Glowing Star Chuck Taylor Sneakers
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https://learn.adafruit.com/glowing-star-chucks

Last updated on 2021-11-15 06:00:47 PM EST
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Overview

Make your logo light up with this simple Converse sneaker mod. All you need is EL panel and an inverter tucked into the tongue of your shoe to get the stars in your Chuck Taylors glowing. Two styles!

Materials & tools:

- 2x [EL panel](https://adafruit.it/caH)
- 2x tiny inverters-- either [coincell](http://adafruit.it/1350) or [1xAAA](http://adafruit.it/1349) type, with batteries
- 2x small pieces of fabric to secure inverters
- plain thread and [sewing needle](http://adafruit.it/615)
- sharp craft knife and cutting mat
- sharp scissors
- metal ruler
- vector graphics software (like Illustrator or Inkscape) to aid in design (optional)
- plain copy paper
- tape
- high-top Converse sneakers
Round All Star

Start by measuring the design element you'd like to recreate in EL panel-- this All Star logo disc is ~48.48mm in diameter.

We chose to make a circle with vector graphics software, but you could also draw one with a compass.
Cut out the circle.

Find the phosphor side of the EL panel--it has a plastic overlay you should leave in place. Trace the circle onto the plastic overlay with marker near where the panel's wires connect.

Cut out the circle with sharp scissors and then peel away the plastic overlay.

Sometimes the edge of cut EL panel can give you a little electric shock when you touch it--you can optionally seal the edge with clear nail polish or the craft glue you'll use in a later step. This will also help make the shoe mod more durable.
Cut a star from a piece of black sticky vinyl. At first we tried matching the actual size of the star on the shoe, but the design looked unbalanced without the text so we made the star bigger.

You can use the star tool in Illustrator-- while holding down the mouse button you can use the up and down arrow keys to change the number of points in the star, and also hold down the 'alt' key for a star with parallel lines.

Remove the vinyl’s backing and stick the star to the phosphor side of the EL panel. Pay attention to the wire connector on your EL panel-- it should face up toward the top of the shoe when you stick the star.

Plug in your inverter and test that your EL panel lights up.
Apply a thin even coat of E6000 craft glue to the shoe's round logo.

Carefully place the EL panel on the glue and pinch to the shoe for 1 minute for good adhesion before allowing to fully dry for 24 hours. You can use clothespins as tiny clamps.

Skip to the "Inverter & Battery (https://adafruit.it/cal)" page to complete your modded shoes.

Rubber Star Badge

For a different style of All-Stars, like the all-black kind:

Use a seam ripper or small pair of scissors to cut the threads holding the rubber star badge to the shoe.

Then use a sharp craft knife to carefully cut out the star from the center of the rubber badge.
Use your star cutout as a guide for cutting your EL panel. The smaller you cut it, the longer the battery will last. Be sure to leave enough overlap around the cutout to glue to the badge.

Use E6000 craft glue on the back of the rubber badge, all around the star cutout. then stick the phosphor side of the EL panel against it, pressing firmly for 30 seconds to a minute. Plug in your inverter and test out your glowing star! The adhesive will be fully dry in 24 hours.

Use a needle and thread to stitch the badge back onto the shoe in its original position. I used a backstitch (https://adafruit.it/caK) for extra durability.
Inverter & Battery

Use a needle and plain thread to tack the wire down along the inside of the shoe. Knot the thread and cut off the excess.

Use a small piece of fabric to secure the inverter along its edges. Pin in place and sew along pin lines by hand with a running stitch. Make the fabric snug around the inverter so it doesn’t slip out the bottom! However you should still be able to slide the inverter up for replacing the battery.

Secure the wire leading from the inverter down the tongue of the shoe in the same manner as you did the wire from the EL panel. Plug the cables together and tuck the
junction between the laces and check for a comfortable fit.

A 1.5" circle of EL panel is about as much as this tiny coincell inverter can power at once, and the battery life is about an hour before noticeable dimming. You can increase battery life by upgrading to the 1xAAA inverter (which is only marginally bigger but a little heavier) or try making cutouts where the EL panel is not used (less panel = longer glowing).

Wear 'Em!

Whether you choose to go with the round all star or the more subtle star cutout badge, we hope this project will put some spring in your step!

Warning! This shoe mod is not waterproof! You'll be fine if you get caught in a light rain but don't go puddle jumping! Don't put your sneakers in the washer or dryer after adding EL panel, instead spot clean and air dry if necessary.