Few other model disciplines rely so heavily on photo etch. The reasons are obvious. Lots and lots of rails, ladders, radars, catapults, etc. which only photo etch reproduces so well is why ship models rely so much on these parts. Most resin manufacturers of ship models now include complete photo-etch detail sets to top off their kits. Like no other genre, these kits now offer the average modeler the ability to create a museum quality model right out of the box. Recent releases by major model manufacturers like Trumpeter and Dragon now feature limited photo-etch sheets to entice to upper scale buyer.

How we do it:

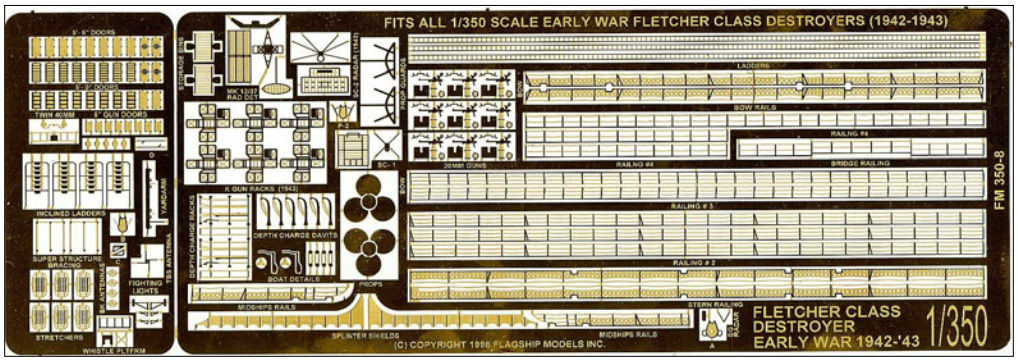
Detail sets are created through the magic of what has been commonly called photo etching. It's known in the industry as chemical milling, and has been used since the late fifties. One of the first applications of this technology was to produce circuit boards. The detail sets you use today are little more than glorified circuit boards gone terribly wrong (or right for modelers). Just imagine a detail set as a circuit board that has etched all the way through leaving only the circuit diagram. Although this analogy is somewhat simplified, it's essentially correct.

I design and create the master drawings for ***Flagship Models*** detail sets using a 3D CAD (Computer Aided Drafting) computer program. The drawings can then be transferred to almost any type metal sheet. The sheets are then chemically etched (or milled) to produce the product you see in your hobby shop. Using computer technology, this allows the designer to produce extremely fine details with perfectly registered raised etched lines as thin as human hair depending on scale.

The Flagship Models photo-etch rails on the bow of this 1/350Tamiya Fletcher is a good example of the advantages of raised etched relief on the parts. Note how the stanchions and bracing are thicker than the rails. Without computers, this feature would be almost impossible to create by hand.

You will quickly find that photo etched parts come in detail "sets" with parts designed for a specific model or type of model. The parts are laid out much like a plastic model kit to keep the set cost effective, but that's where the similarity ends. When Tamiya released their long awaited 1/350 scale Fletcher class destroyer kit, I knew it could really benefit from a highly accurate detail set. While the model is quite accurate in its design, it could still greatly benefit from the detail accuracy that only photo-etched parts could provide.

Plastic models are great, but they have limitations. Plastic can be injected just so thin. Injecting plastic to create minute “see through” voids in subjects such as radars would be VERY expensive and not cost effective to the manufacturer. Most of the parts in the Flagship Models 1/350 Fletcher Class Destroyer set are based on kit parts, except they were thinned down to exact scale and re-designed according to actual naval plans, greatly improving their accuracy and appearance. Other areas on the kit such as the hatches were nothing more than flat, raised sections of plastic with no detail whatsoever molded on, so I designed replacement hatches using actual Naval design drawings (4 different styles) to make them far more detailed and accurate. Other parts such as radar, K-gun storage racks, davits, depth charge racks, stokes litters, etc. were transformed into exact scale replicas of the real thing. The rails on the Fletcher's were cables draped through the stanchions with "cyclone" netting on the lower three rails. We reproduce this detail faithfully in our set right down to the realistic drooped cable rails. This level of detail would be impossible to reproduce with injected plastic technology. Using our detail set will result in a far more accurate and detailed model.



Right: The Flagship Models “Early War” Fletcher set (FM 350-8) has everything needed to build the Tamiya model in the 1942 configuration the kit was designed to depict.