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Introduction

Creating miniature replicas must be something hard wired into the brains of a certain percentage of us humans. Evidence of this activity can be found nearly as far back as there are human records. For those wishing to express themselves creatively in this way, or those simply wanting to own a representation of a favorite flying machine, things have never been better.

The plastic kit industry and aftermarket accessory manufacturers are producing the highest-quality items the modeling world has ever seen. If you're just discovering this world of styrene, your timing is superb. If you're returning from an absence, prepare to be impressed. You are benefiting from the result of years of serious modelers making their thoughts and wishes known to those who produce the goods.

I hope anyone who is a fan of model airplanes will be entertained by what's between these covers and will be encouraged to advance his or her skills. It would be helpful to know the basic modeling techniques before attempting the projects demonstrated here. Readers I think will benefit most probably are already using an airbrush. Not that airbrushing is all that hard; it's just that investing in painting equipment and spending the time to learn our individual set-ups and paint preferences form a kind of threshold in the hobby we all have had to cross before enjoying the greatest rewards.

My goal is to help you build on your skills with what you learn in this book so that you'll have the confidence of knowing just about any desirable modeling goal is within reach. Many of these old modeling tricks were a normal part of kit construction before the advent of today's well-detailed and tight-fitting models. So this book may also give you an appreciation for the humble beginnings of the hobby. I wasn't there at the dawn of plastic models, but I had a glimpse of the dark ages.

My qualifications for writing this book are unique. Like most young boys in the '60s, I grew up on plastic model kits. Unlike my peers, I never gave it up. I certainly noticed cars and girls in my teen years, but a real love of airplanes and creating accurate little plastic ones were powerful forces in me too. A huge influence was the proximity of the original Squadron Shop hobby shop in Hazel Park, Michigan. Besides the books, tools, decals, and exotic imported kits, there were showcases full of built models.

This was a time of *Scale Modeler* magazine in the U.S.; *Scale Models* and *Airfix* magazines from England. Period. No Internet to surf over endless postings of model images. Half an hour away on my bike though, I could study what for all I knew was the cutting edge in built models. What I saw in those cases pointed to where I wanted to go. I honed my skills until my models shared shelf space with

Its silver and gloss-white paint scheme "makes" this Academy 1/72 scale C-97. However, a wonderful paint job only works when the foundation—the model—has been well made and when its surface has been properly prepared to reveal such a smooth finish.

the others at the Squad Shop. By the late '70s, mine were being noticed too, and I actually sold a few. (Who knew what to charge? In fact, I practically gave them away. What counted to me was that I had been paid for the product of something I did for fun. That was heady stuff.)

A few years later, through some fortuitous contacts, I found myself building models for other people on a regular basis. In 1986, I created Hawx Planes and officially turned my hobby into a business. It just seemed like the thing to do. From then until now, I've never had to wait by the phone for someone to order a model airplane. Between models and writing articles for *FineScale Modeler* magazine, I've always been busy.

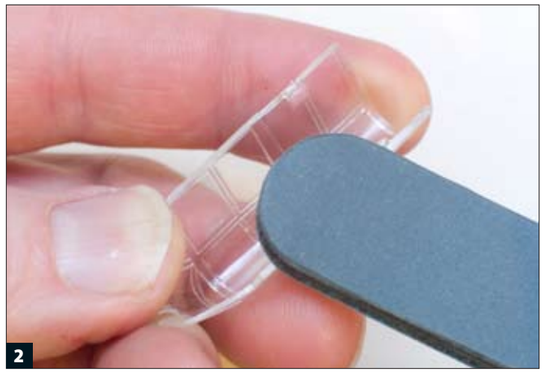
So what you have in this book is one professional's approach to building and detailing plastic model airplanes. My way of building may differ from that of many hobbyists because of my concern with speed and efficiency. I don't mean to imply that I run a production line, but it is true that the faster I can get a high-quality piece out the door, the faster I get paid and the sooner I can move on to the next model. I can't afford to lavish hour upon hour on a model if it doesn't substantially improve the results. I do not have the luxury of taking five steps to do something that I can do with reasonable results in two. (I don't believe that making things complicated necessarily makes them good.)

If I absorbed anything from my days hanging around the Squadron Shop it was the importance of accuracy. Above all, accuracy means getting the aircraft shape right, then being diligent about markings, finish, weapons configurations, and the correct angles of open canopies, doors, and flying surfaces. Searching for and studying pictures of the real thing can easily take as much time as building and finishing the model. For me, it's still an essential part of the process, and you'll see in this book how it influences some of the things I do.

One of the most difficult aspects of this book has been choosing what subjects best illustrate what I think is important in building and detailing. I've tried to include enough variety in kit quality, subject, and scale to keep things interesting for everybody.

Notice the key words in the title of this book are building and detailing—no mention of "superdetailing." Where does detailing stop and superdetailing begin? I don't know. (I do know that the less work I have to do with tweezers, the happier I am.) I hope that with what you see in this book, you'll master some detailing basics and go on to develop your detailing skills as far as you want to take them. Maybe you will write the superdetailing book!

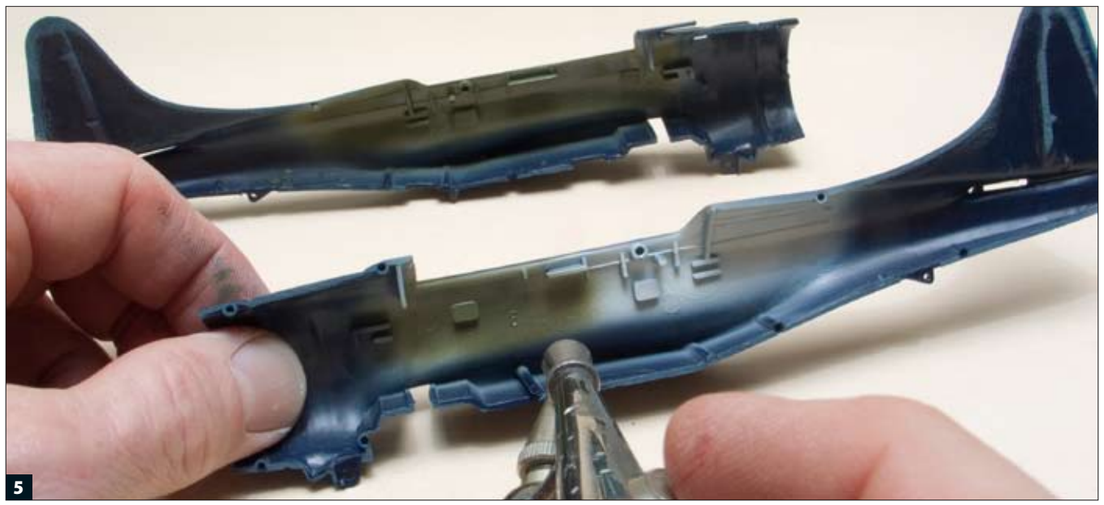
With a cushioned cutting mat underneath, a single-edge razor blade is applied to the sprue joint like a guillotine, making a perfectly clean separation of the canopy.



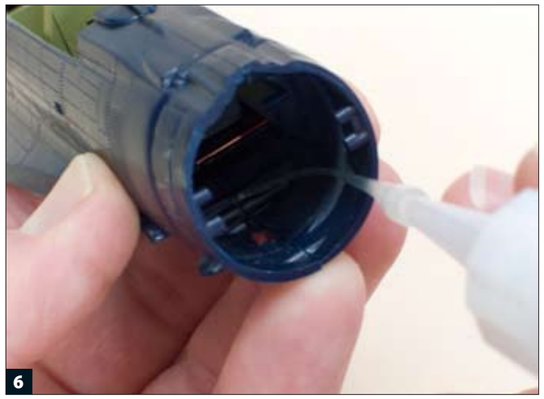
A fine-grit sanding stick smooths and levels the bottom edges of the canopy.

The same procedure is applied to all the mating surfaces of the kit, ensuring the tightest possible fit for all parts.

Test-fitting the canopy early in the building process alerts you to fit problems that you may encounter at the end of the process when the actual attachment of the clear parts takes place.

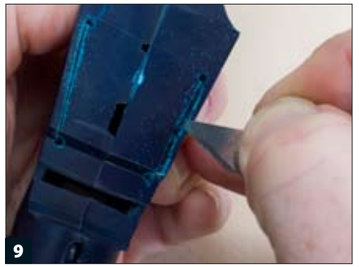


Following a base coat of white, interior green is airbrushed over the fuselage interior. Paint on the finger is evidence the photo isn't entirely staged.

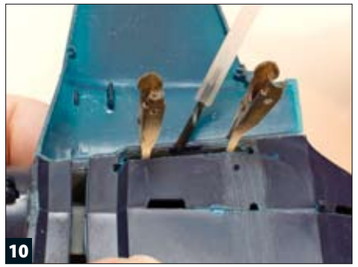


Using the stretched nylon nozzle, super glue is applied to the interior surfaces using any opening available.

With holes drilled to mark the front and rear limits of the cut to be made, a saw blade essentially connects the dots.



The resulting slot is carved open with a hobby knife with a No. 11 blade.



The upper wing half is held in place while liquid plastic cement is applied. The slow setting time of the cement allows any necessary adjustments.

Initial inspection. The first step is a parts examination. This doesn't take long on such a simple kit. I look to see that everything is present and free of noticeable warps, especially in the wing parts. Everything looks good and straight. Take a hard look at the canopy. It's in two pieces and this is one is quite clear. Both pieces have tabs molded into the inside surfaces to ensure no lateral movement when fitting to the fuselage. Though clear, these tabs would be visible when the model is finished. Since this one is just for fun, I'm not going to worry about these tabs. Happily though, this kind of assembly "aid" is rarely seen anymore. The bottom edges also sport prominent ejector-pin marks (from the molding process) that need removal.

With a single-edge razor blade, cleanly separate the canopies from the sprues, **1**, then take a medium-grit sanding stick to all the edges, especially the raised pin marks, **2**, **3**. The trick in this operation is to remove only the raised imperfections and leave the edges of the part as intact as possible. Also, of course, try to avoid landing the sanding stick on the canopy itself. If you don't trust yourself for that, apply masking tape to the outside surfaces to protect them from slips of the abrasive. How the canopy fits its opening in the fuselage can cause unhappiness further up the road, so I want to know early on how well it will click into place, **4**. In order to know that, we need to match up the fuselage halves.

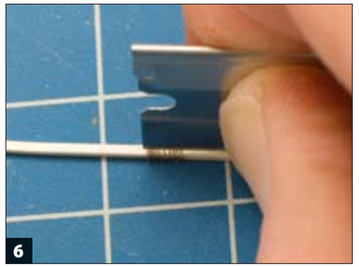
Fuselage has a fit. Snap the fuselage halves off the sprues and click them together to get a rough idea of fit; this one is quite good, revealing no serious gaps. Separate them, and with a medium-to-coarse sanding stick lightly rub the edges of the fuselage halves where they'll touch each other. This removes any mold imperfections (or mold release agents) that may keep the halves from fitting as tightly as they were meant to. It also provides a bit of "tooth" for the super glue. In many cases, I'll remove the small locating pins that fit into their corresponding holes on the other side of the fuselage. Building the way I do, you'll see they are not necessary. (Occasionally, you may find some of these molded-in helpers are actually a hindrance.) Edges thus prepped, dry-fit the fuselage and the clear parts. Happily, the clear parts fit better than expected.

In the spirit of keeping this project simple and fun, pre-assembly painting has been kept to a minimum, **5**. There is no cockpit detail to speak of, and that's OK. (Plenty of cockpit detail will come later in this book.) A closed canopy on this model won't invite a lot of inspection of the cockpit anyway. Study of some color photos of wartime SBDs suggests the interior color was yellowish olive green. For purposes of this project, I suggest you paint the cockpit walls and all the rest of the cockpit your own best guess at a mix of yellow-olive, and leave it at that.

Step one of the kit instructions calls for gluing a couple of interior pieces together. I have no problem with that. Step two is to

Carefully unroll the lead balls with tweezers to give the strips a wrinkled texture that better simulates 1/48 scale canvas straps.

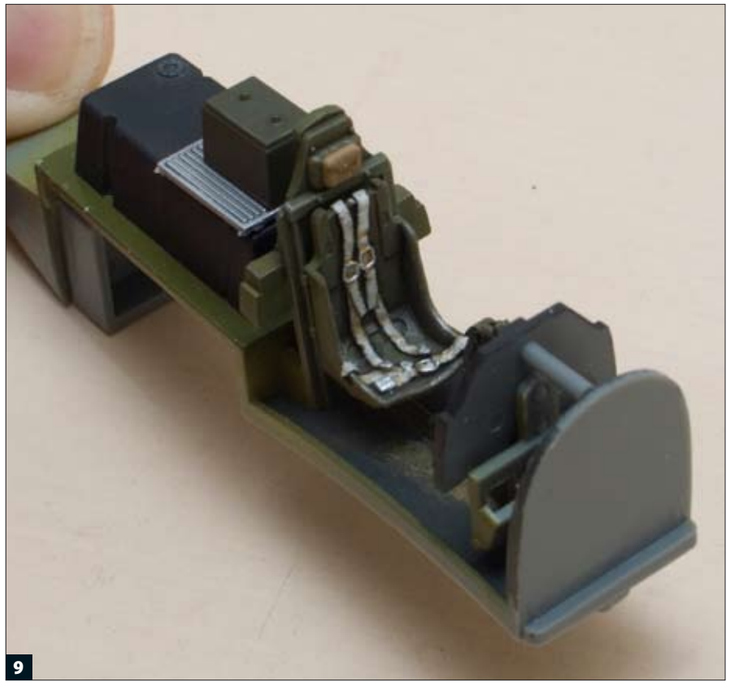
Tightly wrap fine wire around a piece of Evergreen square strip styrene.



A razor blade works well for cutting the wire on one side of the strip. The result is a bunch of wire square "buckles."

The cut loosens the squares enough to be coaxed off the strip stock with fine tweezers. These same tweezers will be used to force the cut ends back to touching each other, reforming visually intact squares.

The seat, with its new belts and buckles, is now ready for a paint job.



The cockpit floor assembly is ready to install. The smooth plywood floor was generally painted black. Wear is simulated with dry-brush dabbing of flat tan.

Buckle up. For one thing, the seat needs harnesses. These are easily made from lead foil, laid flat and cut to width (in this case, 1/32") with the help of a metal straightedge, **1**. Ball up these pliable strips between your fingertips, then carefully unroll them to create believable folds, **2**, **3**, **4**. A length of thin wire—about like carpet thread—is tightly wrapped around a square of .030" styrene stock to make buckles, **5**. To get them off the plastic, make a cut with a single-edge razor blade while guiding the tiny wire squares with fine tweezers, **6**, **7**.

Superglue the wrinkled lead foil strips to the seat and add the wire tightening buckles on top of them, **8**. Small shaped bits of styrene strip added to the ends of the straps suggest other belt hardware. With the addition of these buckles and a little attention paid to painting, the seat can easily become the focal point of this interior, **9**.

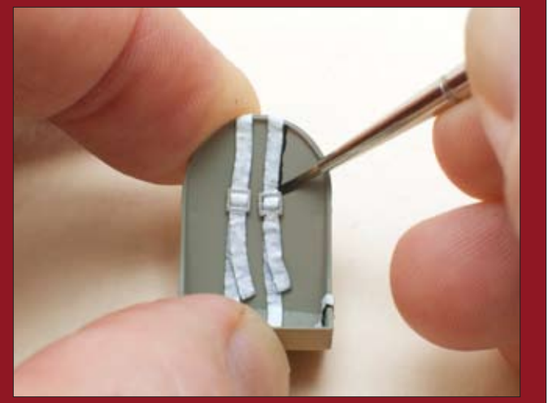
Easy exhaust. Another small touch that adds interest is to drill out the exhaust stacks and gun barrels, **10**, **11**. In 1/48 scale, this isn't too demanding. All it

INSTALLING AN AFTERMARKET HARNESS

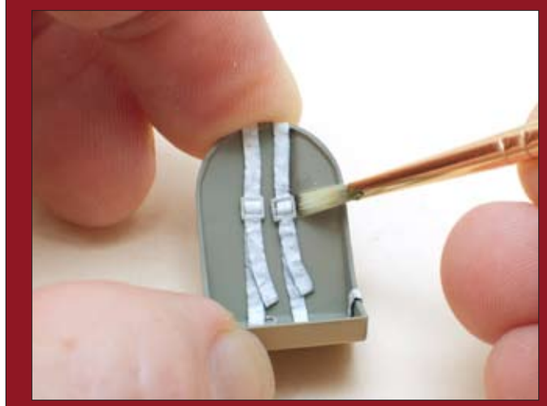
Photo-etched belt and harness buckles are available, and in scales bigger than 1/48th, you'll want to strongly consider using such aftermarket parts. Like threading a needle, you feed your lead foil strip through the tightening buckles, and wrap the end through the slot in the belt fasteners on the ends of the strips. For the purpose of illustration, here's a set of 1/32 scale belts attached to a Hasegawa Spitfire MkV seat.

Actual photo-etched belt buckles are available for those with good eyes and steady hands. Here a strip of lead foil is threaded through the thin slots in the brass pieces.

There's nothing wrong with this seat and its belts, but the appearance is rather flat.

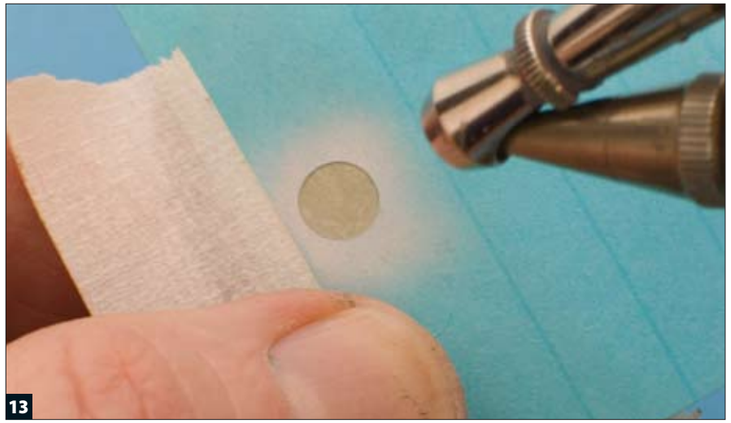


To add some depth, first draw a line of black artist's oil paint next to a belt with a fine pointed brush.



Pull the paint away from the belt with a wider "blending" brush. The idea is to blend the outside edge of the oil paint.

You can do this anyplace you find a raised edge or a corner. The result is a realistic shadow effect.



13

To get a truer white on the national insignias, a disk was cut out of a self-adhering note to match the white of the roundel. This was pressed on the decal, and a coat of white paint was airbrushed onto it. Note the decal's green appearance compared to the white overspray on the mask.

14

The Warhawk received a minimum of weathering, with just a bit of wear on the leading edges of the wings and atop the wings in areas of foot traffic.

decal sheet on-hand. (Never underestimate the value of having a back-up kit!) Layering a second set of decals over the originals lessens the problem, **12**, but doesn't really eliminate it.

My options at this point are to live with the incongruity, mute down the already painted white to match the decals, or add a third layer of white to the decals. I chose the last. I cut a mask from a self-sticking note with the help of a round scribing template to match the white of the roundels, **13**. Conveniently, they're all the same size. I stuck this on the six positions and gave them a good shot of gloss white.

Cutting masks for the code letters would be a pain, to say the least. Instead I used my best pointed paintbrush and some of the same thinned white paint to dab and drag a white wash over the letters. It's precise brushwork, and slips have to be either scraped away with a No. 11 blade or re-touched with the Foliage Green mix. They may be a little uneven on close inspection, but they match the rest of the white markings, which was my higher concern. I left the 29 on the chin and the "Cleopatra" alone. One needs to know where to draw the line.

Flat coat and weather. The model is flat-coated and weathered with restraint, **14**. A common habit among modelers is to apply long black streaks leading back from wing-mounted machine guns. On a Kittyhawk having white leading edges, this sort of thing would be very prominent, yet after going through all my reference photos of Australian machines (and some similarly marked U.S. 49th FG machines), I could find no evidence of such long stains. Shadows and battered wing leading edges are in evidence, but no long, sooty streaks. So either I didn't find the right pictures, ground crews were quick to clean up their airplanes, P-40s never fired their guns, or when they did fire, they didn't make quite the mess often suggested. Whatever was going on, I believed what I saw in my photos and didn't add significant streaks to my wings.

Typical chipped paint on a 1/72 scale model should be hard to see except in areas of high traffic. Where would shoes and boots actually come in contact with the airplane? Probably only where the pilot would get in and out and where the ground crew would service the machine. The most-serviced areas would probably be the engine, guns, and fuel, oil, and coolant access areas. Panels around these areas are bound to get dinged and scratched in opening/closing and removing.

How big would these dings and scratches be in 1/72nd scale? Leading edges of the wing would probably take a beating via prop wash and exposure to fuel hoses dragged over them and the like. Unless there was some kind of battle damage, most of the rest of the machine would be largely left alone. If there was some repair to the airframe itself, this would probably show up as a different, fresher shade of paint.

A worn airplane looks the way it does for a number of reasons. I like to study photos and think about the reasons behind what I see before trying to replicate that in miniature. I want to represent a shrunken real airplane, and the finish is key to that.

Final details consist of placement of a pitot tube from stretched styrene tube, antenna mast from sheet stock, landing light from a tiny disc of chrome tape punched out with the punch-and-die set, then covered with a dab of five-minute epoxy. The molded-on navigation lights got just a touch with gloss red on the left and gloss dark blue on the right and gloss light gray on the tail.