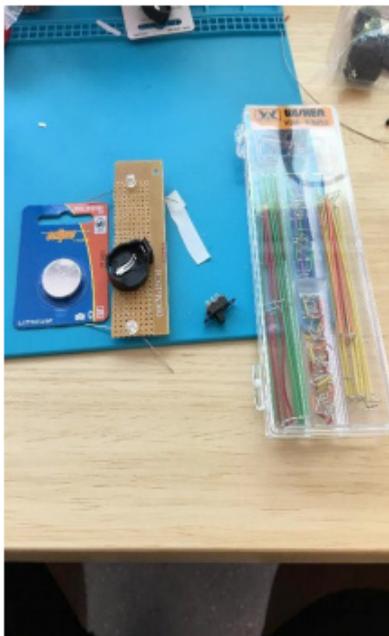


Figure 2: Parts required to build eyes

2. Process

1. First Place the Coin Cell battery in the middle of the Vero board and the two LEDs at the ends and make sure that the LEDs coincide with the Eyes of the Mask. The Placement of the Battery and the LEDs is shown in the figure below. The positive terminal of the battery holder is circled in Figure 3.

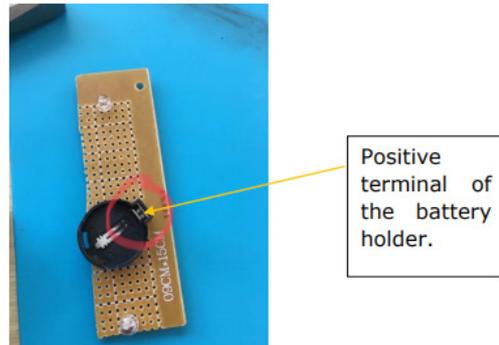


Figure 3: Placement of battery holder and LEDs

2. Solder the battery holder and the LEDs onto the Vero board and remember that the longer lead of the LED is the positive terminal. Trim the leads but do remember the polarity of the LED leads. Make sure to solder on the underside as shown in Figure 4.



Figure 4: Soldering done on the underside of components

3. Now take the Sliding switch which has three terminals and place three short jumper wires in them and solder them. This is shown in Figures 5 and 6 on the next page.





Figure 5: Jumper wires placed in the Switch terminals



Figure 6: Jumper Wires soldered to the switch.

- Now take the switch and place it on the Vero board such that the middle pin and one side pin are on the same track as the positive terminal of the Battery Holder. The other pin should be on the same track as the negative terminal of the battery holder. Solder them onto the Vero board. Figure 7 illustrates this point.



Figure 7: Switch terminals soldered onto the Vero board.

- Now connect the positive terminals of the LEDs to the track on which the two pins of the switch are connected to using jumper wires. Connect the negative terminals of the LEDs to the track where the single pin of the switch is connected. Figure 8 illustrates this.



Figure 8: The two orange wires at the extreme ends of the board connect the positive ends of the LEDs to the Positive terminal of the battery while the blue wire on the left side and the yellow wire on the right side connect the negative terminals of the LEDs to the negative terminal of the battery.

- Now place the battery into the holder and by sliding the switch back and forth, the LEDs should go on and off as shown in Figures 9 and 10 below.

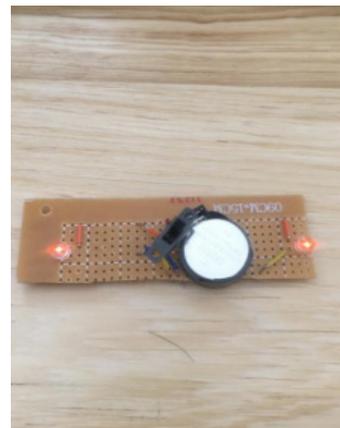


Figure 9: The LEDs on with the switch on.



Figure 10: LEDs off with the switch off



7. The last step is to place the Vero board in the mask and attach it. Make sure the LEDs coincide with the eyes. This is shown in Figure 11.



Figure 11: Glowing Eye Mask.

