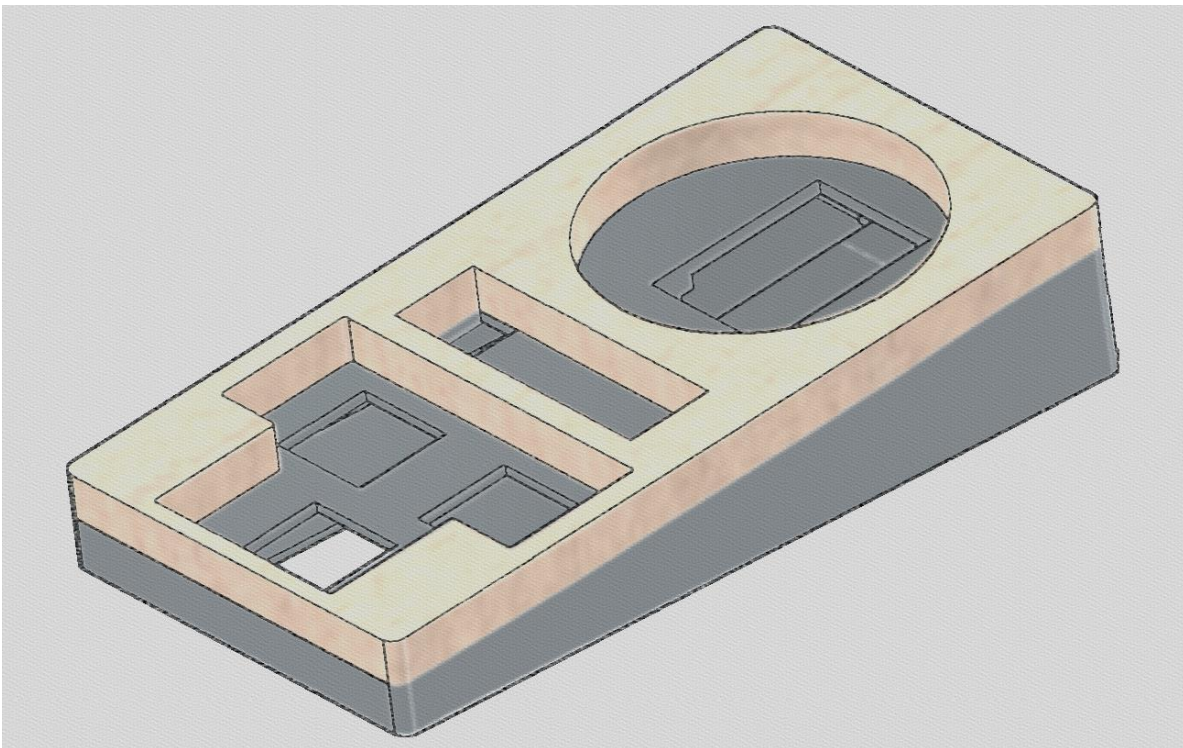


# Béton3 // Build Guide

## Appendix A: Making a Screen Bezel from Polycarbonate

Welcome to Appendix A: Making a Screen Bezel from Polycarbonate. This quick guide will guide you through the process making a polycarbonate screen bezel out of a sheet of commodity 1/16" inch thick clear polycarbonate.



### Table of Contents

- Pg. 2 – Overview of Materials
- Pg. 3 – Cutting the Polycarbonate to Size
- Pg. 4 – Masking Off the Polycarbonate
- Pg. 5 – Painting the Polycarbonate

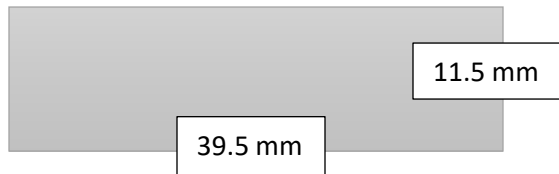
## Overview of Materials

In order to create a polycarbonate screen bezel, you'll need the following materials and parts:

1. A sheet of clear polycarbonate, 1/16" inch thick.
2. Utility knife
3. Fine-tip marker or sharpie
4. Ruler/Straight Edge
5. Black Plasti Dip or Spray Paint (personal preference)
6. Masking tape or electrical tape
7. Scissors
8. (recommended) Beton3 Wooden Top Bezel (to test fit)
9. Sandpaper (to make minor adjustments if cut too big)

## Cutting the Polycarbonate to Size

First, you'll want to cut a rectangle out of the polycarbonate sheet.

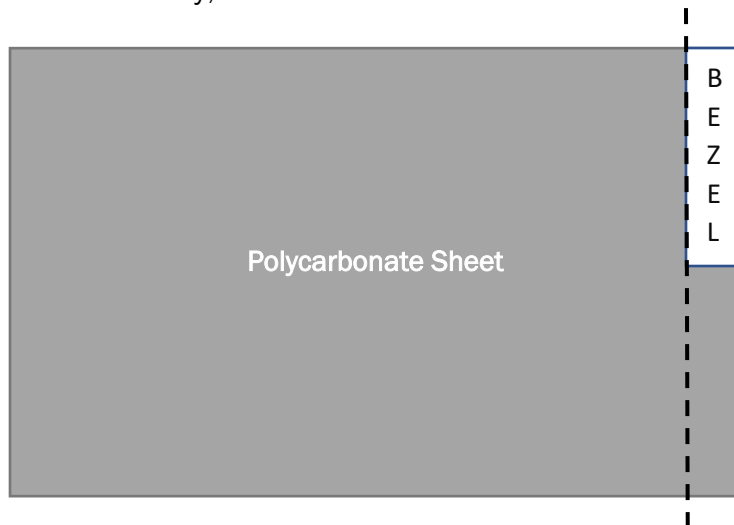


The size of the screen bezel will be 39.5 mm x 11.5 mm.

I found that the best way to do this is using the “score and snap” method outlined under “Method 1” on wikiHow: <https://www.wikihow.com/Cut-Polycarbonate>

Use the ruler to mark off the rectangle you're trying to cut on the protective white plastic that's covering the polycarbonate underneath. Follow the wikiHow guide to score the polycarbonate, and snap it off, leaving a clean, straight edge.

I would recommend starting with the long side first, wasting less polycarbonate in case you decide to retry, like so:



If you have a laser-cut top bezel, try test fitting the rectangle into the cutout for the OLED display to see if it will fit. Use sandpaper to sand off some polycarbonate if it “almost” fits in the rectangular cutout.

Once you've scored and snapped a satisfactory rectangle of polycarbonate, peel off the white protective plastic on ONE side and proceed to the next step.

## Masking Off the Polycarbonate

Once you've cut out this rectangle, the final step is to paint the excess polycarbonate around the edges of the OLED display. In order to do this, the first step will be to mask off a rectangular cutout of the polycarbonate rectangle where the OLED display will shine through.

Use scissors to cut out a rectangle of masking tape or electrical tape and position it as such:



When positioning the tape, be cognizant of the display's position relative to the rectangular cutout in the wooden laser-cut bezel. For me, this was roughly centered, but this may be different for you, especially if you've already substantially completed a Beton3.

You'll want to stick this tape to **the side of the polycarbonate rectangle where you have peeled off the white protective plastic.**

The other side of the bezel should still have white protective plastic covering it, to prevent any paint from getting on that side. If your polycarbonate sheet didn't come with a white protective sheet on both sides, take a large piece of masking tape or electrical tape and mask off the entire other side of the polycarbonate sheet too – this will be critical to the final look.

Once finished masking, go on to painting!

## Painting the Polycarbonate

Once you've masked everything off, set the polycarbonate down somewhere where you can use spray paint, with the 25 x 8 mm cut rectangle of tape **facing UP**. Now, using either your black Plasti Dip or black spray paint, spray the polycarbonate from all four sides, at about a 45° angle from the ground. This will evenly coat both the back of the bezel, and the sides, hiding any imperfections in the scored sides of the bezel.

Don't use too much – you want to be able to peel off that tape, and one good coat is more than sufficient.

Leave the bezel somewhere to dry for a little bit.

After roughly 30-45 minutes (depending on the paint you used), go back and peel off the masking or electrical tape that you used earlier. Doing this step before the paint cures completely gives a cleaner line. If you are having trouble getting the tape free of the rest of the paint, you can lightly try using a razor blade or an X-Acto knife to cut around the edge of the tape and peel it away.

Once all the masking tape is gone, you have successfully made a polycarbonate OLED screen bezel out of a sheet of polycarbonate!