

# High Tech Masking

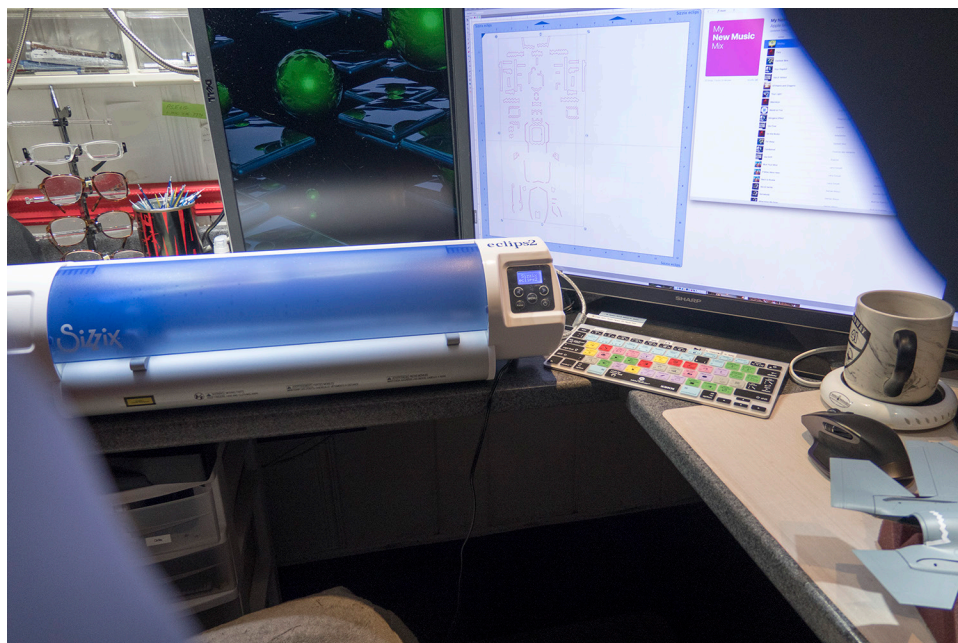


The F-35B had some unique challenges with masking some of the sawtooth shapes on the fuselage. Sure you could mask them the old fashion way with a roll of masking tape, a straight edge, and an X-acto knife. But the drawbacks are many such as cutting and re-cutting small pieces of masking tape along with the biggest problem of possible damage to the model from too much handling.

I did a little research and contacted a company call Sizzix who makes an Electronic Cutter that is primarily used to cut custom designs from paper for weddings, birthdays, and other arts & crafts projects. I confirmed with them that it could also cut shapes from a sheet of masking film.

I bought the eclips2 DIY Electronic Cutter for \$299.99 along with the ecal2 software for \$79.99 and some extra blades and cutting mats from their website <http://www.sizzix.com/eclips2>.

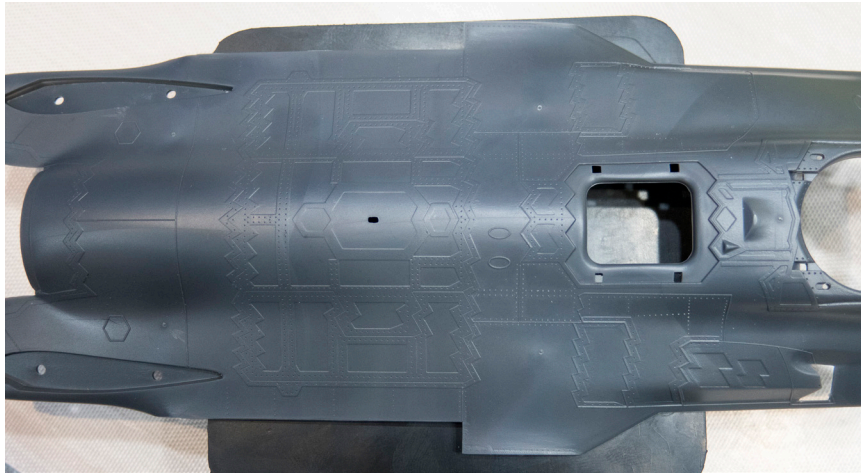
This cutter is amazing. It can cut measurements down to a thousandths of an inch. Here is a picture of the machine on my workbench.



In addition to the eclips2 cutter and software, bought Adobe Illustrator which is a drawing software that is available from Adobe. They have various pricing plans depending on usage. Since I also write these books with lots of photos, I subscribe to all of their software programs. And finally, I used a DSLR camera.

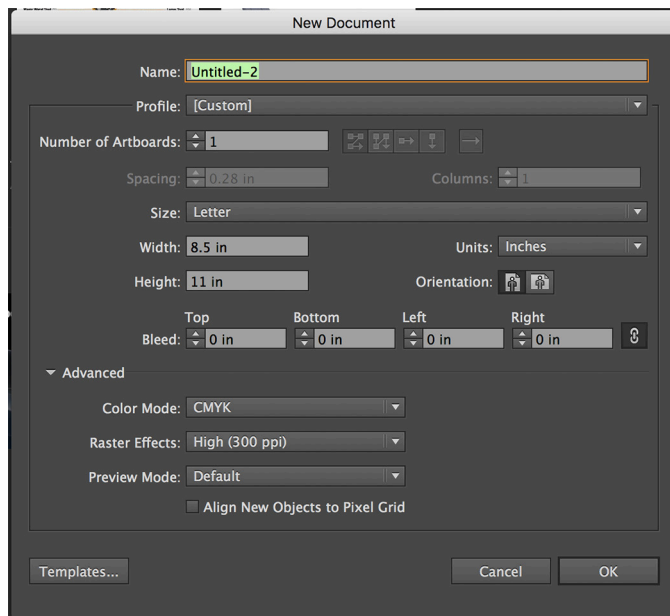
Here was my process:

1. Take clear photos of the model. Looking straight down and from the side. You can take them with an iPad or iPhone as jpegs and Airdrop them to your Mac. Or you can get a little fancier and take RAW photos with a DSLR camera, import them into Lightroom, make adjustments, and then export as jpegs. Below is a photo of the top of the F-35B



2. Open Adobe Illustrator

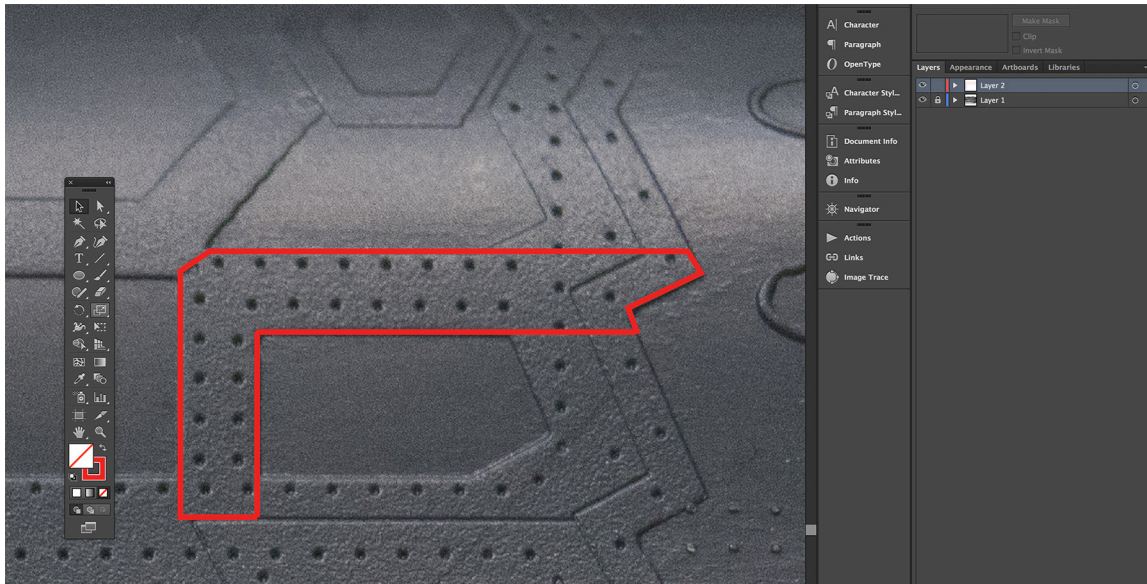
File -> New ...ok



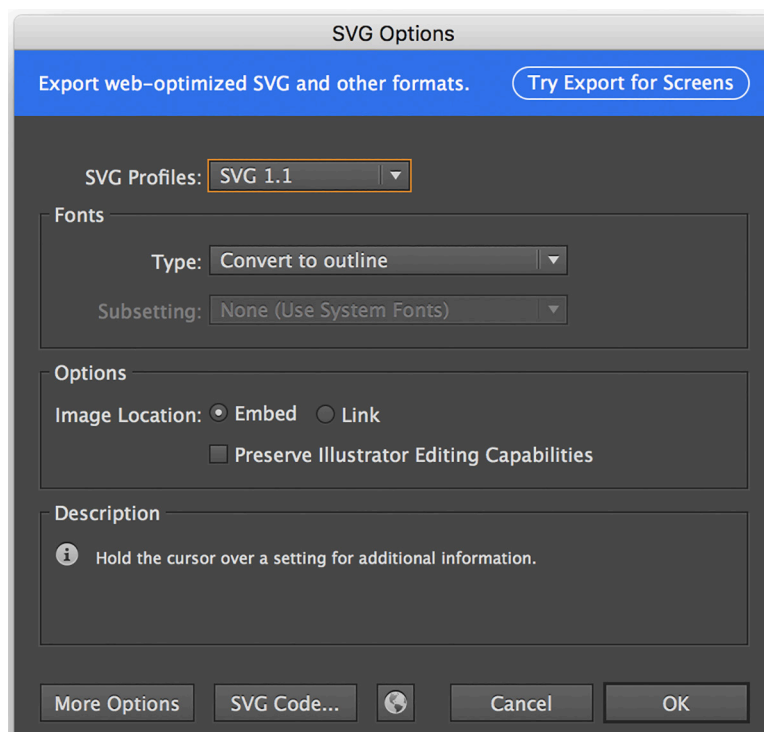


File -> Place ....locate one of the photos and drag it into your art board

Access the Layer Panel and add a new layer. Lock the first layer. With Layer 2 selected, zoom in real close. Using the Line tool, draw a line around the area to be masked Select all of the lines and Right Click -> Join Below shows just one segment. Draw lines around all of the areas to be masked. Don't make them too complex. Remember, you ultimately want to cut a piece of masking tape that can be easily applied to the model.



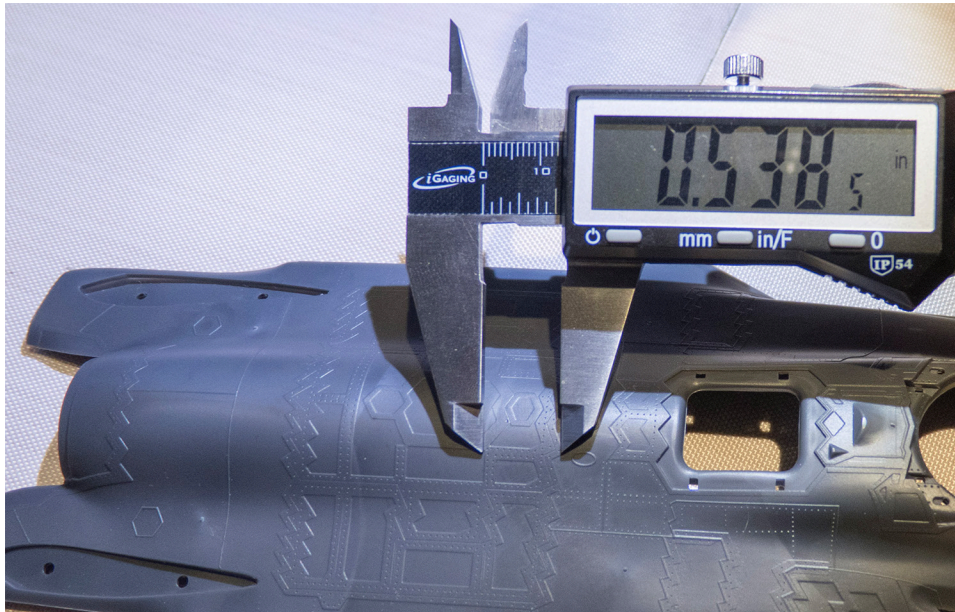
After you have created the various shapes on this photo, it's time to make them usable. Unlock and delete Layer 1 which is just the photo and you should be left with just the outlines of the shapes you drew. Select File - Save As and select SVG. The ecal2 software can import SVG files. Here's the Adobe Illustrator dialog box that appears when you save as SVG. Make sure the type is set to Convert to outline.



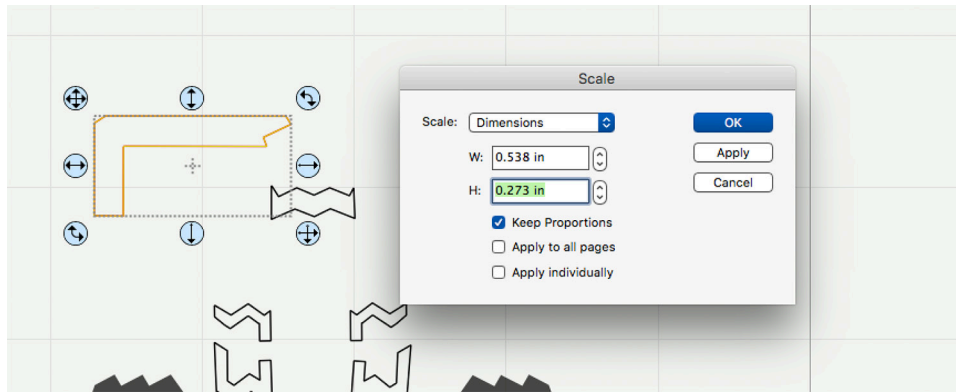
The new SVG file will just have the drawing and not the photo



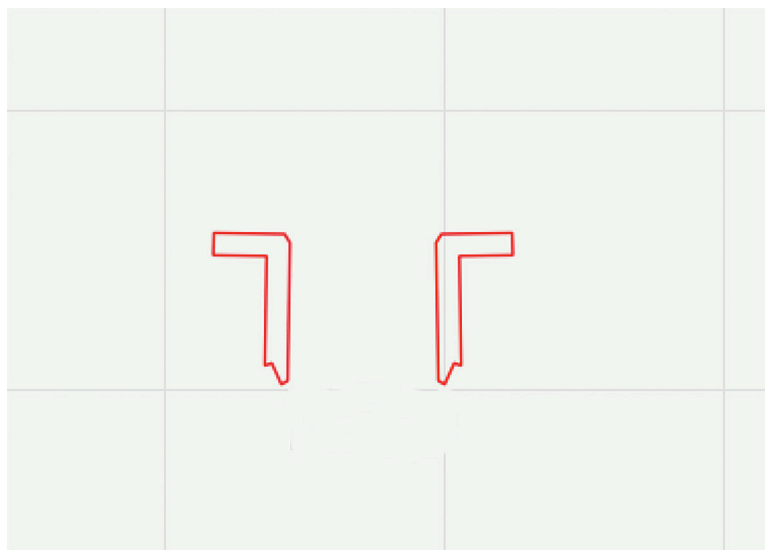
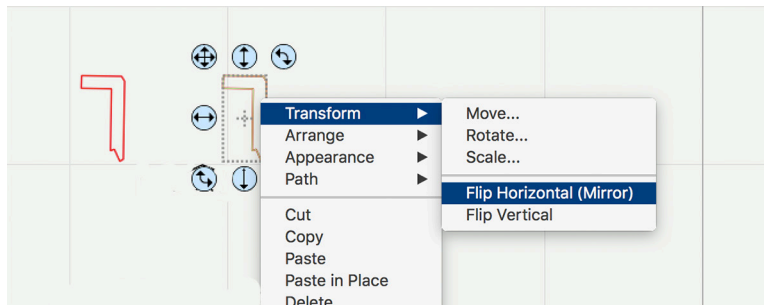
Open the ecal2 software, click the Import SVG option, and find the newly created SVG file we saved with Adobe Illustrator. Before we can create the mask, we'll need to take a measurement to make sure it's to scale. All you need to do is measure the width or the height not both so pick the one that can give you the most accurate measurement.



In ecal2, click to select the outline then right click -> Transform -> Scale and change the height to the caliper measurement. Make sure keep proportions id checked. The reason is the scale gets a little bigger along the way. It's the correct shape...it just needs to be proportionally scaled back.

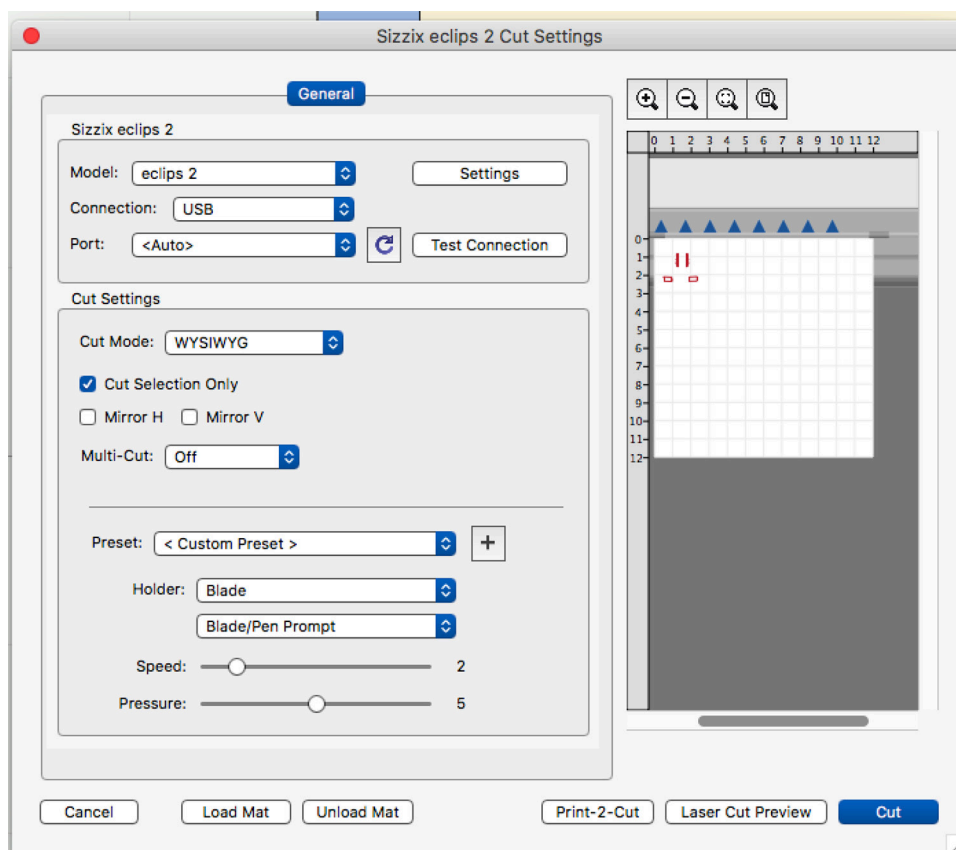


If there's a duplicate section on the other side of the model, make a copy of the image. Select the copy, right click, Transform -> Flip Horizontal (Mirror)



Now we get to make the masks. I tried 3 different manufacturers of masking sheets. Parma Pse, Tamiya, and XXXMain. All three worked great with large shape cuts. But if you have any narrow shapes, like 0.15 inches, Parma Pse was the best. The others would bunch-up in the cutter.

All you need to do is press the sheet onto the cutting mat, place it on the cutter and click the Mat button to load it into the cutter. Next, select the objects you want and click the Cutter button.



Set the speed to 2 so the blade makes a clean cut. Set the pressure to 4 or 5. Depending on how many shapes you selected, it may take the cutter several minutes to finish. Below is a picture showing the removal of the cut shapes from the mat and applied to the model





After you have removed all of the shapes from the sheet, I recommend removing the sheet from the mat and re-covering the mat with it's plastic protective cover. If you leave the sheet on the mat too long it will be harder to remove.

I also created masks for the underside of the F-35B. Here a photo of the finished bottom.



You can email me at [glennhoover@comcast.net](mailto:glennhoover@comcast.net) and I'll send you the ecal2 files I created for the F-35B that will save you some time.