

# making a TV head


supergee (some parts based off document by Minbitt)

## Materials

- ½" Foam Board (maybe 2 sheets)
- Foam (just foam)
- Polycarbonate sheet
- 5% VLT Tint
- 64x32 / 32x32 Dot Matrix display (from Adafruit)
- Matrix Portal M4
- Power Bank & Cable
- Spray paint and/or acrylic paint
- Non-Fiberglass Bondo (possibly 2 cans)
- Bondo squeegee kit
- Hot glue/glue gun

(If text is blue you can get these items at a Walmart or similar stores)

## Basic Shape

Make a design of a tv head, could be based off of an oc, like mine. Take the measurements of your head and cut pieces to form a box out of it. I would use thinner foam board for this. You want a bunch of flat pieces, and to get a rough shape tape them all together. Like this:  (scroll down)



Note: Make sure that your face isn't pressing against the front, like mine does.

Also see if you can put a lip behind where the screen goes, it helps when installing the polycarbonate.

## **Final Shape**

Un-tape the pieces that you made and use them as a stencil to cut pieces in the  $\frac{1}{2}$ " foam board. Then take hot glue and glue the pieces together.

## **Smooth It Out**

Once you have verified that the glue has hardened (it shouldn't take too long), you may notice a problem before you paint: the sides of the foam board have pits and there are gaps in the corners where the panels connect. This is where Bondo comes into play. I would watch [this video](#) since it's a bit hard to explain, it needs to be mixed properly and has to be applied quickly.

After everything is applied you can sand it, or sand it as you go.

## **Paint.**

The fun part (at least to me). Go outside, touch grass, and use spray paint. You might not need to apply primer, as most spray paints today have it built in. Put **at least** 2 coats on it.

If your design calls for extra designs, like mine did, you can buy another color of spray paint, spray it into a bowl, and apply it with a brush, or use acrylic paint. No need for tape! Just make sure that you at least trace out what you want with a pencil. Or just use tape, I don't care.

## **The “Screen”**

Take a polycarbonate sheet (get from Amazon) and cut it into the size of the hole you made in your final design. You can either score it or ask somebody to use a bandsaw like I did.

Then take the tint and apply it. **When applying tint, you want to spray the polycarbonate with water and then apply the tint, so you can squeegee the bubbles out, because you WILL have bubbles.**

**After applying the electronics (see next section),** take the polycarbonate and hot glue it to where the hole for your screen is.

You can also draw anything that doesn't change on the tint with a paint marker (like cracks, in my case, use a silver one).

## **Electronics by [Minbitt](#)**

So, this is the part where I give most credit to [@minbitt](#) (on twitter), because she made all the code and gave detailed instructions on how to set it up. You can get the whole PDF [here](#), it goes over every bit of the electronics and comes with all the files you need. It also explains how you should mount your matrix to the polycarbonate.

Now I must explain something important: her design called for a mirror periscope, and mine didn't, because of the cracks on the screen. **I do not know how to make a periscope, so you will have to design one on your own.** Min does have a very short section on what to do, but not how to fully make one.

## **Goal**

Hey! Guess what? If you followed these, and read how to do everything in minbitt's explanation, you're done! Congrats! Now go cause havoc on the streets.