

DRY BRUSHING ***MODELS***

How to Add a Realistic Finish to Your Models



Dry-brushing

A simple way to add highlights to your models

By Chris Appoldt

Jim Forbes photos



Looking for that last bit of dimension and realism on your models? Try the dry-brushing technique. This technique brings out detail which might otherwise disappear on a model by highlighting the raised surfaces. It works by dipping a short, stiff brush in paint, then brushing off most of the paint and pigment from the bristles. Lightly dragging the brush over raised detail deposits a very small amount of the pigment, highlighting the raised sections only.

Dry-brushing is an effective technique for almost any kind of modeling, but giving some thought to what medium you'll use and where you'll apply it will help you to achieve maximum realism.

Ground bound. On model trucks, construction equipment, and especially armor models, dry-brushing works well on bolt heads and upper surface areas, where the real vehicle is weathered from wind and sun. Try dry-brushing with a bit of your AFV's base paint mixed with some

flat white, and watch how the subtle contrast in shades makes a startling difference.

On tracks, try dry-brushing some earth-colored paint. The effect tones down the "clean" look of treads. Tracks and drive sprockets also benefit from a dry-brushing of steel, silver, or rust paints, as their edges are constantly experiencing a wearing, paint-chipping motion.

Turret-mounted machine guns can have their detail highlighted by a dry-brushing of steel-colored paint, and the cannon barrels and exhaust mufflers can look extremely realistic if there's some dark colors dry-brushed on as soot.

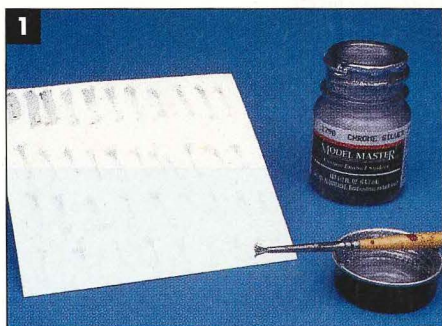
Aircraft. Dry-brushing buttons and knobs in model aircraft cockpits is a lot easier than trying to paint them one by one. Try using silver, white, or light gray enamel paint to make the details on the consoles stand out. A few dozen passes with barely any paint on the brush will yield better results than just a few heavy passes, since that way paint won't bleed

With an old paintbrush and some enamel paints, you're ready to bring out fine detail you never knew was there.

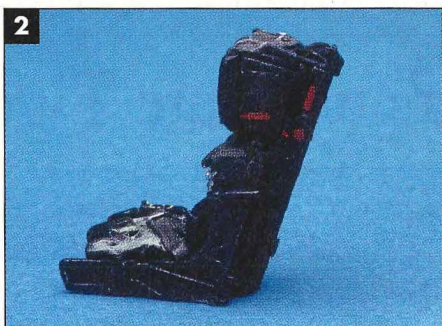
onto the panel.

Wheel wells on aircraft can also benefit from highlights added by dry-brushing, as can leading wing edges and walkways where paint is frequently faded and worn. Model jets have afterburner cans that can be drybrushed with steel or aluminum paints for a nice effect, and a little black applied near gun ports looks great, too.

Figures. Take a photograph sometime and give the clothing a close examination. See how shadows depend on how the person's clothing hangs on them? Dry-brushing the clothing on your figures helps create the illusion of this shadowing, since the deep, recessed areas of the "fabric" folds won't get highlighted. Again, try a lighter shade of the base color, or even flat white, if you want to "pop" a highlight into view. **FSM**



Clip down an old brush, making the bristles short and stiff. Lightly dip it into the paint – you don't need much. Next, on a paper blotter, brush off almost all of the paint. You'll barely see anything at all on the paper when it's ready.



Lightly drag the brush over the detail you want to highlight. Don't try to leave a coat of the new color; just a trace of it. If you've correctly removed most of the paint in the first step, you'll get about 10 passes before you need to re-wet the brush.



This Black Box NACES ejector seat is going into a 1/48 scale F-18. Hornets on aircraft carriers see quite a bit of wear, so Chris added another application of dry-brushing. The trick is to go slowly. Better too little than too much.



A third round of dry-brushing passes leaves the NACES seat with a lot more dimension than it had with its initial flat black paint job. If you've drybrushed areas that you don't want highlighted, just go back and retouch with the original color.



Wooden truck beds become visibly worn as objects are loaded into them, and the sun and rain will bleach the upper surfaces of a hard-working truck. On this 1/35 scale Fort ZiS 5, Terry Thompson simulated wear with a dry-brushing of lighter paint – even on the fender edges.

Wash and dry-brush an Iraqi Freedom M1 Abrams



Direct from the streets of Baghdad, the M1A1 Abrams tank! John used the Tamiya mine-plow version with extra detailing parts from Eduard and AFV Club tracks. A thorough wash and dry-brush finish makes this model look as though it just rumbled into your living room.

Finishing techniques reveal your hard-earned detail

Story by John Plzak

Photos by William Zuback and Jim Forbes



You've spent hours researching, building, and detailing your latest kit only to watch all the fine detail disappear when you paint it. The problem is that details on small objects like models don't cast shadows large enough to distinguish them from the surrounding area. The solution is to apply a wash and use dry-brushing to enhance shadows and highlights on your model. These techniques will make that hidden detail pop out and reproduce some of the effects of weathering at the same time.

The process requires no expensive tools and only a few supplies, some of which you already have on your workbench. I'll demonstrate it on a timely subject: an M1A1 Abrams tank, the spearhead of U.S. armor forces in Operation Iraqi Freedom.

The model. Building and detailing the model was straightforward. I started with the version of the Tamiya M1A1 kit equipped with a mine plow (No. 35158). The kit is more than 10 years old, and though it's fairly accurate, I decided to update it with Eduard's photoetched brass detail set (No. 35-333). Eduard even includes the louver-like protrusions on the turret for the infrared IFF (identification friend or foe) devices used on Iraqi Freedom coalition vehicles – the kind of detail that benefits from the wash-and-dry-brush process.

The kit's tracks have guide teeth incorrectly located in the middle of the track blocks instead of between them, but fortunately I found an AFV Club set of T-158 tracks (No. AF3512) that are more accurate for M1A1s in service today.

Despite extensive media coverage of the war, I had some difficulty coming up with markings for my M1A1. Eventually, I found a photo in a special edition of *U.S. News and World Report* showing several M1s apparently with the 2nd Brigade of the 3rd Infantry. Like their Desert Storm predecessors, Iraqi Freedom M1s are loaded with external stores that seem to include everything but the kitchen sink. I gave my Abrams a pile of accessories from Greif's "Modern U.S. Tank Crew Gear" set (No. GF004) and the Academy "Tank Supplies II" set (No. 1383), but it still looks underdressed!

Coming out with the wash. The first phase in finishing my M1 was to apply the wash. A wash is simply highly thinned pigment – mostly thinner and only a touch of pigment – applied over the base coat. Just about any water- or oil-based paint can be used in a wash – enamels, acrylics, watercolors, or artist's oils. I've tried the exotic mixtures some modelers use, like chalk pastels diluted in lacquer thinner, but I prefer the artist's oils.

Artist's oils have several advantages that make them ideal for washes: opacity, intense colors, and finely ground pigments. Many modelers fear the long drying times of oil paints, but when thinned as they are for a wash, they dry in a few hours.

Compared to modeling paints, artist's oils are expensive, but only a small amount is needed to do an entire model. One tube will usually last you for years, and you don't need many colors. Most of my washes are made using burnt umber (dark brown) dark-

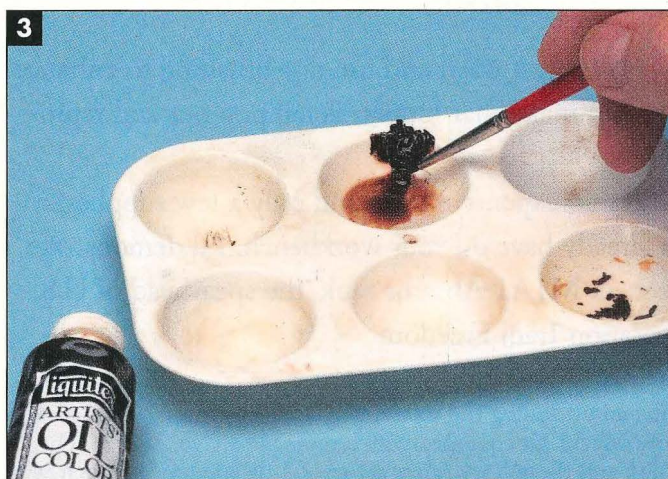




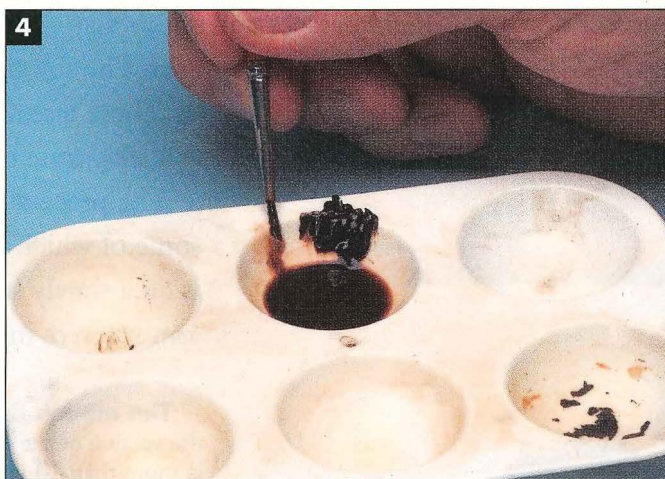
Here's John's Abrams and plow before painting. The dark items are photoetched brass details from Eduard. Larger detail pieces were left off the model until after the wash and dry-brushing steps were completed.



Tools of the trade: John mixes artist's oil paints and thinner in a six-hole mixing palette. A fine brush is used to apply the wash. For dry-brushing, John will mix colors on the ceramic tile, then apply them with a short-bristle brush.



With a blob of burnt-umber oil paint on the rim, John pushes a little into the shallow pool of mineral spirits.



With the solution thoroughly mixed and resembling strong coffee, John draws off excess wash on the rim of the palette.

ened with black. For thinner, I use ordinary mineral spirits (paint thinner) purchased at a home center or hardware store.

Apply the base coat. I completed all the basic construction steps and added the major detail items to my Abrams, **1**, before I applied a base coat of acrylic Polly Scale U.S. Desert Storm Sand (FS 33446). I use acrylics for my base coats because the mineral spirits in the wash won't damage the paint even if it's had only a few hours' drying time. The thinner will wrinkle an enamel base coat if you don't wait several days for the base to dry or apply an acrylic flat clear coat as a barrier.

Mix the wash. Mix the wash in a small container that's disposable or easy to clean, **2**. I mix mine in a plastic six-well artist's mixing tray. I use a white tray because it allows me to check the color density of the wash before I apply it.

When preparing the wash, you don't need to squeeze a big glob of paint out of the tube. Remove a small dab about the size of a BB with a toothpick and place it on the edge of the mixing pallet. Fill the well about three-quarters full of mineral spirits. Using a fine brush, stir some of the paint into the thinner, **3**, adding paint until the color of the wash looks like strong coffee. Work the brush as though you're cleaning it until it's clear of pigment. While stirring, tap the bristles on the side of the mix-

ing well from time to time to check the intensity of the color, **4**.

Apply the wash. There are two ways to apply washes. For a small area where you want to represent weathering as well as shadow, such as a truck cab floor, flood the entire area with a coat of wash, **5**.

For large areas like the hull and turret of a tank, I prefer a more controlled method. Fill the brush with wash and touch it on the model, **6**. The wash will easily flow around raised or scribed detail. If it's too dark, remove most of it with a cotton swab or a dry paint brush. If it is too light, add more pigment to the wash and apply more to darken the area. Remember that the wash will dry lighter than it looks when first applied. Experiment a bit to learn how much pigment is needed.

Don't worry if the color varies a bit on the model. The paint on full-size AFVs doesn't weather evenly, and colors can vary quite a bit from one part of the vehicle to another.

Continue applying the wash wherever there are details on the model, **7**. The pigment will settle quickly in the mixing well, so stir often and test it frequently on the pallet. The wash will also darken as you use up the thinner in the well. Add more thinner and remix as necessary.

What have I done? After about half an hour, your model

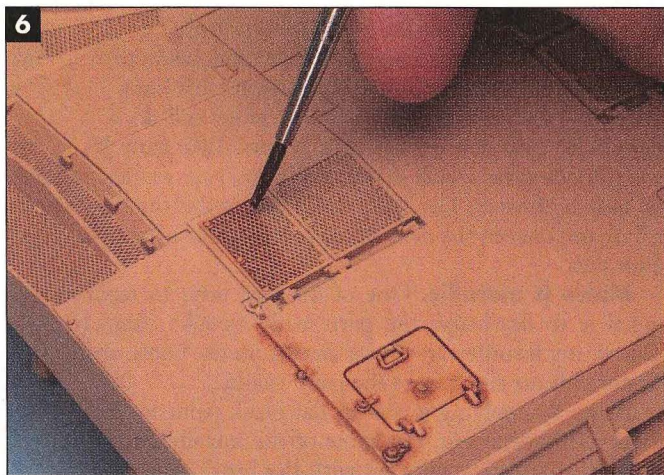
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Here are the wash and dry-brush techniques in a (lug)nutshell: (left to right) first the tire color was sprayed on the road wheel; a lighter gray dry-brushed on the tire edges; tire was masked and

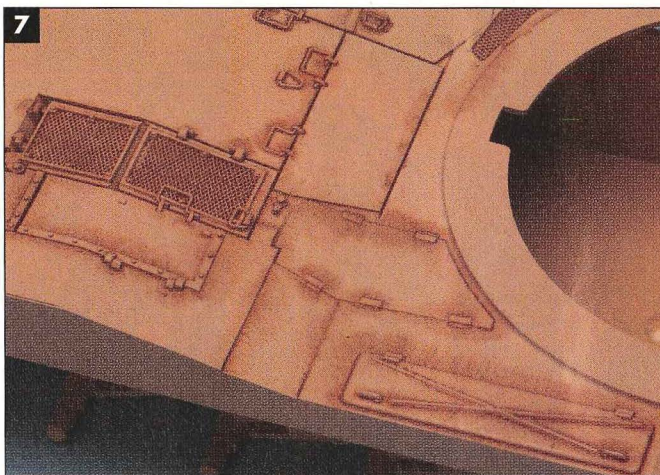
wheel color airbrushed; burnt-umber wash applied to the wheel details; dry-brushed highlights add depth.

6



The fine brush transfers the wash to the recessed detail of the hull. When properly thinned, the wash should flow quickly around hatches and along recessed panel lines.

7



The wash has been applied to all the topside detail on the hull. It looks messy now, but don't fret! The excess will be cleaned up in the next step.

will look awful – very uneven and blotchy. Don't panic! Your hard work is not ruined. Let it dry for another hour or two, then take a cotton swab dampened with mineral spirits and carefully go over the entire model, **8**. Don't rub too hard or you may rub through the paint. Pay particular attention to the large flat areas of the model. You just want to cover the model with a thin coat of thinner, and gently remove the wash from the areas where it doesn't belong.

When the thinner dries, the wash will be much more even. Let it all dry overnight before you move on to dry-brushing the model.

Dry-brush fundamentals. The second phase of the finishing process, dry-brushing, is almost the opposite of a wash. Paint is applied to the brush, then removed until almost none is left. The brush should be dry, hence the term "dry-brush." As the brush is passed over the model, small amounts of paint collect on the high points of the details (see photo **5**).

Dry-brushing can be done with either enamels or acrylics. I use acrylics for small jobs like tires or road wheels, but for large areas I find enamels mixed with artist's oils work best. Enamels give me access to a wide variety of colors, while the oils will increase the paint's blending ability and working time.

How the mine plow works

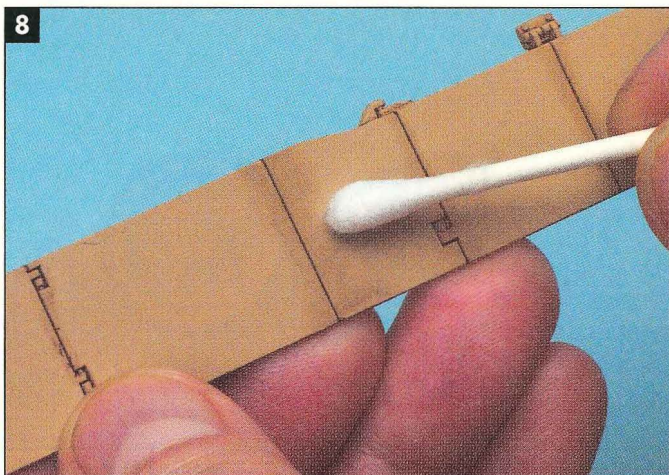
The mine plow developed for the M1 tank is based on a Soviet design. It works by pushing aside most of the mines rather than exploding them. A small "dog bone" roller suspended on a chain between the plow blades trips mines with tilt-rod fuses.

The plow was very effective in Desert Storm and later in Bosnia and Kosovo. It also works well against defensive berms and dug-in emplacements. No doubt it was put to good use in Operation Iraqi Freedom.

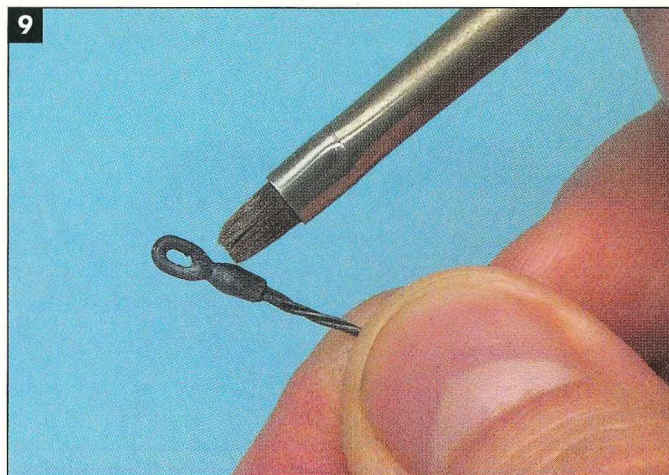
The plow unit simply bolts to the front of any M1 tank. The right periscope is removed from the driver's hatch so the hydraulic control cable can be routed into the driver's compartment.

Tamiya did an excellent job of reproducing the plow in its M1A1 kit, including the fine chain and turned-brass "dog bone." It can be positioned on the model in the deployed or stored mode, and the deflection plates can also be shown extended or stowed.

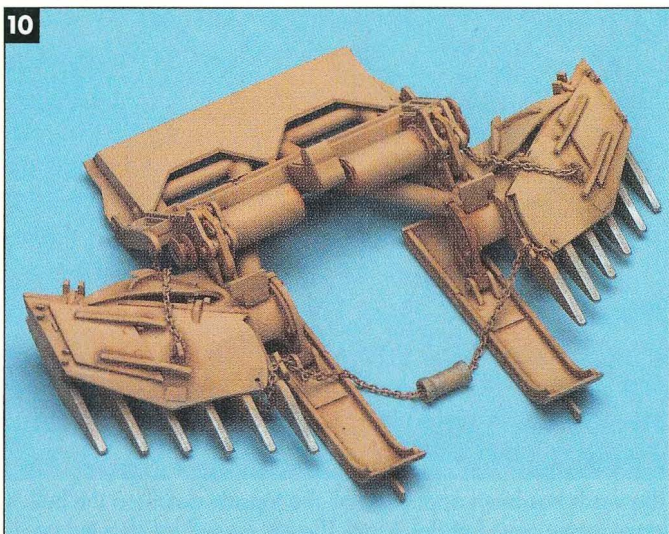
—John Plzak



After waiting an hour or two for the mineral spirits to dry, John wipes off the excess wash with a thinner-dampened cotton swab.



With most of the pigment removed from the flat brush, a light grazing of Testor steel enamel on this tow cable shows how effective a good dry-brush technique can be.



Here's the finished mine plow, effectively washed and dry-brushed. Note the metallic sheen of the plow blades, created with a dry-brushing of Testor chrome silver.

You don't need a lot of oil colors in your pallet; you'll mainly use white. Yellow ochre is useful when working with greens because it will keep the white from bleaching out the color. I like to mix the paint on an old piece of white glazed wall tile. As with the wash, the white surface helps me check the color. The tile also won't absorb paint and is easy to clean when I'm done. Small, stiff, flat brushes with short bristles work best.

Scrub-a-dub. Find a paint close to your base color (it doesn't have to be a perfect match). A small amount is needed, so use a toothpick to scoop out a dab of the pigment that has settled to the bottom of the bottle. Place a dab of white oil paint next to the enamel and use your brush to mix in a bit of the white until the enamel is only slightly lighter than the base color.

Load the brush with the mixture and wipe off the excess paint on a piece of paper, rag, or paper towel. You want to remove almost all of the paint from the brush.

Start brushing the model, paying particular attention to scrubbing over the raised detail and edges, 9. It takes a little practice to learn how much paint you should have on the brush and how much pressure you should apply to the brush. Use

more pressure if the results build up too slowly.

Go over the entire model, then add more white to the base and go over everything again, this time using less pressure. Add even more white and do a light third pass just on the high points. Take care: If you put down too much of the final color, your model may end up looking frosted. Let it dry overnight, and if the finish looks a little too uneven the next day, apply a topcoat of your favorite clear flat.

Make it metallic. One of the best ways to replicate metal is to dry-brush the parts with metallic enamels. Two of my favorites are Testor steel from the bottle and Testor chrome silver from the paint marker.

Begin by applying a coat of flat black paint to the parts to be metalized. Put some of the metallic paint on your pallet, pick up a bit with the brush, wipe the brush almost dry, and work it over the details. To use the paint from the pen, I simply push in the nib several times on my tile pallet until I have a small puddle of paint to work with.

You'll be amazed at how realistic items like shovels, tow cables, and track links can be made to look using this method, 10.

These finishing techniques are not difficult to learn. They will give the appearance of any model a shot of realism and show off the fine detail molded into modern kits. Practice them a bit, and soon people who see your models will say, "Look at all the detail! How did you do that?" **FSM**

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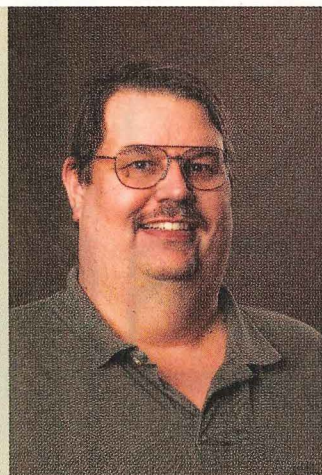
Meet John Plzak

John's byline will be familiar to *FineScale Modeler* readers from his many Workbench Reviews. This article is the Milwaukee, Wisconsin, modeler's debut as a feature contributor.

He began modeling more than 40 years ago when he received an Aurora P-61 Black Widow kit on his seventh birthday. "I think I spent all of about 60 minutes building it, including a nice thick coat of glossy black paint."

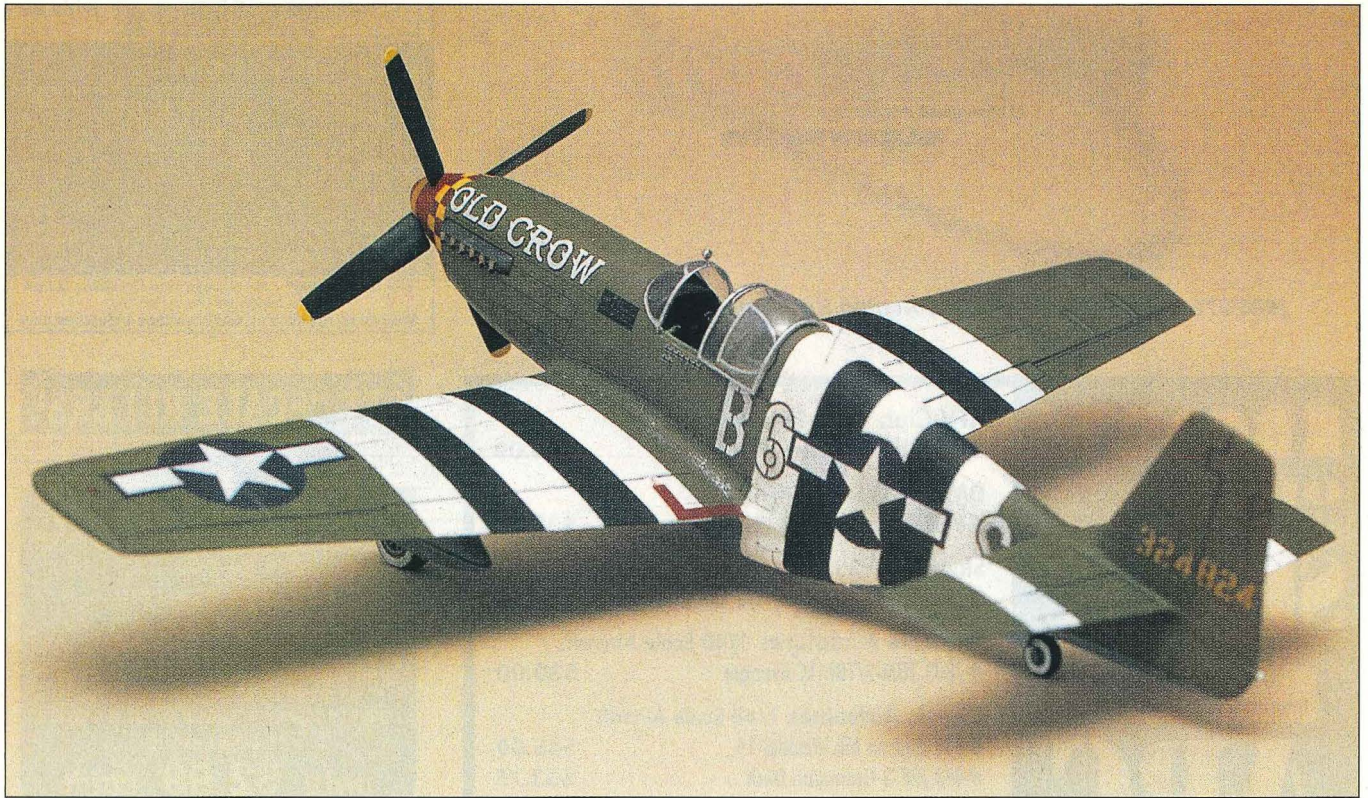
John became more serious about modeling in his early teens. Although armor is his focus, his interests include aircraft, racing cars, and even science fiction subjects. A member of the Milwaukee's Richard I. Bong Chapter of the IPMS since 1979, he has served as the club's secretary, president, and contest chairman at different times.

Among his many modeling achievements, John is proudest of winning his first IPMS National award in Chicago in 2001, contributing models to several museum displays built by the Bong Chapter, and seeing his work in FSM.



Even in 1/35 scale, an M1 is intimidating from any angle. With its details brought out by the wash and dry-brushing, John's Abrams is hardly distinguishable from its full-size counterparts in Iraq.





Improving prepainted aircraft

A professional modeler jazzes up Revell-Monogram's P-51B

By Pat Hawkey Photos by the author

To make it simpler for newer modelers to build good-looking aircraft models, Revell-Monogram has extended its line of "ProFinish" kits to include some 1/48 scale aircraft. The line consists of veteran kits with the major (and many of the minor) components already spray painted.

That's the good news. The bad news is that it's usually with good reason that one paints a model plane after it's built, and certainly not before it leaves the sprue. In other words, Revell-Monogram is doing one of the last steps first. That presents some challenges, but, as we'll see, the resulting plane can be quite good.

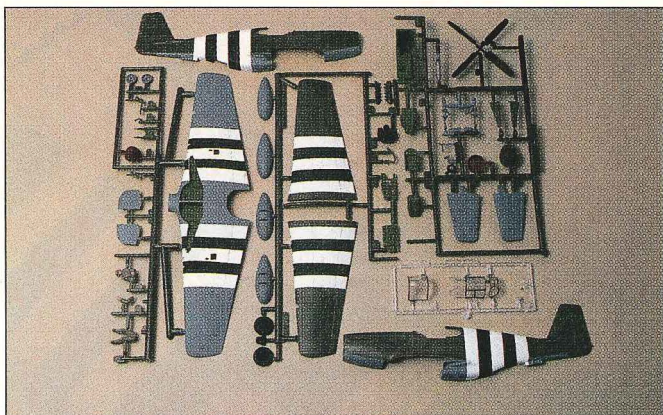
My mission was to assemble a prepainted kit, retaining its factory paint job but improving its appearance. I had to put myself in the position of someone likely to purchase one of these kits. That person, I assumed, would not own an airbrush. (Since I literally had not finished a model plane without an airbrush in about 30 years, this was a challenge to me.) I also would limit myself strictly to common Testor paints, as I didn't want to use

What could you do with a kit if someone had already painted it for you? We asked Pat Hawkey to find out with this 1/48 scale kit of "Old Crow."

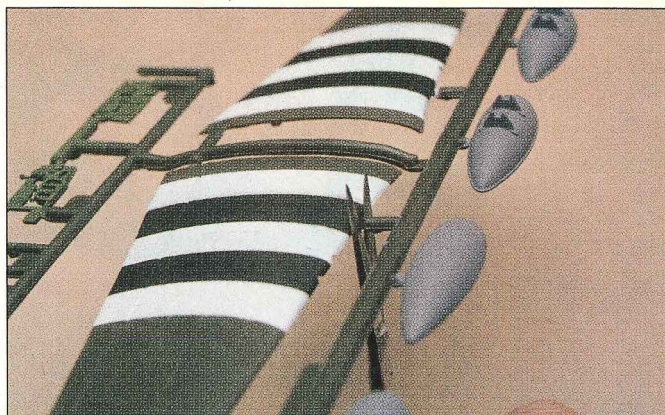
anything the budding young – or mature – modeler wouldn't have access to. This would be interesting.

The ProFinish kits may not be perfect for everyone – but they're a quick and relatively easy introduction to the hobby for first-time builders, and a fine starting point for advanced modelers who have experience with making corrections and adding aftermarket parts.

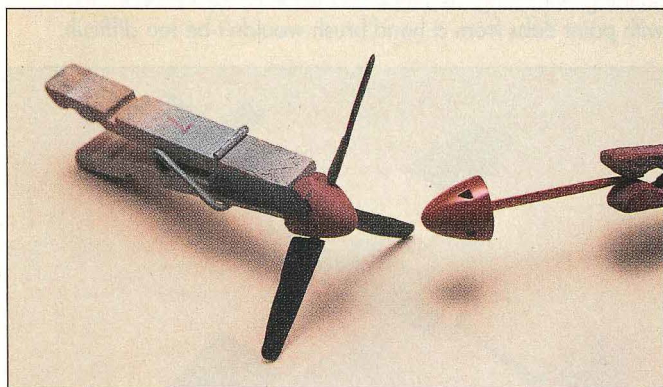
Personally, I favor any attempt to bring young blood into this hobby, and I hope the ProFinish line achieves that. The kits should make great gifts for youngsters who are spending way too much time in front of their computers – I remember my delight as a kid in the late 1960s with Monogram's prepainted F-105 and AC-47. With any luck, these kits may inspire a whole new generation of model builders. **FSM**



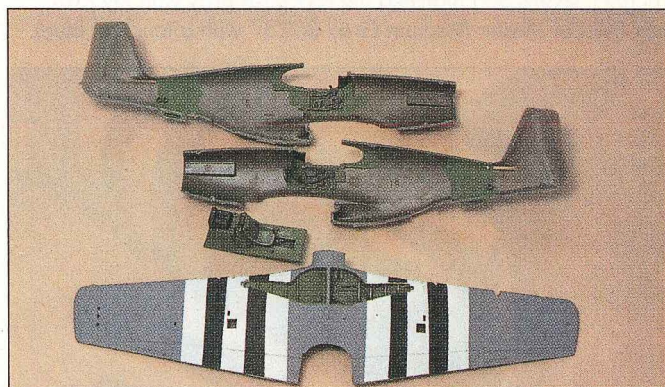
1 The Pro Modeler P-51B "Old Crow" is molded in olive, and the invasion stripes, undersurface, interior, tires, prop, spinner, and canopy frame come pre-painted in a flat finish.



2 Care in assembly was paramount, starting with removal of parts from the trees. I scissored most of them close to the sprue, then cleaned off the burrs with a fresh hobby knife blade.



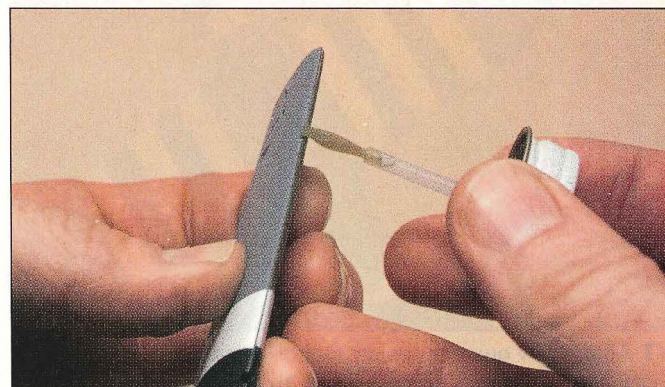
3 An immediate area of concern was the spinner. Without a white base coat, the red applied to olive green plastic was decidedly dull, and wouldn't match the decal. I glued the front and rear halves together without the propeller to better clean up the significant seam. Next, I brush painted the spinner flat white, then sprayed it a couple of times with Testor 1204 Gloss Dark Red. I separated the propeller blades, cleaned them up with a medium-grit sanding stick, brush painted them gloss black, and installed them individually. I masked the tips and brush painted them yellow over a white base coat, then added Hamilton Standard logos to the blades from a spare Mustang decal sheet.



4 I matched the interior green with Testor Model Master Interior Green (34151) mixed with Field Drab (30118), then brush painted the tail wheel well and extended the green fuselage interior. After building the cockpit interior to the stage shown, I gave it a wash of acrylic flat black thinned with a 30/70 mix of dish-washing soap and water. Once the wash is dry you need to be able to rub it off everything but the cracks it settled into, and the soap breaks down the adhesive qualities of the paint. The black wash adds depth and definition, and a dry-brushing of silver over the top and edges provides even more. The landing gear well on the right has received this treatment.



5 Since sanding seams would mean saying goodbye to the factory finish, it was important to strive for as precise a fit as possible. Here the inner surfaces of the wings are smoothed of any raised blemishes with a coarse sanding stick.



6 With as tight a fit as I was going to get with the wing halves, I touched a loaded brush of liquid cement to the edges. Capillary action took the glue where it needed to go, and maintaining clamping pressure on parts kept cement "squeeze-outs" to a minimum along the seams.



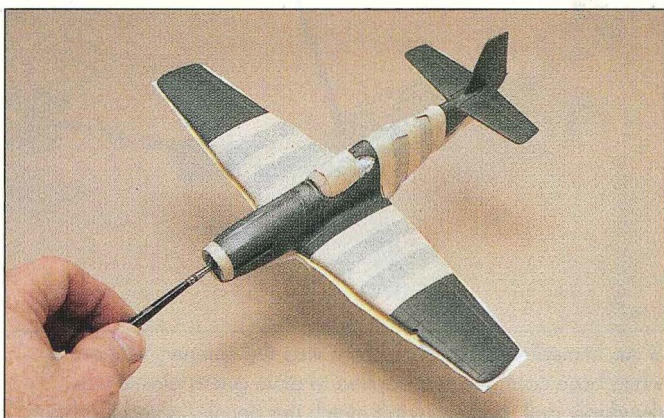
7 After sanding the mating surfaces of the fuselage halves, I glued from the inside with gap-filling super glue. The fit isn't great, even if you're careful to line things up. I puttied the rougher seams and matched the ProFinish gray with my own mix (Model Master Medium Gray 35237 with a touch of blue).



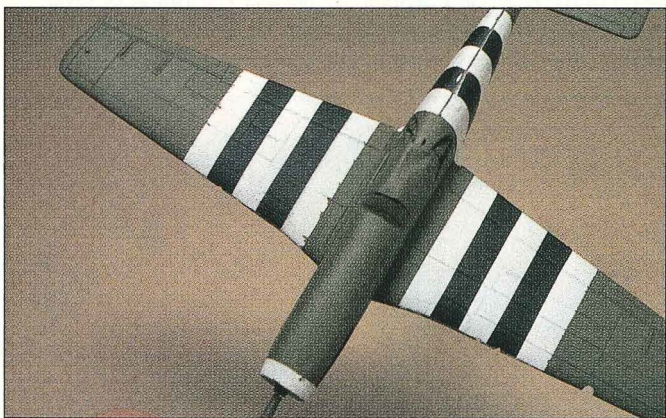
8 I swiped with a medium grit Flex-I-File across the spine to even out the seam. Here I didn't use any putty. The paint was thick and I managed to remove the visible seam without too much sanding. Matching the black and white of the invasion stripes with paint dabs from a hand brush wouldn't be too difficult.



9 Happily, the upper-wing-to-fuselage fit was pretty good. (Underneath was a very different story.) After carving away half of the given raised ridge on the fuselage and carefully applying liquid cement, a styrene shim, and some epoxy putty, I closed the gap between the windscreen and the fuselage.



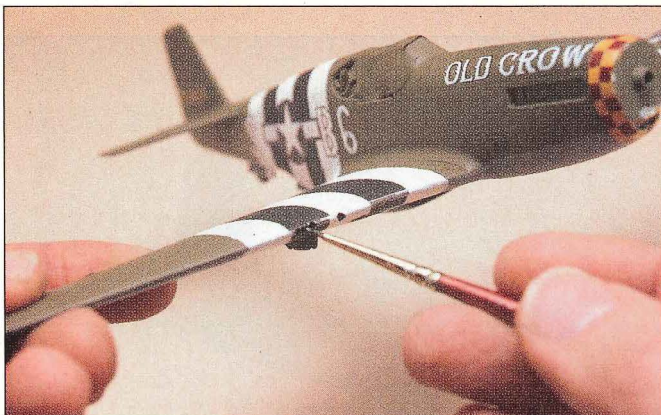
10 I masked and painted the nose band a base coat of flat white, then proceeded to mask off everything that was not going to be Olive Drab. The hole in the nose for the prop shaft accepted a needle file, which made an invaluable handle for the rest of the project.



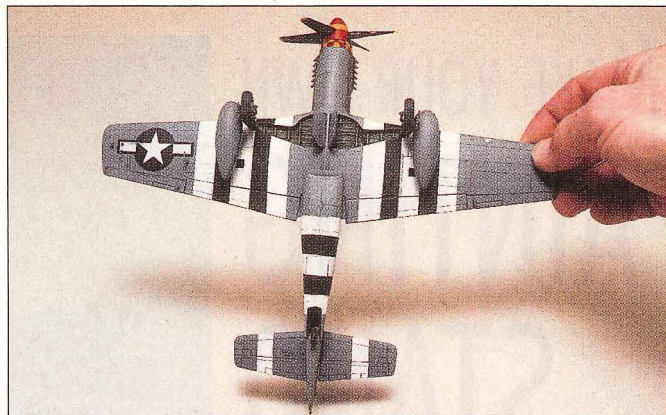
11 After a few quick sweeping squirts from a spray can of Testor Model Master Olive Drab (34087), my paint job was on. Some olive drab seeped underneath the masking tape, but I was able to scrape it off with a sharpened toothpick. I brush painted the nose ring Testor 1114 Gloss Yellow with a touch of brown to match the spinner's yellow decal band. Since half of this area would be covered by red checks, I didn't try to make it perfect.



12 To eliminate silvering, I brush-painted the entire upper cowl and the small area to be under the "kills" decal with two coats of Future floor polish. A second kit gave me another decal to layer over the fuselage markings, and a second "Old Crow" – the plane carried the name on both sides. Never trusting decals to conform correctly to a curved surface, I cut out the red checks and applied them to the nose individually.



13 I spent some time with a pointed brush touching up the minimally damaged ProFinish areas, but since this model had a flat finish and would represent a used warrior, little of this was noticeable. But my model still looked two-dimensional. To animate it, I gave the entire model the same flat black acrylic wash as I had given the cockpit and the wheel wells. Not only did it accent all the panel and separation lines between flying and control surfaces, but it stained the flat finish a little bit as I suspected it would. I rubbed it off the invasion stripes as much as I could, but liked the effect on the green and gray and left that uneven look alone.



14 I used a silver Prisma pencil to apply a few paint chips, and lightly added black pastel streaks trailing from nose area panel lines to suggest oil and grime stains. I dulled out the code letters and fuselage insignia with gray chalk pastels to contrast with what would've been the fresher white invasion stripes. I put on the canopy framing with a combination of silver decal film and hand brushed Polly-S Bright Silver. Bud Anderson's real Old Crow featured white-walled tires (Why, Bud? Why?) and these I lifted from the Mustang International decal sheet. I turned an old unused landing light into a rear-view mirror, added a whip antenna, and that was it.



Pat set aside his trusty airbrush and used only Testor spray cans and hand-painted enamels to spruce up this pre-painted Mustang.

Easy aircraft figures By Rafe Morrissey



Painting figures for aircraft dioramas in nine basic steps

If you're an inveterate aircraft modeler like I am, you've probably gotten into the habit of dumping any figures that come in a kit in the spares box thinking, "I'll get around to them someday" or maybe even, "I'll leave that to the armor guys." If you like to photograph your models, though, there's nothing like a figure to provide a sense of scale and to help establish a convincing scene. Unfortunately for many who specialize in finishing aircraft, painting figures can seem like a black art. The following method is designed to help a modeler produce convincing figures with a minimum of guesswork in a few easy steps.

This method is a simplification of techniques discussed by master modeler Sheperd Paine in *How to Build Dioramas*. It's broken into two stages: painting the flesh tones and painting the uniform and equipment. It is ideal for 1/72, 1/48, and possibly even 1/32 scale figures. Larger figures require the much more elaborate techniques contained in Mr. Paine's book, however.

Getting started

As with any model, proper preparation of parts is the key. Wash the figure with soap and water to remove any leftover mold-

release agent. Most kit figures have mold parting lines and flash on them. Resin aftermarket figures, on the other hand, generally don't have mold parting lines but may have flash or blobs of excess resin that need to be removed. Begin by trimming away any flash and scraping off the mold parting line with a No. 11 hobby-knife blade. Afterward, wet sand the area with some 400-grit sandpaper followed by some 600-grit. This blends the treated area into the rest of the figure. Unlike airplane models, figures are best finished once they're completely assembled. Many resin figures have separate arms, legs, and heads. Kit figures may need an arm

attached, but most arrive in one piece. If the figure has a complex pose, like a pilot climbing into a cockpit, test fit it by temporarily attaching the parts with small bits of modeling clay to confirm the pose in relation to the model.

Resin figures must be assembled with super glue or epoxy. Be sure to fill any seams with putty. A quick way to fill seams on figures is to slightly overfill them with Squadron White Putty or any toluene-based filler. While the putty is still wet, use a cotton swab dipped in Cutex nail polish remover to remove the excess putty. Do not use the acetone free formula. It won't work. The cotton swab should be damp, not sopping. Repeat with fresh cotton swabs as necessary to remove any excess putty. This technique eliminates the need for sanding.

Prime directive

The next step is to prime the figure. This highlights any remaining seams and provides an even surface for later paint coats. Usually, I drill a small hole in an

inconspicuous area of the figure (like the bottom of the foot) and insert a toothpick to hold the figure. In this manner, I can hold and move the figure during painting without handling it.

Vallejo paints will not stick well to bare plastic or resin so a primer coat is essential. I prime my figures with light gray paint. The particular shade does not matter much, but be sure to completely cover the entire figure. I used Testor Acryl light gray (FS 36495) on this project. Some modelers claim that only lacquer- or enamel-based primers should be used, but Testor acrylics work just fine for me. Wiping the figure down with a cotton swab soaked in isopropyl alcohol helps remove any traces of mold release, sanding dust, or skin oils, and is the key to successful priming with acrylic paints.

Take a good look

Once the figure is primed, take a long good look at it under a strong light. Note the areas that are in shadow and those that are exposed to the most light. These are the places where darkened and lightened colors will be used to emphasize shadows and highlights. Keep a mental note of these areas in mind as you begin to paint, **1**.

Faces and hands

Realistic flesh tones are the biggest obstacle when creating a convincing figure, so let's start there. It's best to paint the areas of exposed skin first, anyway. Picking the right colors to paint a face is one of the toughest challenges artists face. In these small scales, however, I've found a few colors in the Testor Model Master line of enamel paints that seem to work every time. The colors are tan (FS 20900), military brown (FS 30117), and radome tan (FS 33613). These are common colors and should be easy to find, but any enamel paint of the same FS number should work just as well. It is important to use only enamel paints for the skin areas, though. They have a more realistic sheen and allow for the subtle blending that is a critical part of the process. We'll use acrylics for the rest of the figure.

Begin by painting all the exposed skin areas with a basecoat of the Testor Model Master tan, **2**. Next, areas that are in shadow like eye sockets, wrinkles, and the underside of the chin are painted



Here is the primed navigator figure from the classic Monogram 1/48 B-17G kit. All flash and mold parting lines have been scraped away with a No. 11 blade and the figure given a light sanding with 400- and 600-grit sandpaper to smooth everything out.



Lay in the base flesh color with Testor Model Master tan (FS 20900) enamel applied with a fine-point brush.



Use a fine-point brush to lay in any areas in shadow such as eye sockets, under the nose, under the chin, and recesses near clothing with the Testor Model Master military brown (FS 30117).

Testor Model Master military brown with a fine-tip brush, **3**. Be as precise as possible here. For example, apply a dab of the darker color on the underside of the nose, between the lips, and under the lower lip. Finally, use the Testor Model Master radome tan to apply highlights to the areas of the face and hands that capture the most overhead light, such as above the eyebrows, the bridge of the nose, the tops of the cheeks, and the point of the chin, **4**. When all the shadows and highlights have been added to the face and hands, blend everything with a clean, smooth-bristle brush that's slightly dampened with thinner. Make sure there's not too much thinner in the brush, or you will remove the paint instead of blending the differently shaded areas. Go slowly, and you will see the stark lines between shadow and highlight areas disappear. Photo **5** shows the final effect. You'll notice that I didn't worry about painting the eyes. That's because from a scale viewing distance, you can't really see the individual eyes. Try looking at people when you're walking down the street. They have to be awfully close before you can see the "whites of their eyes!"

Clothes and equipment

Acrylic paints are ideal for painting clothing because they dry dead flat. For the same reason they don't work as well for flesh tones, the flat finish of most acrylic paints really makes cloth areas look realistic. My favorite brand of paint for figure painting is Vallejo's. These paints come in a rainbow of colors and are unrivaled in their ability to cover with one coat. Each bottle comes with a dispenser tip that lets you squeeze out just enough paint for the job while keeping the remainder from drying up.

In most cases, acrylic paints dry too quickly to be blended, so a different technique is needed. The initial steps are the same as those for faces and hands. First, lay in the base color of the garment. Paint the figure as though you were dressing a mannequin, **6**. Next, add a little black or dark brown to the base color and apply it to the areas where shadows fall from folds in the cloth or belts and other equipment. Keep in mind that the shadows are only on the underside of the fold and not in the entire recess. Next, add a little bit of

white to the base color and pick out the highlights, such as the top of folds and the upper edges of the cuffs. At this point, all of the highlights and shadows probably look too stark and unrealistic, **7**. Since it's impossible to blend them easily, create a very thin mixture of the base color and water and apply it to the entire area. Artists call this a "glaze," and it blends the highlights and shadows effectively. Just make sure the glaze goes on evenly and doesn't pool in recesses. If the shadows and highlights are still too stark, mix up a slightly thicker glaze and apply a second coat to the area, **8**. Don't make it too thick though, or it will cover everything and you'll have to start over.

Vallejo is a relatively new brand of paint available to modelers. Each bottle comes with an applicator tip allowing you to neatly dispense precise amounts of paint.

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Next, lay in the highlighted areas like the forehead, bridge of the nose, tops of the cheeks and the tip of the chin with Testor Model Master radome tan (FS 33613).

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Lightly draw the fine-point brush slightly dampened with mineral spirits back and forth over the face and hands to subtly blend the transition areas between dark and light areas. Don't use too much thinner or you will smear everything. Go lightly!



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Use the Vallejo paints to lay in the base color of the uniform, life vest, and boots. Paint the figure as though you were dressing it.

Once the glaze has dried thoroughly and you are satisfied with the blended effect, you can go in and paint the smaller details, like the figure's belts, shoes, buckles, and equipment, **9**. Unless the detail is very small, you should follow the same procedure of laying down the base color, shadows, and highlights, followed by a glaze. Avoid using straight white or silver for detail. It looks too stark and unrealistic in smaller scales. Mix a little tan into white and black into silver and they'll have a much better appearance.

Hopefully the techniques I've described here will inspire you to pull the figures out of an old Monogram kit, or maybe even pick up a few new aftermarket ones. You may not take up figure modeling full-time, but a nicely done figure next to a model makes the perfect finishing



touch, and provides a change of pace between airplane projects. **FSM**

Besides being just plain fun to paint, figures are an excellent way to convey the immense size of the real aircraft in photos as in the case of this Revell Germany 1/72 P-47M Thunderbolt.

Meet Rafe Morrissey

Rafe Morrissey began modeling at the age of 6. His father, an Air Force pilot, who introduced him to the hobby, kindled his interest in military aviation. Rafe earns a living as public affairs consultant for a Washington, D.C.-based government relations firm. He fits modeling in between work and helping raise his two small daughters.

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Using a process similar to that with the flesh areas, add black and white to the base color and use the two altered shades to lay in the shadows and highlights. For some uniform colors you may need to use other hues to achieve the effect. In the case of the life vest, I used a mixture of black and red to create a dark orange tone for the shadows because straight black turned the shadow green. White uniforms are another special case. Use a very light gray for the base shade so you can use straight white for the highlights. A dark purple will work better than straight black for making the shadows on white uniforms.

Acrylic paints do not blend like oils or enamels. When they are dry, they are dry. Instead, make a thin mixture of the base color and apply it over the entire area. Don't load your brush up too much or let the mixture pool in recesses. Keep your mixture thin and reapply as necessary to achieve the effect of blending. Don't make your mixture too thick or it will cover everything and you'll have to start over!

Once the major elements of the uniform have been completed, finish the figure off by adding detail items such as parachute straps, buckles, and insignia. Tone down colors such as white, black, and silver by adding brown, white, and black, respectively. Otherwise, they look too stark and unrealistic.