

# PHOTO ETCHING HOME MADE – STEP BY STEP

- 1- Cut two (mirror imaged) transparencies to size (1/4 inch bigger than brass)
- 2- Tape a negative transparency to a sheet of glass (matte side towards you)
- 3- Place second negative transparency on top of the first (matte side to the first's matte side) and align both and tape the second transparency to the first one
- 4- Cut a sheet of brass to the appropriate size and sand it clean (see p. 6)
- 5- Cut two carrier sheets 1/2 inch larger than brass
- 6- Clean and burnish your wetted brass with diminishing grits sandpapers (1000 > 3000 grade) to clean it from dirt and oxidation. Wear rubber gloves during sanding. Rinse it thoroughly under distilled water
- 7- In a yellow light cut two sheets of photo resist to a size a bit larger than your brass
- 8- Remove first – inner protective layer from the inside protective curled side of the photo resist using a piece of Scotch tape
- 9- Place distilled water-moistened brass on a sheet of glass and carefully lay a photo resist film on it (emulsion side down). Rolling motion reduces air bubbles trapped in between
- 10- Flip brass over and do the same on the other side
- 11- Sandwich brass-resists combo between glossy sides of carrier sheets
- 12- Run your sandwich through the laminator after it warms up
- 13- Flip the sandwich and laminate it again
- 14- Place your sandwich in a light-safe box (the one from salmon) until you're ready to expose it
- 15- Place your brass-resists sandwich sheet in between sheets of two, taped together transparencies
- 16- Place this assembled brass-transparencies combo between two sheets of quartz glass and clamp them together
- 17- Place this in a UV lamp and expose it for **45** seconds. Flip the plate and repeat on the other side.
- 18- After exposure remove brass sheet from transparencies' pocket
- 19- Remove outer protective plastic wrap from both sides of photo resist
- 20- Immerse brass sheet in a developer (**20%** or 1 part **sodium hydroxide** to 4 parts distilled water) and agitate for ~ 30 seconds until unexposed film is washed away and brass in there will become bright. Brush the brass with a soft brush. Do this on both sides
- 21- Wash in water to stop further development
- 22- Hang the brass sheet on protected wire
- 23- Fill the etching tank with **25%** solution of **ammonium persulfate** at 42 deg. C (500g of crystals for 2 L. of etchant) and immerse brass in it, agitating until all black areas etch away. Etching solution will attain blue hue.
- 24- Bathe your brass plate for ..... min. in **sodium hydroxide** (full strength) to remove photo resist
- 25- Rinse it in running water