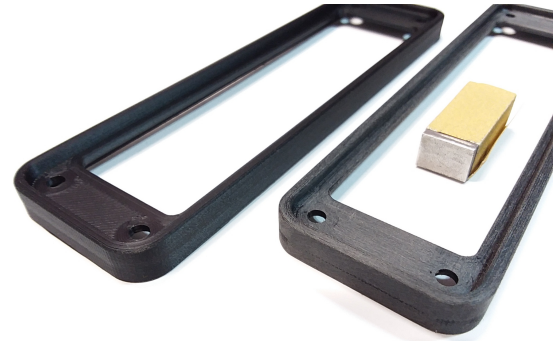


Here is a quick run down on how to get good results when painting one of our 3D printed trim bezels. By using the 3D printing process, we can design any size and shape bezel. This allows us to create truly custom switch panels without the need for injection molds or tooling. This has proven to be a great addition to our custom services. Although the majority of the parts we print are not visible after installation, we wanted to share some info on how to make the ones that are look great.



*Unsanded part on left. Notice the dark line around the sides of the sanded part. This dark line indicates more sanding is needed.*

Starting off with personal protection is a must when sanding parts. I recommend the use of dust masks, gloves, and eye protection. This plastic is reinforced with glass fibers, and although you may not be able to see them, they could cause irritation to your lungs, skin, or eyes. Now, on to the process.

I have achieved great results sanding with 180 grit sandpaper wrapped around a small steel block. The sanding block helps to sand the surfaces flat. While you are sanding you will notice that the sanded surfaces turn a dull gray color, and any low spots will show as the original dark black. 3D printed parts shrink after cooling in certain areas depending on the wall thickness and shape. This happens on injection molded plastic as well, and getting the part to look flat takes a little effort. Luckily, it's a small surface and the sanding process to eliminate all the low spots only took 15 minutes. Sand in a crosshatch pattern evenly along the surface, cutting it down to eliminate low spots, and also roughing up the surface for paint to adhere to. Once the entire surface is a consistent dull gray, wipe it off with some rubbing alcohol. After that dries you will have another chance to see if it has any low spots. Avoid sanding down into a low spot. Instead, run the sanding block over surrounding areas to cut it down to the bottom of the low spot. Once you are satisfied with the surface, clean it with a lint free cloth dampened with rubbing alcohol or an automotive paint prep cleaner. Avoid touching the bezel with your bare hands after cleaning.



*This picture shows a bezel that was sanded with 180 grit, sprayed with primer, then sanded with 320 grit. Notice the gray areas on the sides. These are low spots. More time should have been spent flattening the part before paint. This will show up in the final finish.*

Now on to the topcoat! Well....maybe. At this point, if you are going for a show car finish, using a primer is a great way to achieve top quality results. I used a readily available primer that can be found at most hardware stores. After the primer was dry, I sanded the bezel lightly with 320 grit. I then cleaned it with alcohol, blew it off, and top coated it with some silver paint I had laying around. 2 coats did the trick and the results were fantastic!



Another way I went about it was sanding with 180, then with 320 grit. Next, I sprayed the silver topcoat directly on the plastic. Since the plastic is dark, I had to coat it several times to get good coverage with the thin silver paint. It came out pretty nice and eliminated a step.

Overall, this plastic accepts automotive finishes quite well. It sands with little effort, and whether or not you choose to use primer, you can get great results.



*As printed part vs. painted part. Remember to clean paint out of the mounting holes. Too much paint build-up can make too tight a fit.*



*Painting the trim bezel can have a dramatic effect on the overall appearance of your instrument panel.*