

Tutorial: Preparing an Intaglio Design for Electro-Etching



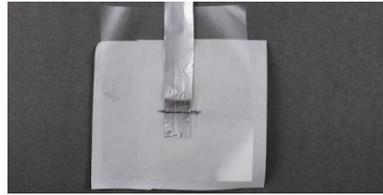
The positive space of the design will be etched into the metal and the negative space of the design will be left untouched above the design.

Materials required:

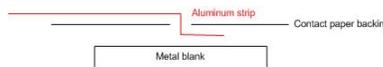
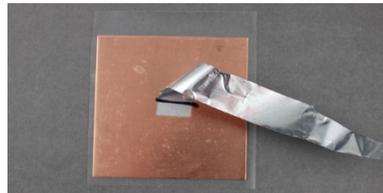
- Resist mask of the design
 - Metal blank
 - Scotch Magic™ tape
 - Heavy duty aluminum foil
 - Clear contact paper
1. Prepare the metal blank by scrubbing it well, and wiping it with alcohol. If the metal blank is already of the correct size smooth the edges and round the corners if appropriate. Otherwise these finishing tasks will be done following the etching.
 2. Apply the resist mask to the front of the metal blank using the appropriate technique.
 3. Cut a piece of contact paper slightly larger than the metal, and an inch taller. Cut a horizontal slit in the center of the contact paper. The slit must be slightly wider than the strip of aluminum foil but narrower than the width of the metal.



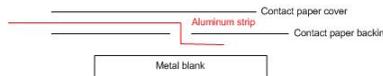
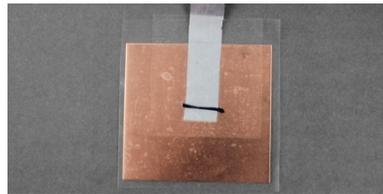
4. Remove the backing from the contact paper. Slip about half an inch of the aluminum strip through the slit from the non-sticky side to the sticky side, and stick the end of the aluminum strip to the sticky side below the slit. (For the photo, I set it down on the backing paper so it would not stick to my background.)



5. Turn the metal blank over so the design is on the bottom and place it on the saved backing paper. Apply the contact paper to the back of the metal blank with the extra inch being on the top of the metal blank, and burnish it to the metal.



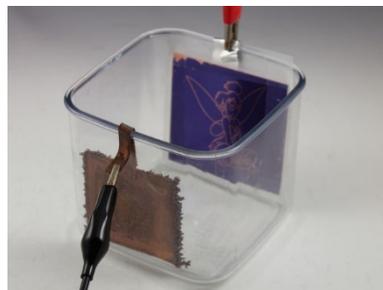
6. Cut another piece of contact paper approximately the same size as the first piece and place it on top of the first piece of contact paper. Make sure this second piece completely covers the aluminum strip from below the slit to the top edge of the first piece of contact paper.



7. Seal the edges using strips of Scotch Magic™ tape to cover all the edges, sealing the resist to the contact paper backing, or liberally apply nail polish to the edges, being careful not to cover any of the design that is to be etched. Check for any pinholes and cover them with nail polish or a paint pen without xylene.



8. Hang the package on the edge of the tank by the strip of aluminum foil, and clamp it in place with the red alligator clip from the power supply. Add the electrolyte to the tank until it completely covers the metal blank, but do not allow the electrolyte to touch the aluminum strip or the alligator clip. Hang a copper cathode on the other side of the tank and connect it to the black alligator clip from the power supply.



9. Lift the package out of the electrolyte and inspect the etching every 10 or 15 minutes. If a deeper etch is desired, hang the package back into the tank and let the etching continue. When the desired depth of etch has been reached remove the package from the tank, rinse it, and dry it.
10. Trim the metal to the desired size and do any other finishing tasks required.
11. Burnish in a tumbler with stainless steel shot and Super Sunsheen for 30 minutes.