

Once two PE parts are glued together you will instantly realize that one part had details etched into one side, and you have glued it on backwards.

If a PE part is supposed to fit between two bits on a model it won't.

“Insta-Cure” also won't.

Be assured if you need to prepare 8 complex and difficult sub-assemblies you will figure out the optimum assembly method and sequence somewhere along the finish of number 7.

A tiny photo etch piece will adhere to anything, such as fingers, tweezers, eyelashes, work table top, etc. except that which you desperately need it to adhere to.

When applying PE with super-glue, the glue on the model will harden and the glue on the PE piece will harden approximately 2 nanoseconds before they are in contact with one another.

Once a part is placed on the project, it will slide around everywhere except where you want it to adhere. When it reaches a particularly reprehensible location it will immediately lock down permanently.

Removing a photo-etched piece that is attached where you don't want it to be will visibly damage the model in that location when you remove it.

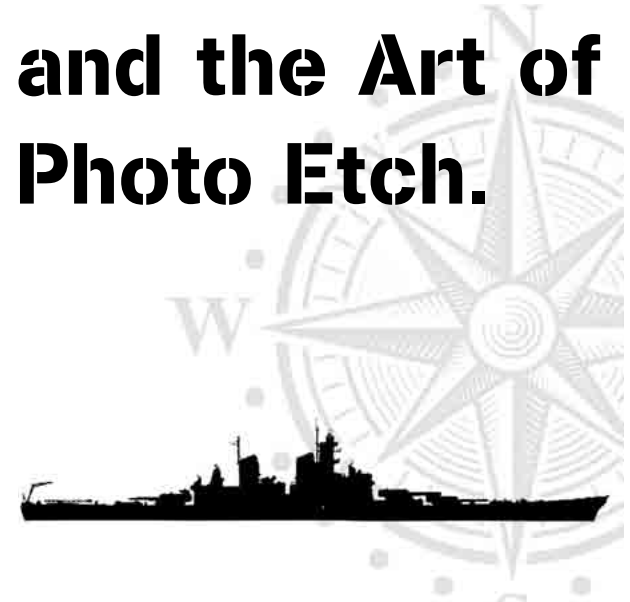
After a minimum of 15 minutes working with photo etch you will have recalled roughly 110% of the “sailor talk” you worked so long and hard to forget.

Once the kit is finished, placed on the shelf, and all instructions discarded, that tiny lost piece will reveal itself in (of course) the most obvious place.

You are now primed and ready to work with photo etch, have fun.



# Zen and the Art of Photo Etch.



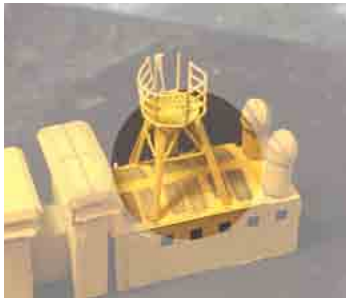
It seems that many of us are confused, and confounded by the wonderful detail-enhancing product known as photo etch, also referred to as PE in this dissertation. There seems to be much that can, and maliciously does, go wrong with this enhancement. In hopes of promoting a better understanding of this product's foibles for the neophyte starting out as well as the experienced builder looking to expand his skill, I present the following guides and warnings for its use. We'll start with a word on:

## **Annealing**

Many builders believe in annealing and I have become one of them. Annealing is heating the brass which causes a change in the material on the molecular level. If you have ever tried to bend a PE piece into a curve you know it fights you every step of the way. While gluing

it in place it will try it's best to pull away and in general is a pain to work with. Once annealed, however, it loses much of the springiness and behaves much better and is far easier to shape and glue in place.

Most videos I have watched on this process show the builder annealing the entire fret and here is where I diverge from the norm. I anneal piece by piece. It takes longer and is more difficult to do, but there are many instances where annealing is not only unneeded but undesirable. Annealing will also lessen the strength of the brass and if any bits are load bearing, (or



Load bearing, like these legs

need to be handled when assembling) it makes it harder to work with and easier to distort by accident. I would far more prefer to only anneal the pieces that need it, but you should

make your own choice. After all if our sanity was important to us why would we choose to work with photo etch at all?

### On the supplied instruction sheet(s)

Manufacturers of PE products always seem to include instructions which consists of barely comprehensible directions that minimally relate to the class of; but never the specific; ship, aircraft, or ground vehicle you are currently in the process of building.

**Corollary:** Producers of PE parts always include a number of extra pieces which are not notated or referred to on the instruction sheets. This is done just to screw with you.

There will never be included in the instructions how two folded and glued sub-assemblies of PE are to fit together.

**Corollary:** If an explanation of a particularly difficult procedure is to be done it will be printed in ancient Sanskrit for which there is no known translation.

### General hints and safety

When you first start working with PE you will naively think all you need is a pair of tweezers.



In this way lies madness. You will need at least two pair, needle nosed and flat. And make yourself a super glue applying tool, snipping the end off the eye of a needle will do or you can buy an expensive, commercially produced one that will work almost as well. You will also need a folding tool. No, don't argue with me, just go buy one now and save yourself some shreds of your sanity.

Wear some kind of eye protection. Safety glasses are not strictly required but there *will* be flying metal bits. Your magnifying headset, (probably needed anyway) will also suffice.

Don't use your self healing cutting surface, that will cause your brass to bend and distort. Use a piece of glass or a ceramic tile.

**NOTE:** This has the added benefit of dulling your #11 blades at a far more rapid pace.



**Corollary:** Your PE workspace is where #11

blades go to die, so stock extra.

It is part of the photo etch manufacturing dogma that if a sub-assembly will need 3 PE parts to complete, 5 or 9 parts is infinitely superior.

If your project requires 16 pieces of PE your set will include exactly 16 pieces. There is never a thought to supply any spares. For anything.

Ever.

No matter what tool you use, a PE piece that is supposed to be curved will bend into a crease, but any bend that is supposed to be a sharp angle will curve absurdly.

**Corollary:** When you attempt to correct a bowed piece that was supposed to be angled, it will take a crisp angle some place other than where you want it.

If you need to prep 2 PE parts for installation, prep three, you will need them.

**Corollary:** The first part will set and adhere perfectly lulling you into a false sense of security. The second piece will pop off into hyperspace headed for another dimension and your ready glue will dry up while you prepare another piece.

**Corollary to the corollary:** Of course, *no* PE set contains spare parts so be prepared to purchase a second PE set to complete the model.

A tiny PE part once dropped acquires stealth technologies instantly.

**Corollary:** The carpet is *not* your friend.