PAINTING, DECALS, WEATHERING, AND SIMPLE DISPLAY BASES

There are several simple steps in painting that are an absolute must if you want to get good results. First, you have to ensure that the plastic parts are clean and free of sanding dust and residue. Give all the parts a cleaning with Polly S surface preparation cleaner.

To get a quality finish or to mix colors to get various shades and fading effects, you cannot get by without an airbrush. Since temperature and to a large degree humidity affect airbrushing, you should do all your painting in a moderate temperature and low humidity environment. Generally, temperatures between 65 and 75 degrees are good and humidity of no more than 60–65 percent is acceptable. The thinner that you use is also important, and I always use the manufacturers' recommended thinners. To get the most from each bottle of paint, drop a few copper BBs into the bottle to help mix up the sticky paint on the bottom of the bottle. Thinning paint for airbrushing can sometimes be a trial and error process, and there is also a relationship between paint thinning ratios and the air pressure you use. Generally, I use a mixture range of four parts paint to one part thinner to

three parts paint to one part thinner at between 22 to 28 pounds of air pressure. I have tried a lot of different air supplies and the easiest and quietest is by far a CO_2 bottle with a pressure regulator. While the setup cost is a little more than a small compressor, the air is always dry, the air flow is consistent and adjustable, it's as quiet as a church mouse, and a bottle typically lasts me two years.

When you are ready to paint, secure the parts with masking tape on either lengths of balsa wood or stiff cardboard sections so that you will not be handling the parts. As a rule of thumb, give all parts a coat of primer first. The only time you would not use a primer is when you are using metalizer-type paints. Primer provides a good adhesion surface for paint and the primer color will also highlight any flaws, cracks, seams, and scratches that you may have missed. If you do find any areas that need additional finishing work, let the primer dry for a few days, fix the problem areas, and then sand the surrounding primer using a minimum of 600-grit sandpaper. To blend in the unpainted and primer painted areas, first give the unpainted area a coat of primer and then give the entire area a complete coat so that both the old and new primer are covered.

The finish coats of paint should not be rushed and you should let the paint dry for a least 48 hours before you handle the model or apply a second coat. Gloss paint takes longer to dry and it may be several days before a gloss paint like white really dries. As a rule of thumb, if the surface smells like fresh paint it's still drying. Once you are finished painting the next step is to add the decals.

Keeping your airbrush clean is also very important. I run thinner through the airbrush between colors as well as cleaning the tip. When I am finished with each airbrushing session I disassemble the airbrush and clean it using tissues, thinner,

and pipe cleaners. To make enamel-base paint flow more smoothly I warm the paint on a coffee warmer, always keeping the lid open a crack so that pressure will not build up. The paint only has to be on the warm side to get it to flow smoothly. If you are using spray paint let the can sit upside down for a few hours and then give it a good shaking. Spray paint can also be warmed by setting the can in hot water for a few minutes. Always test the paint before using it and clean the spray tip when you are done. To remove excess paint from the tip, hold the can upside down and spray until no paint comes out. If you are using a hand brush, add a few drops of thinner and BBs to the paint and mix well. Thinning the paint slightly will help it flow better. Paintbrush selection is also important and I use only natural hair brushes that keep their shape. Clean your brushes after every use and run them under hot water to reshape them.

The secret to decal application is to apply the decals to a gloss surface, to cut as much of the clear film from the decal as possible, and to use decal-setting solutions that make the decal snuggle up around surface details. If you used gloss paints you are ready to add the decals; if you used a flat colored paint, then you need to add a gloss finish. I have tried a lot of gloss finishes and I have had the most success with water-base clear gloss paint, although it tends to clog my airbrush. Water-base clear gloss works well on either water- or enamel-base surfaces. I have also had a lot of success using a clear gloss polyurethane paint, the kind you find in hardware or home supply stores.

Once you have glossed the surface, apply a test decal to a test surface first, unless you know for sure that the decals you are using are good decals that will respond to setting solution and will not silver. I have had problems with some manu-

facturer's decals that do not respond at all to setting solution and silver even if they are applied to a gloss surface. I always try to use after-market decals, which are designed for setting solutions, unless the kit has a set of decals that have been manufactured by an after-market decal manufacturer. Always cut the decals free from their sheets using a sharp knife and a ruler. Cut as much of the clear film off as possible. For small decals like instruction labels or serial numbers, cut around the perimeter. For large numbers or letters cut out each one individually, remove all the clear film and then apply them one at a time. The trick is to ensure that they are lined up correctly. Insignia should also have all the clear film trimmed away. For curved areas like circles use a series of tangential cuts to trim away the excess film, and for straight cuts use a metal ruler as a guide.

Cut decals one at a time and dip them in warm water with tweezers for a few seconds so that the decal absorbs the water. The decal is ready to apply when it slides off the backing. Slide the decal slightly off the backing, lay the decal on the model, and then slide the remaining portion off the backing while holding the decal in place with a moist Q-tip. The gloss surface will allow you to slide the decal around a bit to position it. If the decal starts to dry, moisten it with some water applied with a Q-tip. Let the decal dry, then apply coats of setting solution to the surface using a Q-tip. After a few coats the decal will soften and snuggle up around the raised detail and into or around panel lines. Sometimes the decal will wrinkle when you apply the setting solution. If this happens push the decal back down with a damp Q-tip. When you have finished applying all the decals, clean up the surrounding surfaces of the decals to remove any water stains and then give the decals a coat of clear gloss to protect them.

Now comes the fun part, weathering. If you are going to weather your model heavily I recommend that you lighten the surfaces of the airplane that would normally be exposed to the sun. These would be the upper surfaces of the wings and the upper area of the fuselage. The easiest way to do this is to spray a coat of highly thinned white or light gray over these surfaces using a water-base paint. How much you want to lighten the surfaces and the decals will dictate how much paint you will be mixing. Generally, I use 25 percent paint to 75 percent thinner. One light coat is all you need, as you do not want to overdo the effect. Next drybrush silver paint mixed with some black to tone down the bright silver appearance on the leading edges of the wings, tail, rudder, and

any wing surfaces that would show wear due to walking. Your drybrush strokes should be from the leading edge to the trailing edge of the wing. This effect should be very subtle. Next add exhaust stains for the engine exhaust ports and gunpowder stains at the gun locations. When you have finished weathering, give the entire model a coat of clear flat.

Simple display bases will help protect your model from careless hands and allow you to view the model up close without breaking it, or marring the surface by handling it. Wood display bases cut from oak, hard rock maple, walnut, or mahogany with routed edges make excellent display bases. To secure the model to the base, drill holes in the bottoms of the tires and glue plastic rod into them. Then drill corresponding holes

into the display base and then drill large holes into the bottom of the display base about ½ inch in diameter and about ⅛ inch deep into the wood. Cut plastic disks slightly smaller than the ½-inch diameter holes, and then drill holes into the center of the disks the same size as the rod that you glued into the tires. Slip the rods through the holes of the display base, making sure that the tires are sitting flat on the surface of the display base.

To secure the model, slip the cut plastic disks over the rod, glue the plastic with super glue, and then trim the excess rod. Several manufacturers also make display bases and diorama displays using resin and photoetch, and some have even designed their bases to fit AMT/ERTL's clear display covers.
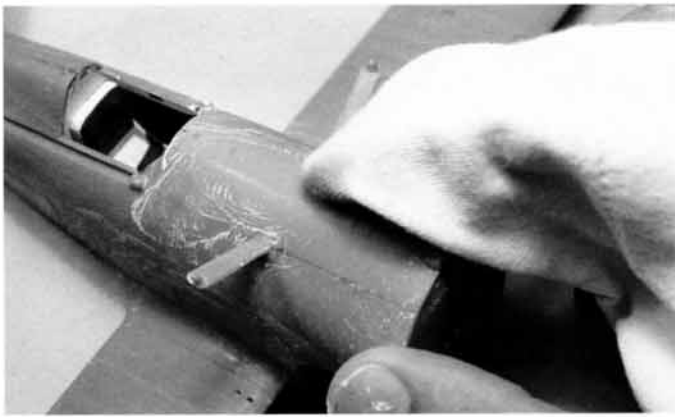
Fig. 6-1. One of the last stages of preparation of a model prior to painting is to polish the surface and smooth out the plastic. There are several ways to do this. One way is to use finer grades of sandpaper up to 600 grit, and another method is to use Bare Metal Foil's liquid plastic polish.
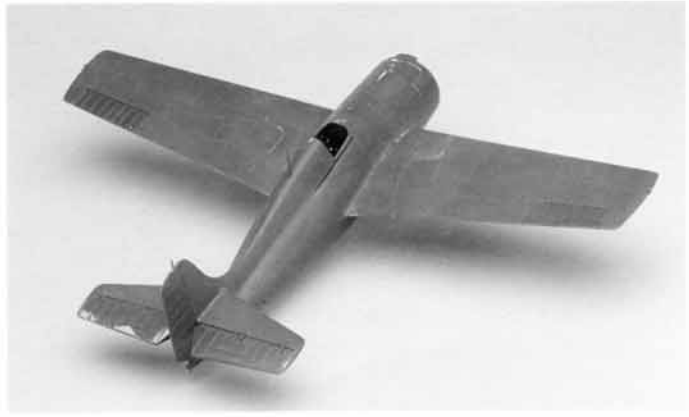

Fig. 6-2. Revell's F4F Wildcat is assembled and once it is masked the painting process will begin. Note that the plastic surface has been sanded smooth and lightly polished. Photo by Glenn Johnson.

Fig. 6-3. Scotch 3M painter's masking tape cut into small strips works great for masking landing gear.
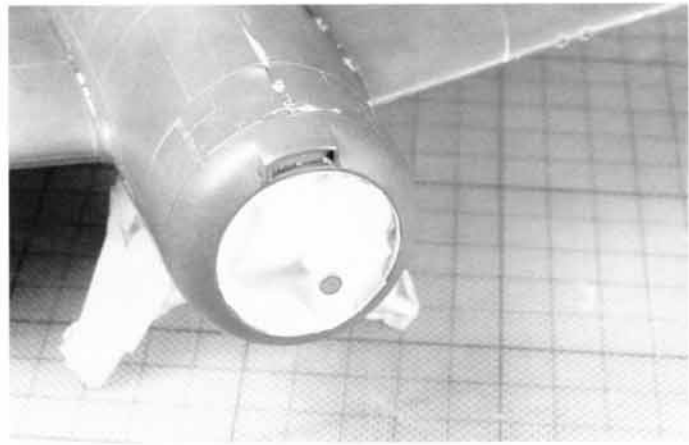
Fig. 6-4. Here combinations of small strips of masking tape and a large piece cut into a disk shape with a center hole punched cover the engine area of this F4F Wildcat very well.
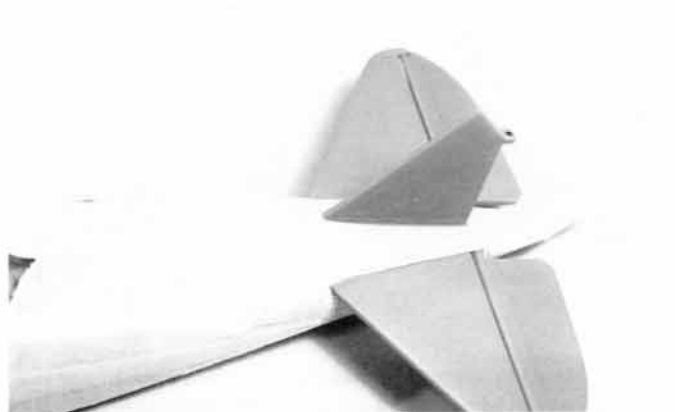
Fig. 6-5. Here's another good example of using combinations of thin strips of masking tape with larger sections to cover the fuselage area of this airplane. The tail surfaces on this model are ready to be painted yellow.

Fig. 6-6. Here the Wildcat has been primed and is ready for the first application of additional masking. Once you have primed the model, check it one last time for flaws and cracks, repair those areas, and reprime. Photo by Glenn Johnson.
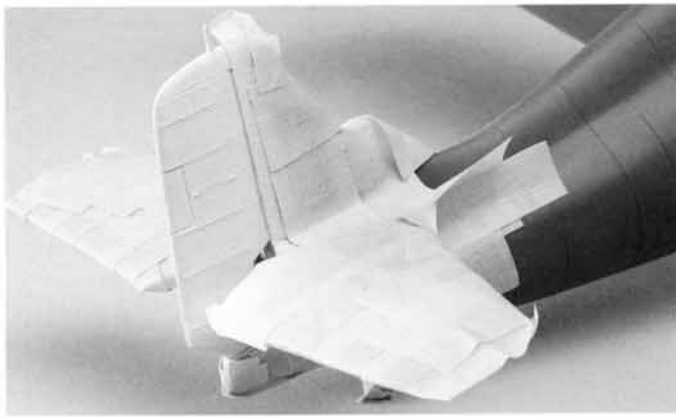
Fig. 6-7. This F4F Wildcat will have a red and white striped rudder. The first step is to paint the entire rudder white. Here again, use small strips of masking tape to cover the surface areas. Photo by Glenn Johnson.
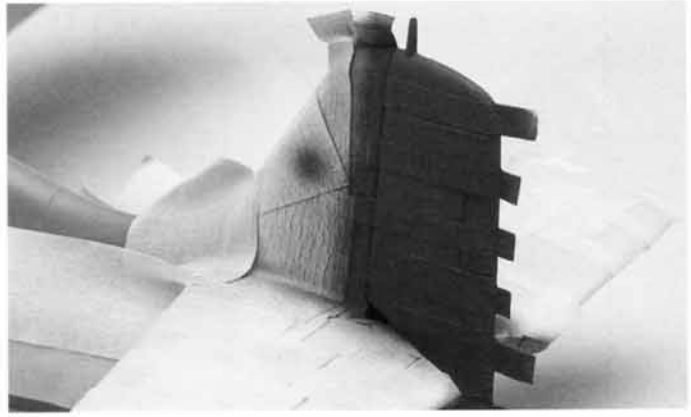
Fig. 6-8. The next step is to cut strips of masking tape the thickness of the stripes, position them on the rudder, and spray the surface red. Photo by Glenn Johnson.
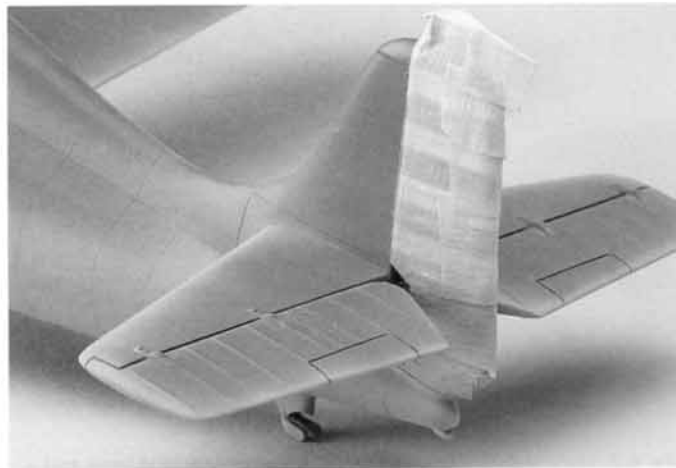
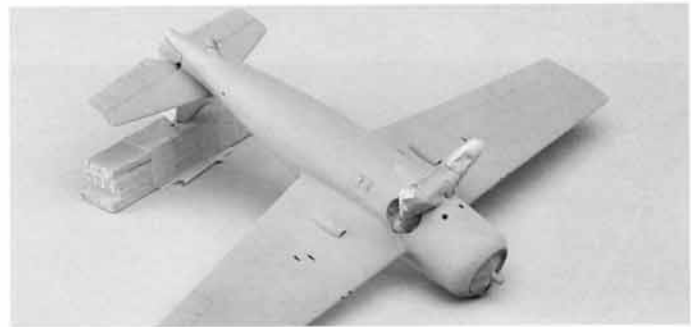Fig. 6-9. Once the red paint is dry, remove all the masking and then completely mask the rudder. Photo by Glenn Johnson.

Fig. 6-10. The next step is to paint the undersurfaces of the aircraft light gray. When painting such large surface areas, remember that you do not have to coat the entire surface in one application. It's better to have several thin coats than one thick coat. Photo by Glenn Johnson.
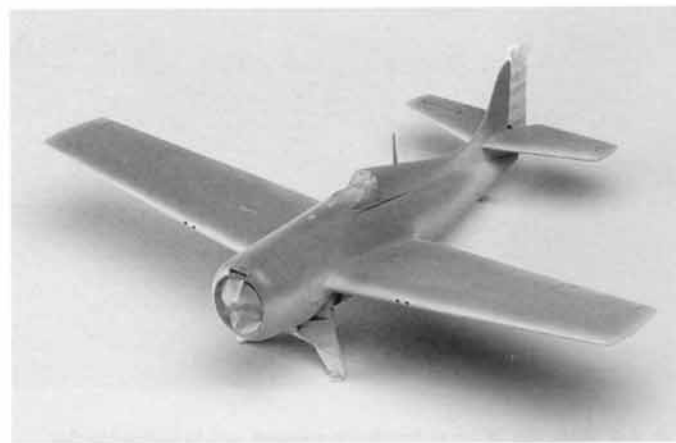
Fig. 6-11. Once the underside paint is dry, the model is flipped over and is ready for the upper color. Photo by Glenn Johnson.

Fig. 6-12. Here the upper color has been carefully applied and the entire model has been given a gloss coat. By carefully positioning the airbrush and holding the aircraft at different angles while painting the upper surface, you can get good demarcation lines along the wings and good feather lines along the fuselage. Photo by Glenn Johnson.
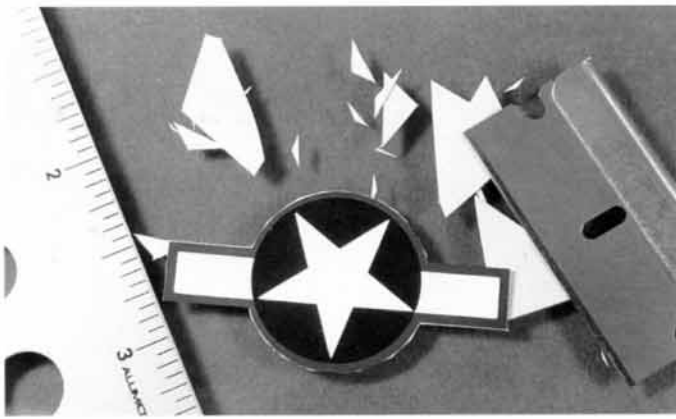
Fig. 6-13. One of the fundamentals of decal application, aside from applying decals to a gloss surface, is to remove as much of the carrier film as possible from the surface of the decal.
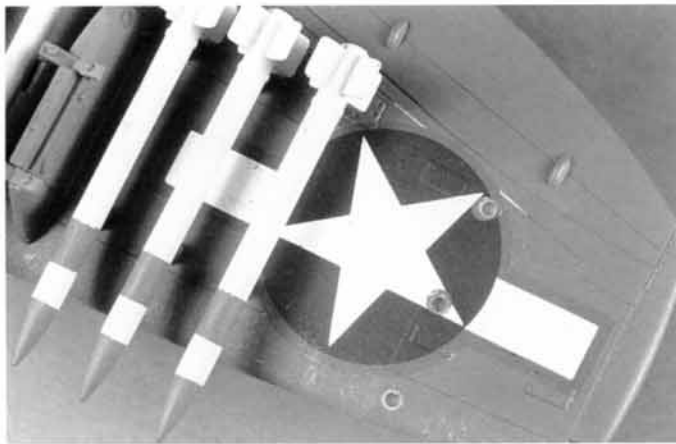

Fig. 6-14. Q-tips dampened with decal-setting solution work great for both sliding the decal from its backing and positioning it correctly.

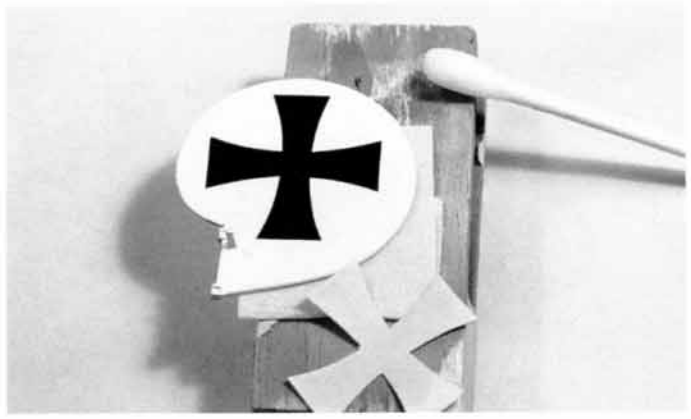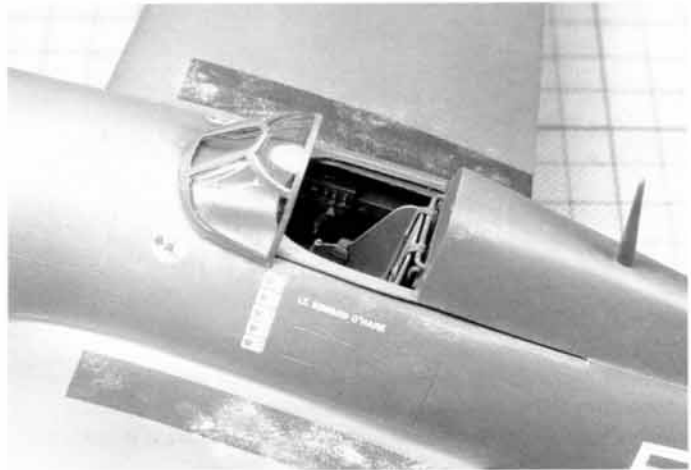Fig. 6-15. Applying decal-setting solution will soften the decal and allow it to conform around raised detail. This decal took seven applications of setting solution to get it to conform around the raised surfaces.

Fig. 6-16. Even small decals should have as much clear film as possible cut from around the sides of the decal to reduce the risk of silvering.

Fig. 6-17. Cut a large decal like this into smaller parts, remove all the clear film, and then position each image. This approach is a must when there's so much clear film on a decal.

Fig. 6-18. After all the decals are set, apply dulled Testor's silver paint to the leading edges of the wings and to the tail, cowling, and areas where pilots and maintenance crews walk. Photo by Glenn Johnson.

Fig. 6-19. Add the gunpowder smoke burns to the upper surfaces of the wings and also exhaust stains from behind the cowling flaps. Once you have finished weathering, paint the model with Dullcote. Photo by Glenn Johnson.
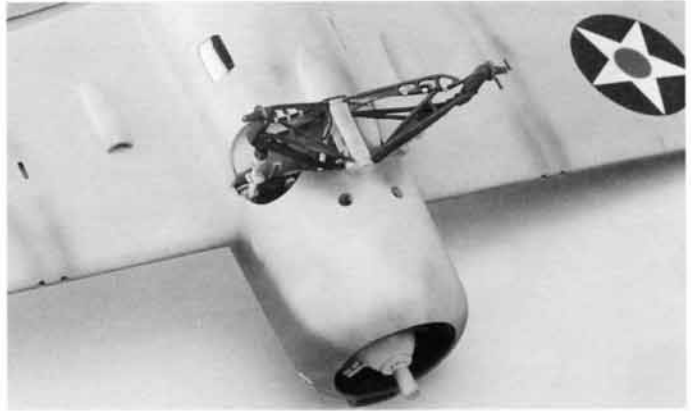

Fig. 6-20. Don't forget to apply gunpowder stains to the underside of the wings and behind the machine gun shell ejection ports, and to apply exhaust stains for the mufflers. Photo by Glenn Johnson.
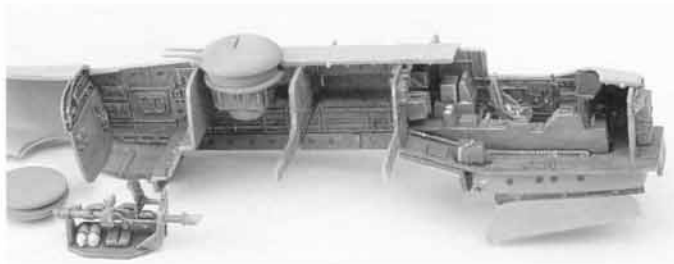

Fig. 6-21. Don't forget to weather the inside of your model. The sooty, dirty effect on this 1/48 scale A-26 was achieved using Tamiya's smoke X-19 colored paint. Model by Richard Boutin, Sr. Photo by Glenn Johnson.
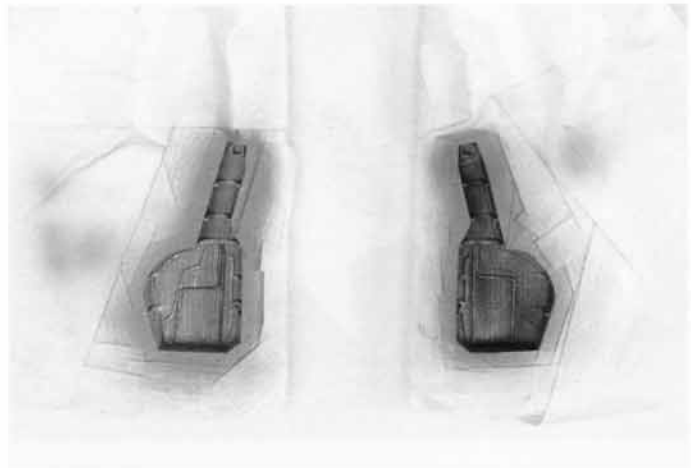
Fig. 6-22. The left wing wheel well has received its final application of pastel dust, while the right one has just been drybrushed with silver paint. Photo by Glenn Johnson.
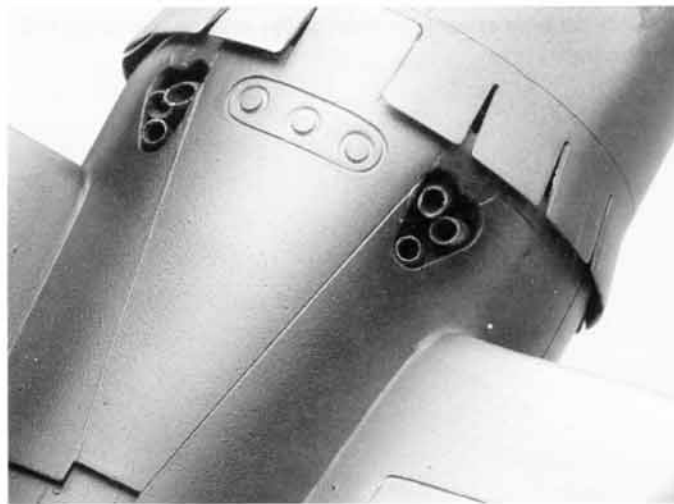
Fig. 6-23. The exhaust stains on this F4U Corsair were achieved using a combination of Testor's dark metalizer paints and flat black applied as separate coats. Sometimes the application of heavy exhaust stains can also help to hide minor flaws. Photo by Glenn Johnson.
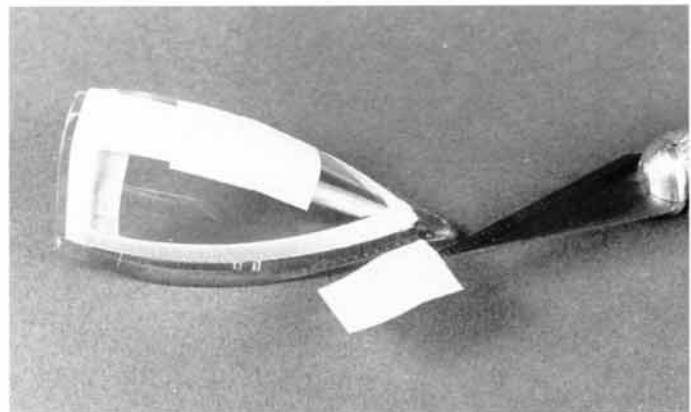

Fig. 6-24. Scotch 3M painter's masking tape also works great for masking clear parts. For this canopy, long thin strips of tape were cut and positioned along the edge of the framing to box in the area that needed to be masked.
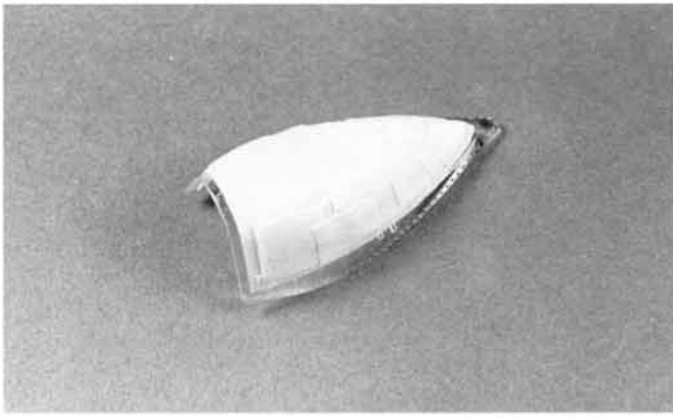
Fig. 6-25. Here the completed upper surface of the canopy is ready to be painted.
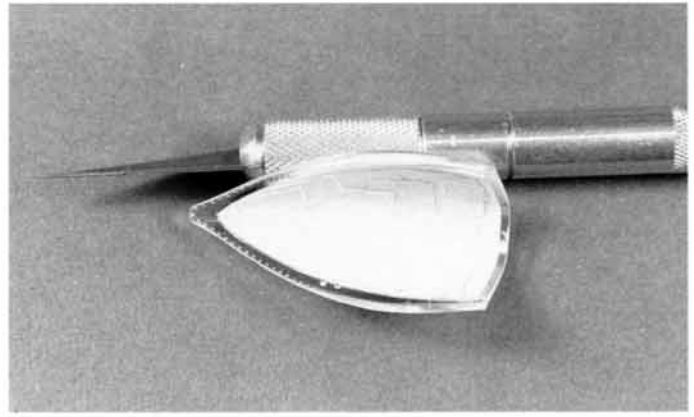

Fig. 6-26. When masking canopies, don't forget to cover the underside. Since the inside of canopies do not have any framing you need to mask the outer surface first, and then use the locations of the masking tape as a guide to placing the tape on the underside.
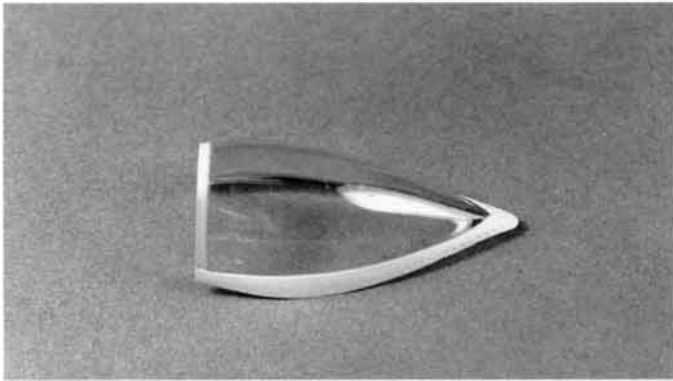

Fig. 6-27. Here the completed canopy is ready to be attached to the model. The secret to ensuring that you get sharp painted edges is to burnish the masking tape down with the tip of a pencil.
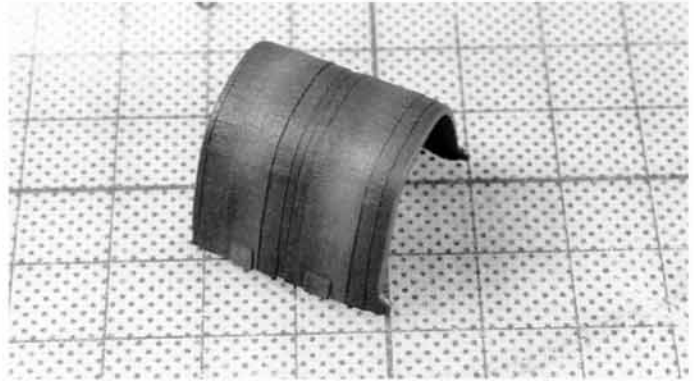

Fig. 6-28. A trick for painting canopies with criss-crossed framing is to mask the canopy framing in one direction and paint it.
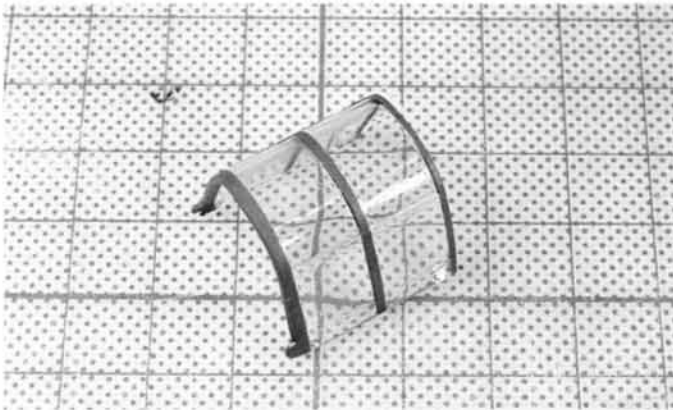

Fig. 6-29. Here the canopy framing has been painted from left to right and is now ready for the second application of masking tape.
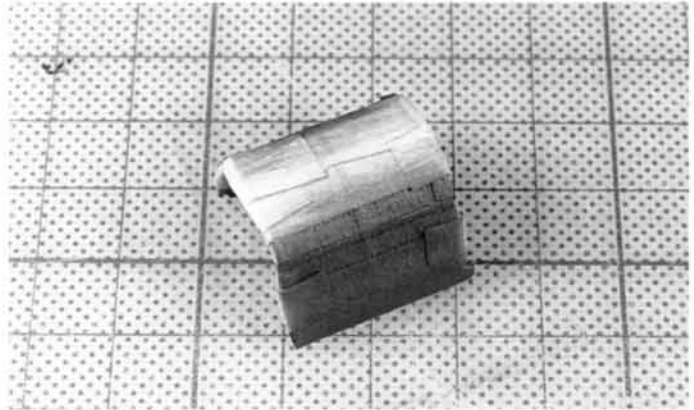

Fig. 6-30. Here the canopy framing from front to back has been masked and painted. Be sure to let the paint dry at least 48 hours prior to applying masking tape to it.
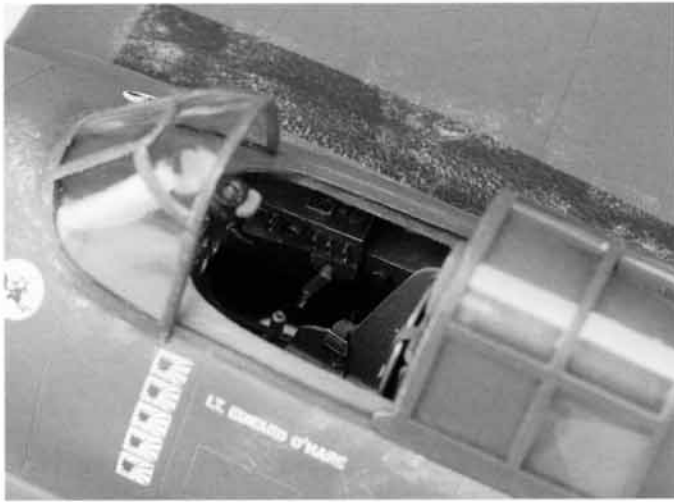
Fig. 6-31. The rear canopy on this F4F Wildcat was painted using this stepped approach and the results are sharp and well defined. Photo by Glenn Johnson.
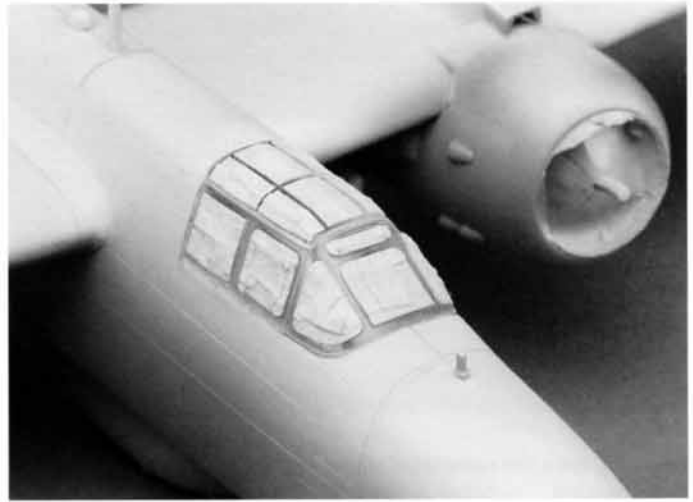

Fig. 6-32. Another good example of canopy masking. Here the canopy was glued into place first, then masked.
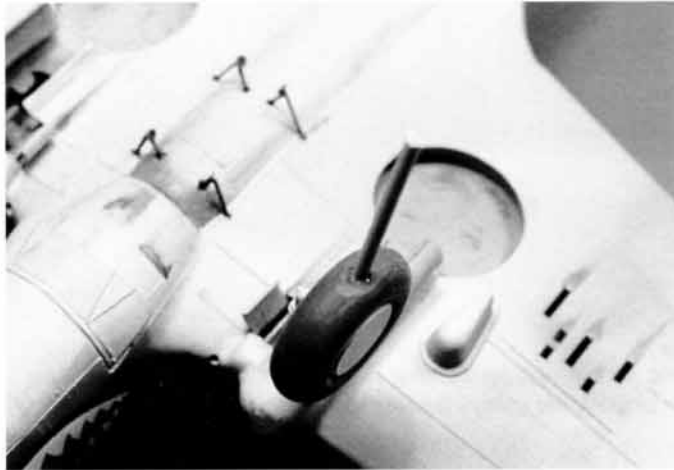

Fig. 6-33. To positively secure a model to a wood display base, drill small holes in the bottoms of the tires and glue pieces of plastic rods into the holes.
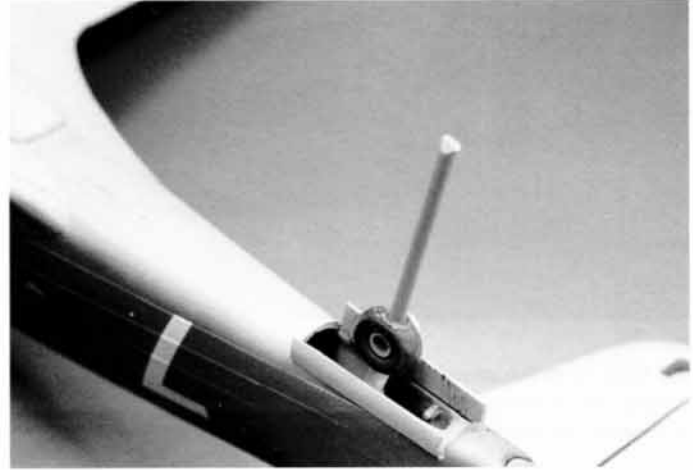

Fig. 6-34. Don't forget to drill a hole in the tail wheel as well and attach a piece of rod to it. If the model is displayed at an angle, you do not want it to tip off the display base because the rear wheel was not secured.

Fig. 6-35. To mark the location of the holes on a wood display base, position the model on the base and then mark the points where the plastic rods are resting. Once the locations are marked, drill holes all the way through the wood display base the same diameter as the rod. The next step is to turn the display base upside down and with a drill enlarge the holes about a third of the way up through the bottom.

Fig. 6-36. Complete staining the base, and then cut plastic disks slightly smaller than the hole's diameter. Drill holes in the center of the disks the same size as the diameter of the rod. Next position the model on the display base, slide the rods through the holes in the wood, slip the disks over the rods, glue in place, and cut the excess rod. The model is now secured to the base. Photo by Glenn Johnson.
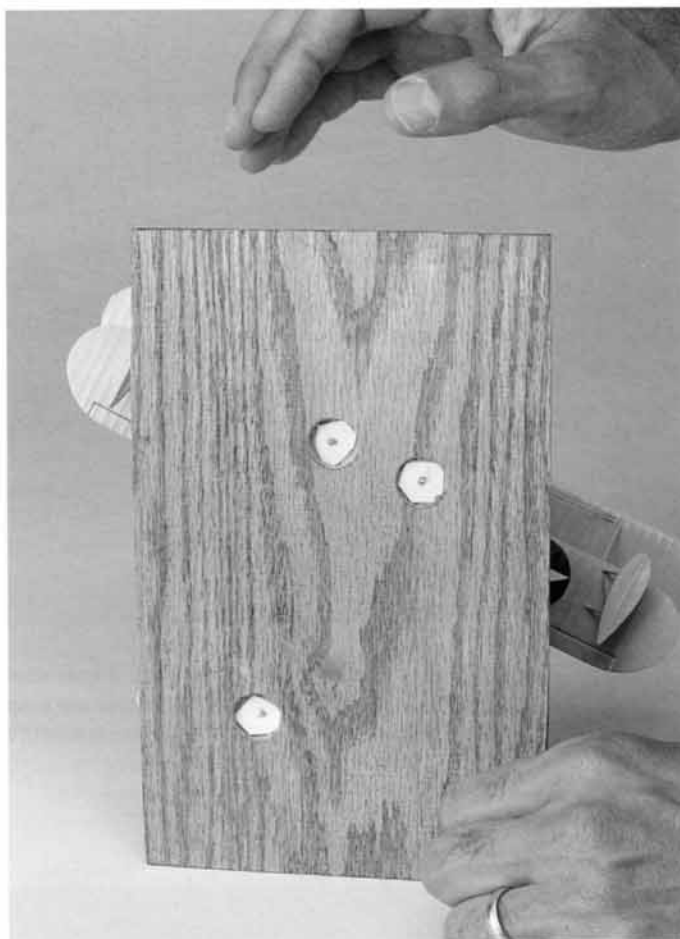

Fig. 6-37. Routing the edges on the display base in combination with selecting a stain color that complements the surface color of the model adds to the overall effect of your finished masterpiece. Photo by Glenn Johnson.
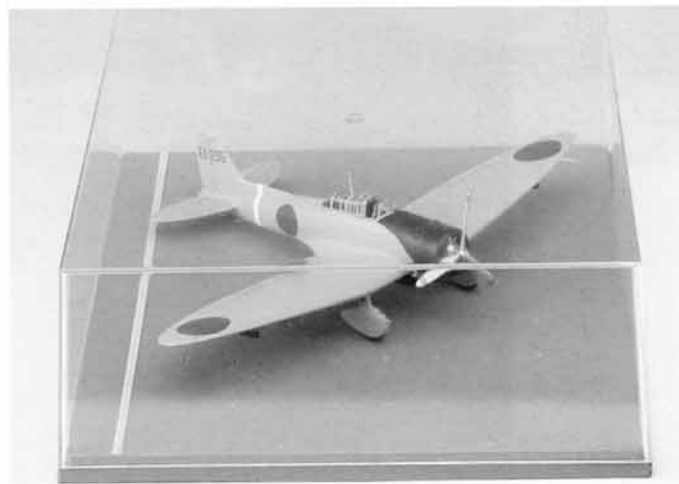

Fig. 6-38. Cottage industry companies such as Classic Warships produce simple display bases that also double as diorama bases. Their carrier deck display bases add a nice presentation effect to 1/48 scale naval aircraft and these display bases are also designed to accept AMT/ERTL's large display case. Photo by Glenn Johnson.

Fig. 6-39. This impressive 1/200 scale simple diorama by Glenn Johnson is mounted to a wood display base. The B2 Bomber and KC 110 Tanker are suspended by a thick stainless steel wire embedded in the refueling probe. The KC 110 Tanker is manufactured by Hasegawa and the B2 Bomber is manufactured by DML. Photo by Glenn Johnson.

Fig. 6-40. Eduard's 1/48 scale Albatross C-III sitting on top of Rockford Boulder Company's diorama display base. Model by Bill Teehan.