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March/April 2024

Modeler

p.10

BUILD BETTER

SPACECRAFT

Improve real
and fictional
vehicles

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PLUS

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FSM editor Tim Kidwell
shows how to add LEDs to a
1/32 scale TIE fighter

**BONUS
ONLINE
CONTENT
CODE
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Vol. 42 • Issue 2

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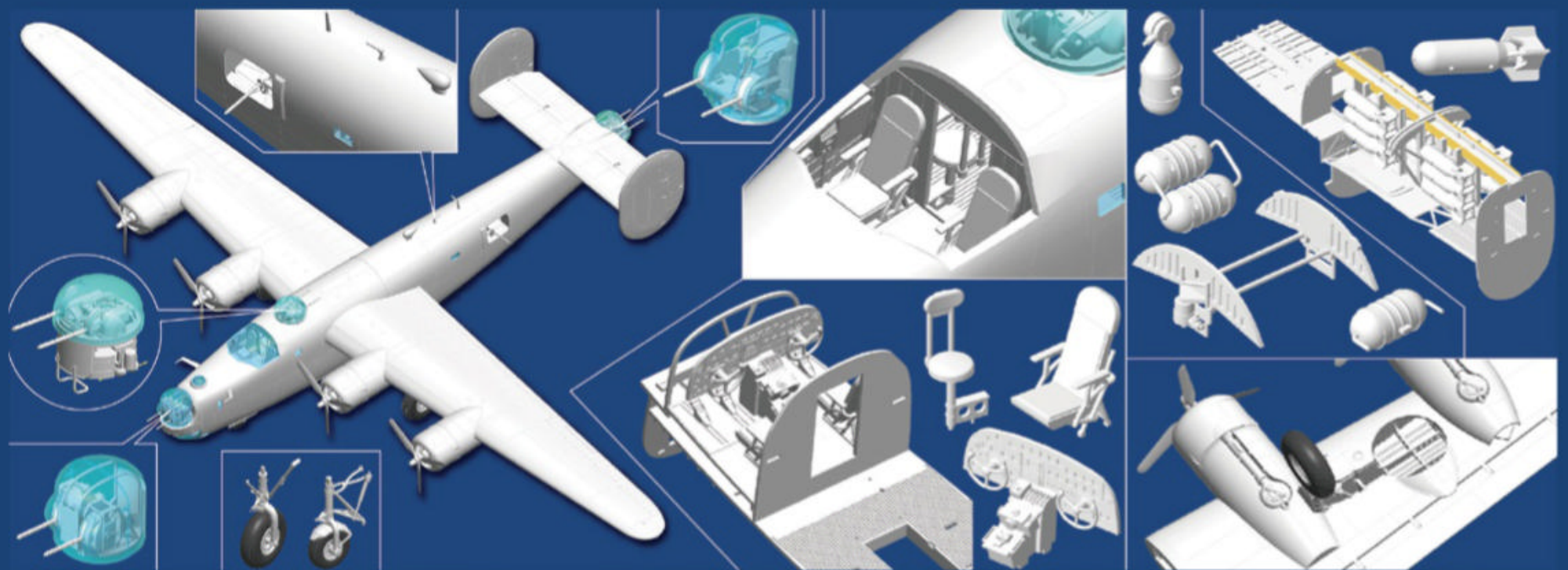
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FROM THE EDITOR

By Aaron Skinner

Making time for the workbench

As you look over the table of contents above, you'll notice that Tim Kidwell and I have how-to stories in this issue. While it's not unusual for our bylines to appear, it's been a couple of years since either of us has finished a project and taken you guys through the process.

This isn't the way we want it. We enjoy time at the workbench and are both working on personal projects.

Part of the problem has been finding time, and I'm sure we aren't alone in bal-

ancing family and/or work with spending time on our latest model. Yes, even though it's part of our job, it can be a struggle to build as much as we want.

How do you do it? Let me know your tricks and techniques for making time for yourself at the workbench at the email below.

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editor@FineScale.com

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The Creature



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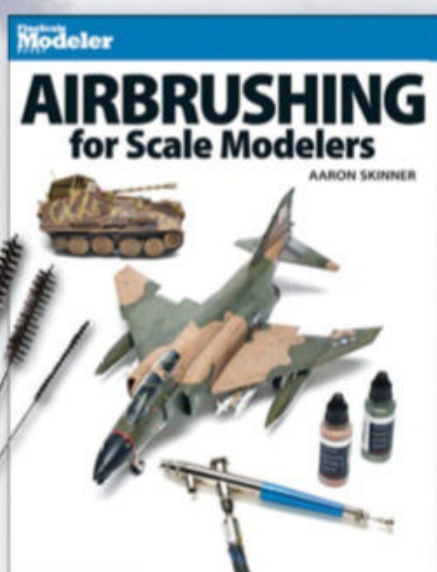
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Despite its role as a fleet flagship, the Imperial Japanese navy battleship *Yamato* was far from pristine when operating in the Pacific. This photo taken in late 1942 or early 1943 clearly shows streaking and staining on the hull. There are even patches of “new” paint visible.

Yamato's finish based on photos

In response to Clinton Gaskill's letter (“What a dirty, dirty ship,” *Scale Talk*, January/February 2024) about the finish on my model, here's a photo of “dirty little *Yamato*” taken in late 1942 or early 1943. It's clear that it is streaked and stained.

While modeling is an art, the line of subjectivity plays into our interpretations when it comes to our desire to replicate the real steel. Mine are always done to my best abilities based on photos rather than subjective commentary on what it “should have been like.”

– Harvey Low
Toronto, Canada

Oh no, they really are that dirty

I read Clinton Gaskill's comments about

extreme weathering being nice, but not realistic; I have to respectfully disagree.

I served in several mechanized infantry battalions and can state with a high degree of confidence that you can't put enough mud, grime, or filth on your military vehicle models that are in an operational environment. The motor pool is another story. My platoon would spend half the day at the “bird bath” cleaning our APCs, Bradleys, and Abrams with firehoses trying to remove the “extreme weathering” they picked up in the field.

Regardless of the perceived reality of others, modelers should enjoy the freedom of their own interpretation of their creations. Hobby on and make 'em dirty!

– Robert Bevelacqua
Jackson Springs, N.C.

Ed.: Weathering has been a hot-button issue in the hobby since the first ... well, for a long, long time. Techniques like dry-brushing have gone in and out of vogue, the realism of pre-shading and post-shading has proven fodder for articles, internet comments, and podcasts, and let's not even get started on color modulation, streaking fluids, and mapping.

As both Harvey and Robert say, modeling is as much art as anything and everyone should feel free to finish their models as they interpret the subject.

In some cases, that extreme weathering imparts a sense of the conditions the machines operated in. If, like Harvey, you prefer to refer to photos as the basis for weathering, have at it. If you want to build them showroom clean have at it. Above all have fun! – Aaron Skinner

The elements of why we build

I think some of recent discussions of what constitutes “real modeling” may have missed the point. Perhaps the starting point might be to consider why someone would want to pursue modeling by in the first place.

As a framework, I'm going to borrow from articles published when mountaineering underwent soul-searching and redefinition a generation ago. Lito Tejada-Flores described a number of different forms of climbing or mountaineering in “Games Climbers Play,” and Robin Campbell spelled out different appeals of climbing in “Climbing Ethics.” [With] more than half a century of building models, I can relate to several attractions to the hobby. I suggest that the following four elements apply to all modelers at one time or another:

1. Build the Model. We are creative beings. Whether it's building a new shelf in the kitchen or creating a city, we take pleasure in using our hands and minds to make something. There is an innate appeal to tak-



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ing a box of plastic sprues, a simple set of directions, or even just a picture and changing this from something imagined into a tangible object. For newcomers to the hobby, this can be a strong attraction.

2. Love the Subject. We all know a modeler who specializes in aircraft or trains or someone who is very knowledgeable about a single subject. A skilled modeler in my club is interested in Shermans and builds these in various scales and eras as vignettes, dioramas, and simple displays. His hobby is not just putting pieces together, but about the history and legacy of this piece of technology. There are others whose knowledge of and interest in NASCAR or Gundam or maybe specific events such as the Battle of Midway or an era such as the dawning of the jet age draws them to model-related subjects. I was 10 when I read Adolf Galland's autobiography, *The First and the Last*, and I was delighted to find Monogram's Bf 109 kit so I could see exactly what that airplane looked like. It was a connection to the history reflected in the pages of Galland's book.

3. Test Your Skill. Sixty years ago, I was happy to twist and bend parts free from their sprues and perhaps use a knife to clean up major chunks if they interfered with fit. As the years rolled by, I began to use hobby knives and eventually a sprue cutter. Because my references were limited at the time, and what was available were usually black-and-white photos, I was puzzled why anyone would really need to paint a model. When I did try painting, the heavy, brush-streaked results were only mildly pleasing. Then, 30 years ago, I invested in an airbrush and have become competent with it — mostly. These basic skills of cutting, sanding, filling, and painting have, with practice and continued attention, produced pleasing results for many out-of-the-box projects.

4. Improve Your Skills. Learning is a lifelong process and the advent of the internet has made continuing improvement in individual modeling techniques easier than ever. Long ago, I gave up on superglue, because it never seemed to live up to the claims, instead using 5-minute epoxy for

many years. Recently, I happened across several videos that set me on the right track with superglue. The model I am finishing now required thin and medium superglue, old-fashioned liquid and extra-thin plastic cement, and a bit of 5-minute epoxy to help shape an anchor chain. Concurrent education in paints and painting and handling photo-etched metal parts has breathed new life into my projects. The results have been radically better-looking and more satisfying. Not only can an old dog learn new tricks, but the old dog will be pleased with the new skills!

It is the happy circumstance where there is no wrong answer to the question, "Why do you build models?"

— Bill Menning
Huntington, Vt.

Ed.: Thanks for your extensive thoughts on the philosophy of modeling, Bill. You mention the pleasure in creating and that is definitely real. As a hobby, it is, and should be, enjoyable, pleasurable, and above all, fun. Keep up the good work! — A.S.

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Disappointed, never discouraged

Tim and Aaron's discussion of discouragement in a recent FineScale Modeler Weekly video hit the nail on the head. It's easy to get discouraged after looking at amazing builds in the magazine or online. But it doesn't have to be.

When I start a model, I have a few goals in mind. First, I like to learn something new, either about the subject or techniques I could use that I haven't learned or mastered. Second, if something's not working, I'm not afraid to strip paint, disassemble, and even buy a new kit or new decals. Third, if something is going right, I stop and congratulate myself before risking it all by proceeding with the build. Haven't we all messed up a perfect build in the later stages of construction? I've often been disappointed with the final result, but never discouraged. I just know that I've learned something I won't do on the next model.

Now and then, there's a perfect build, the one you show at contests, online, or in submissions to *FSM*. It's not about trophies (although that's nice), it's about pleasing yourself and saying, "Wow, I built that."

— Jim James
Winter Garden, Fla.

Ed.: Great letter and awesome attitude, Jim. "Keep learning and make the next model better than the last" are words to live by. — A.S.

Kit features from decades gone by

I'm not sure what caused these memories to pop into my head, but I wonder if any older modelers remember these:

When Hasegawa released its P5M Marlin and P2V Neptune kits in the 1970s, folks made a big deal about how the parts were molded with the sprue attachment

connected to the gluing face of the parts rather than, as was more common, the outer surface of the parts. The obvious advantage here is that cutting the sprues off left cleanup limited to the mating surface with less chance of damaging detail. After a while, that great feature seemed to die out.

The other was the 45 rpm vinyl records that came in some Revell kits in the 1960s and '70s. I had a bunch of them, all gone today, but I remember the records from the 1/72 scale PBV "Black Cats" Catalina, Junkers Ju-88, and Sikorsky CH-54 "Sky Crane," the 1/32 scale P-47, and the 1/720 scale USS *Massachusetts*. Does anybody else remember these? Anyone?

— Greg Kolasa
Wantage, N.J.

Ed.: I've seen newer kits including some from Tamiya and Bandai that are placing the attachment points on the mating surfaces, so that idea hasn't died. As for the records in the kits? That's a new one for me. Let's see what the readers have to say. — A.S.

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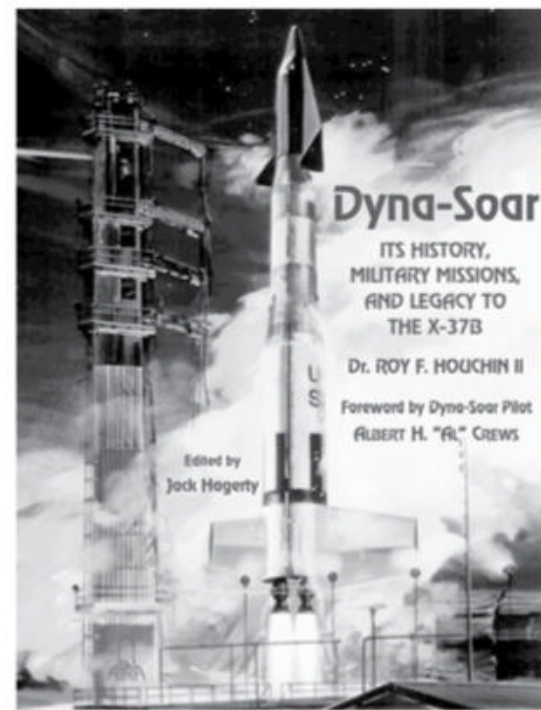
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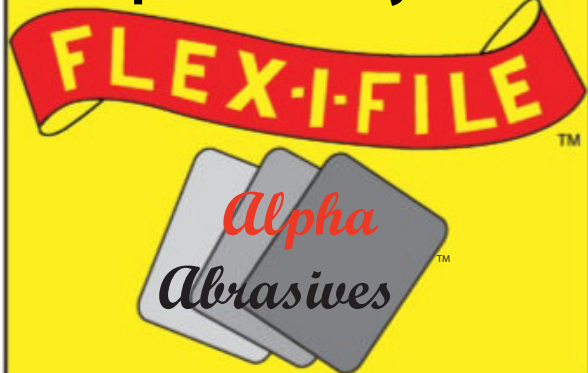
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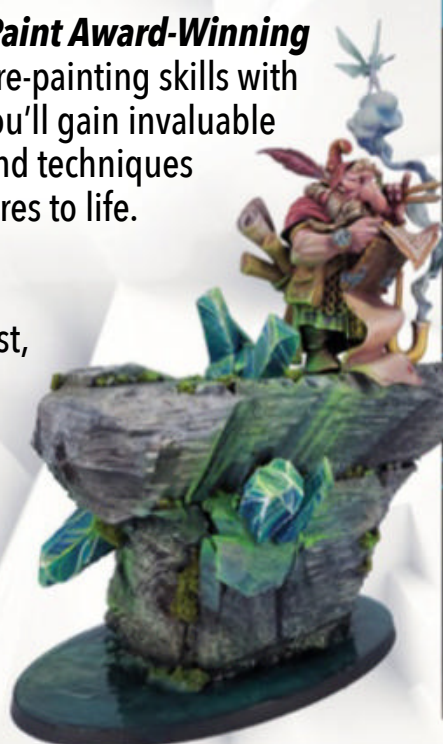
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1/72 SCALE

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1/144 SCALE

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1/35 SCALE

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1/12 SCALE

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1/20 SCALE

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1/25 SCALE

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SdKfz 6/2 side panels from FC Model Trend, No. 37203, \$13.61.

AK-47, AK-74, SKS-74, AKM from FC Model Trend, No. 16444, \$12.50.

Panzer III smoke dischargers from FC Model Trend, No. 48567, \$9.80.

1/72 SCALE

M113 T150 tracks, sprocket and idler wheel from FC Model Trend, No. 72535, \$14.50.

WWII Japanese Aviation from ICM, No. 3021, \$18.99.

OLD KIT, *modern techniques, and a challenge*

Get the most out of aging AMT annuals in your stash

BY TIM BOYD



Starting with this article, I'm kicking off the AMT Annual Kit Challenge. What is that? I'm glad you asked.

First, it's not a yearly thing (although maybe it should be!). Rather, every fall from 1958 to 1977, AMT produced 1/25 scale 3-in-1 customizing "annual" kits for the latest cars and trucks that filled dealership showrooms. While some of these annuals have been reissued (and Round 2 is now duplicating them with all-new tooling), many remain one-off products that were never offered again once that year's run sold out.

For the uninitiated, annual kits lay somewhere between simplified curbside or snap-together kits and fully detailed kits with multipiece chassis, suspension, interiors, and engine compartments. Generally revered for accurate body

proportions and crisp molding, they often also included era-correct customization and race options. On the other hand, builders often encountered vague assembly instructions, lack of locating tabs, one-piece chassis plates, tub-style interiors with seats

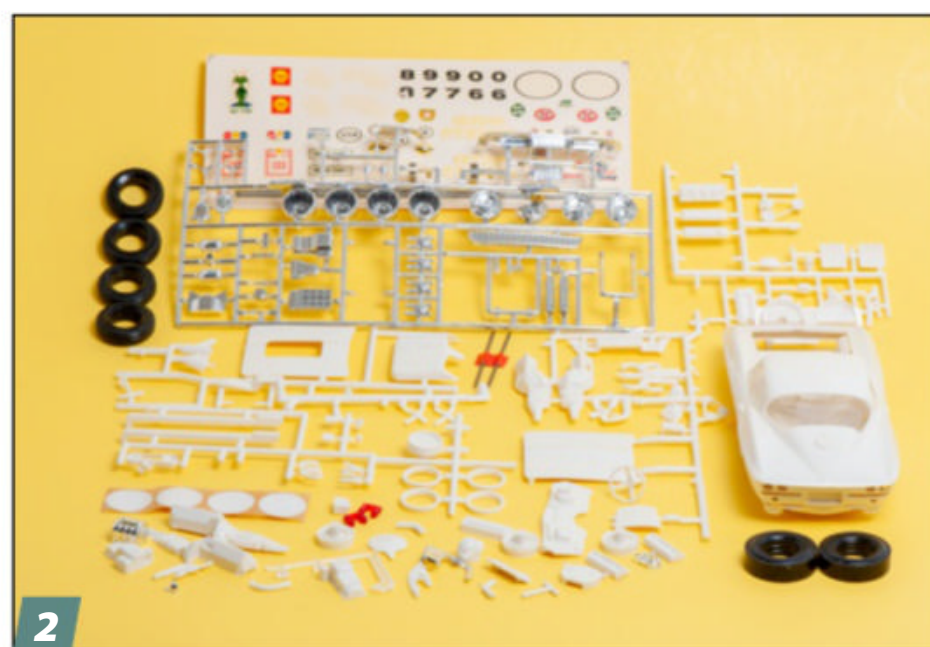
molded to the floorboards, and exaggerated and inconveniently located mold lines and sprue tabs.

As you'd expect, many of these never-reissued AMT annual kits have become valuable collectibles, and most unbuilt annual kits are destined to remain in kit-collection purgatory, never to enjoy even a single, assembled part.

But what if we started pulling those annuals out of storage, peeled the plastic, cracked open their boxes, and began building them using today's modeling techniques and supplies to finish them? And that's the AMT Annual Kit Challenge. I'm diving in with the never-reissued AMT 1/25 scale 1966 Corvette Stingray 3-in-1 Customizing Kit, worth about \$165 in unbuilt, mint condition.



1 AMT's annual kit lineup typically included both coupe and convertible Corvette offerings, like this 1966 Stingray Fast-Back (No. 6926-150). In addition to a factory-stock version, you could build a Gene Winfield-designed custom or a drag or road-racing version.



2 The Corvette includes a well-detailed, one-piece body, an opening hood, and a simplified representation of both a 327 and 427 Chevy V8. The one-piece chassis and four-part interior reflect the tooling's dual purpose as kits and AMT pre-assembled, promotional, dealer giveaways.



3 Before starting an annual kit, find references. AMT's annual kits were sometimes vague about placement of certain components, and references can help guide your assembly efforts.

REFERENCES

FOR HELP WITH MANY OF THE TASKS discussed in this article, make sure to visit [FineScale.com](https://finescale.com) and check out the scale-auto-related Snapshots there. They will help you get the most out of your AMT Annual Kit Challenge.

Links to helpful advice:

- How to use rubbing compounds for a smooth scale model finish (<https://finescale.com/online-extras/how-to/2021/05/make-rubbing-compounds-work-for-you>)
- How to use polishing pads for that perfect shine on scale models (<https://finescale.com/online-extras/how-to/2021/05/polishing-pads-get-the-rough-out>)
- 5 steps to get the smoothest paint finish possible (<https://finescale.com/online-extras/how-to/2021/05/5-steps-to-get-the-smoothest-paint-finish-possible>)
- Paint chassis details – FineScale Modeler DLC December 2022 (<https://finescale.com/~media/files/pdf/finescale-modeler-dlc/2022/04-december-dlc/1222fsmldlc.pdf>)



The bodies in AMT annual kits were molded with authentic proportions, sharp door panel lines, and crisply engraved nameplates and trim. They also displayed heavy mold lines along the fender edges and front and rear sections (where the multipiece tooling elements joined together to form the kit's one-piece body). Here, I've marked these parting lines for careful filing and sanding to come.



I straightened the top edges of the side windows with a file for a factory appearance. Removing the mold lines and fixing these window openings are the two most important tasks for getting a good result from building this AMT annual kit.



The hood-to-body fit is another area often requiring attention with AMT annual kits. Test-fit and fine tune the gaps between the hood and fenders, keeping in mind that when you paint, that will slightly reduce the clearances between these parts.



Prior to painting, mask the intricately engraved body badging to prevent paint buildup. Bare-Metal Foil (BMF) serves this purpose well. Cut an oversized piece, place it over and burnish it onto the engraving, and slice away excess foil with a sharp hobby knife.



I used Model Car World (MCW) Automotive Finishes. When using real automotive paint on a model kit's styrene body, you need to seal the plastic before application. While MCW offers primer and body sealer, I opted for Testors Metalizer (OOP, sadly) as the sealer.



I airbrushed the body and hood simultaneously MCW 1966 Corvette Code 982 Mosport Green Metallic. Next came two thin coats of Mr. Super Clear Gloss (No. B-513). Note: I avoid two-part urethane clears due to very real health risks and unrealistic, out-of-scale appearance.



No matter how well you've painted your model, there will be some "orange peel." To eliminate it, successively apply coarse, fine, and finish Tamiya Polishing Compounds with a soft cloth. You can substitute automotive finish products if you cannot locate the Tamiya versions.



These compounds run the risk of removing paint from the sharp edges of a body, so try to avoid these areas when polishing. But it happens to even experienced modelers: Here, I used a fine brush touch-up the tip of the "V" below the Corvette emblem in front of the hood.



I polished away the paint on the raised emblems exposing the BMF beneath (Step 7). Alternatively, foil the badging after painting, then carefully trim around the edges as shown on the corner of the hood (top). Both approaches deliver good results.



Apply BMF to window trim and any other applicable body trim. The key to success with BMF is to use a brand-new, fresh, hobby blade while trimming the foil on the body. For advice about using BMF, visit FineScale.com/baremetalfoil.



Second-generation Corvettes sported a different rocker panel treatment every year from 1963–1967. In 1966, the ribbed rocker panel wore a flat black finish with a chrome strip along its top edge. Attention to these sorts of details make your replica stand out.



15

Mold seams often mar the plated bumpers in AMT annual kits. I carefully trimmed the seams with a hobby knife and touched up the exposed styrene with a Molotow Liquid Chrome marker. Thinned flat black accented the Corvette's 1966-specific, egg-crate grille.



16

Research appropriate interior colors for your car. In this case, I replicated 1966 Corvette Code 430/431 Dark Green with Tamiya Dark Green (No. TS-2). I masked the coves on the instrument panel to avoid excessive paint buildup. The carpet is a mixture of green and black flocking.



17

In accordance with my references, I finished detailing the interior with silver paint and Molotow Liquid Chrome; dry-brushing detailed the gauges; gloss clear flowed into the gauges simulated lenses; and brown paint represented the 1966 Corvette's optional teak steering wheel.



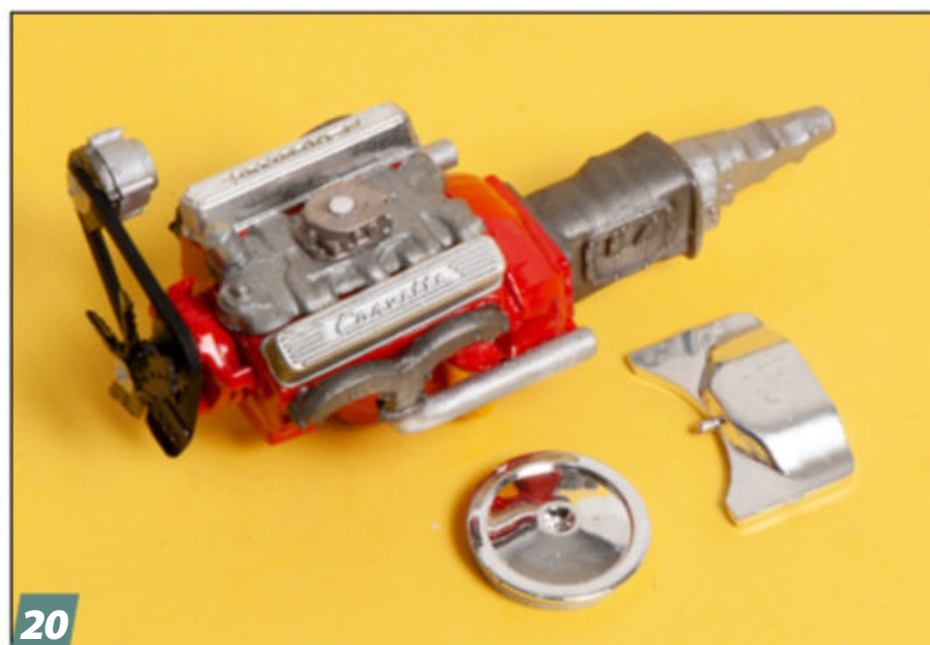
18

In finished form, AMT annual kits can leave portions of the body underside and interior tub exposed to view. Best practices say to paint all these surfaces flat black, just in case. This is also a good time to paint the interior headliner and pillar areas the appropriate color.



19

The kit's simple Corvette 327 V8 can be brought to life with careful component painting. This kit also included Corvette's big-block 427, but I replicated the top-of-the-line small-block code L79 high-performance 327 by painting the intake manifold aluminum instead of orange.



20

All 1966 Corvette engines moved to a new air cleaner, but AMT kept the prior year's design. The correct part is in AMT/Ertl 1970 Corvette coupe and 1972 Corvette convertible kits. I left off the ignition shielding until final assembly because it wouldn't mount as shown in the instructions.

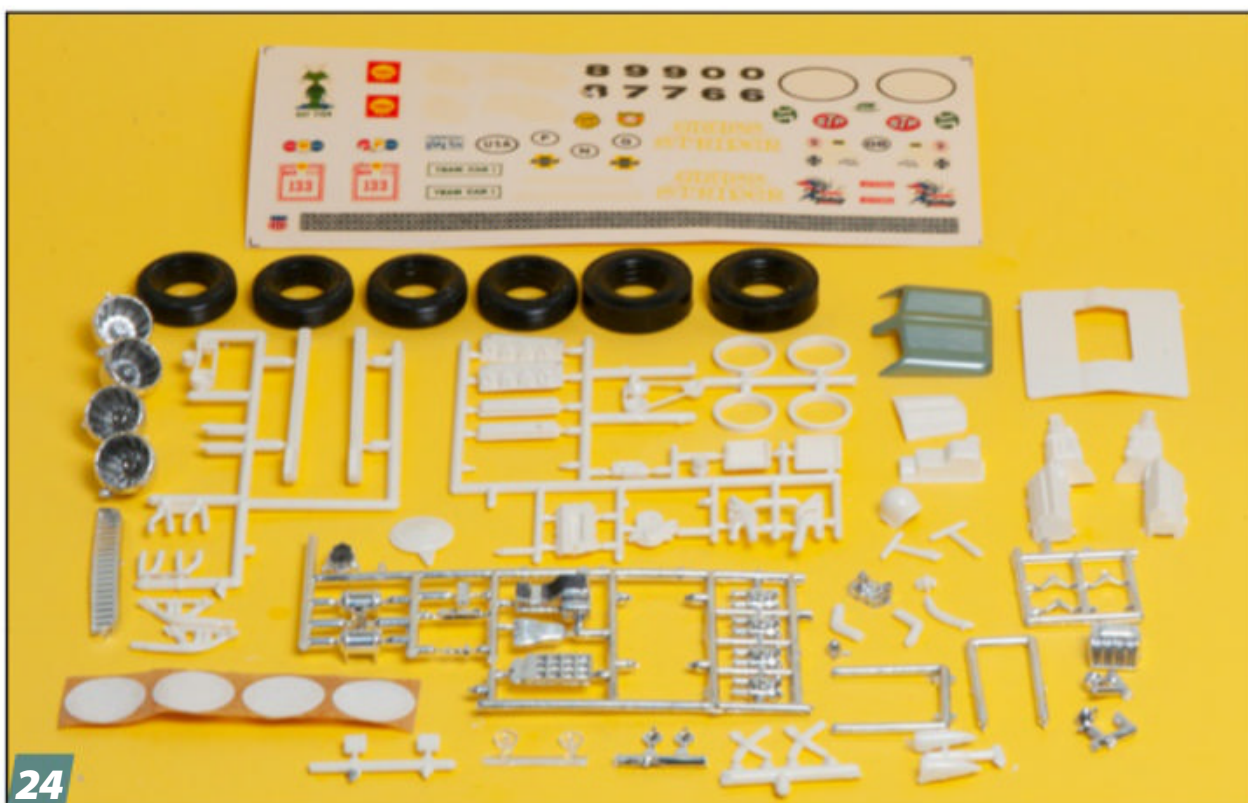


AMT annual kits often included a one-piece chassis. Detail painting can go a long way to lending a realistic appearance to this simplified design. Engine-compartment parts need similar treatment.



AMT instructions were sometimes vague about the location of engine compartment components, so I placed them according to references. AMT annual kits often omitted the upper radiator hoses. Here, I pulled one from my spares box to approximate the car's appearance.

I painted the kit's wheel covers flat black and magnesium under Vallejo Dark Gray Model Wash (No. 76.517). Tire choices for 1966 Corvettes were blackwalls, narrow gold line, or narrow whitewalls. I pulled American Satco Narrow whiteline tires (No. 10031; OOP) from my spares.



After completion of the factory-stock version of an AMT annual kit, you will end up with a large catalog of unused parts. AMT worked closely with many of the era's best car customizers to include replicas of the latest aftermarket parts in their kits, so these leftovers are highly valued today for era-correct model racing and custom projects.

FINAL THOUGHTS

BY ANY MEASURE, the second-generation Corvette was a landmark in mid-century automotive design, and, in my judgment, the 1966 coupe may have been the individual high point among those five model years. As built here, the AMT annual kit produces a stunning replica of the real car.

I kept my build mostly out-of-the box (the air cleaner, radiator hose, and tires being the only exceptions). You could up the ante with your build — the L79 V8 from an AMT 1966 Chevy Nova and the chassis from a Revell 1967 Corvette would be good starts for this particular AMT annual. But be careful because you add complexity and time to your project.

Most importantly, have fun with the AMT Annual Kit Challenge on the terms you choose. Sure, after you've painted and assembled your rare kit, it will admittedly have lost its value as an unbuilt collectible. However, you will now have gained a miniature replica of the real car that, depending on the subject, might be valued in the high five figures or more. Place your completed scale replica in a position of pride in your collection! **FSM**



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AIRBRU



Things to know
whether you are
a beginner or
need a refresher

BY AARON SKINNER

AIRBRUSHING

FAQ

Few skills improve the appearance of models as much as airbrushing, but it can also be one of the harder tools to master. Not only are there different kinds of brushes and air supplies to consider at the outset, but there are also multiple variables that will affect how paint moves through the brush and how it hits the model. For the uninitiated, this can be an overwhelming amount of info that can keep them locked into using paintbrushes and spray cans.

Fear not! I'm going to answer many of those questions. If you are considering picking up an airbrush or have one but you aren't sure where to start, hopefully, this will take the mystery out of this versatile tool. Even if you have been airbrushing for years, consider this a refresher.

How does an airbrush work?

Let's get the science-y stuff out of the way early. The basic ideas at play are the Bernoulli Principle — a pressure differential pulls material, in this case paint, into the airstream — and the Venturi Effect — in which the material constricted by a narrowing (needle and nozzle) is accelerated and atomized. In practice, air under pressure pulls paint from the airbrush reservoir and through the narrow opening of the nozzle which accelerates it and turns it into a fine spray. Congrats! You are now able to say, "I'll take Airbrushing for \$200" or wow your friends at parties with this arcane knowledge.

Should I use a single- or double-action brush?

Airbrushes come in a variety of shapes and sizes, but they can be broken down into several subtypes. In terms of use and versatility, the biggest category split comes down to the brush's action.

In a single-action airbrush, the trigger or button is fixed in place and only controls airflow. The nozzle aperture is set by moving the needle with a set screw. This



The Paasche H (top) is a classic example of a single-action, external mix airbrush. As the button is pressed down, paint from the siphon-feed cup is pulled up the channel as air rushes across the exposed nozzle. The Iwata Eclipse HP-CS (bottom) is the quintessential double-action, internal-mix brush on which the button goes down for air and back for paint flow drawing the color from the gravity-feed cup into the brush.

means that the pattern will be consistent throughout the paint session.

A double-action, sometimes called dual-action, airbrush trigger not only kicks in airflow when pressed down, but pulling it back moves the needle and opens the nozzle. This increases paint flow and changes the pattern, from no paint initially to wide as far back as it will go. Some double-action brushes have limiters to keep the needle from going all the way back, useful if you need to keep it narrow or don't want to apply too much paint when your finger inevitably slips — as mine always does — from exhaustion or a sneeze.

What's with internal and external mix?

Another airbrush division is based on where paint and air mix. All double-action and many single-action brushes are internal mix and draw paint through the body of the brush where it mixes with air at the tip.

In external-mix brushes, air leaves the air tip and flows across a fluid cap drawing

paint from the reservoir. So, the paint and air mix in front.

I prefer internal-mix brushes because they atomize paint better in my experience. But the paint channels can be harder to reach and clean.

Can you explain the feed types?

Sure. Whatever you do, don't feed your airbrush after midnight.

Seriously though, reservoir placement and how paint feeds into airflow affects



Traditional airbrush trigger are on top; press down and slide back to move paint.



Pistol-grip brushes have a more ergonomic handgrip that may cause less hand fatigue.

paint use, the minimum pressure needed to move paint, and sight lines.

On a gravity-feed brush, the paint cup mounts on top with the bottom of the reservoir opening straight into the paint channel. Gravity helps move the paint, so air doesn't need to draw it up. In my experience, that means you can spray at lower pressures. But some users complain the cup blocks the view.

With a siphon-feed brush, the bottle attaches underneath the brush leaving an unobstructed view. But air pressure is required to pull paint up the siphon tube and into the brush, which makes for a greater minimum operating pressure.

Side-feed brushes offer a bit of the best of both worlds, especially since they often feature interchangeable gravity- or siphon-feed reservoirs. Plus, the view directly forward isn't obscured.

What other features should I consider on an airbrush?

First, consider how you grip the brush. Traditional airbrushes have the button mounted on top and are designed to be held like a pencil and operated with an index finger. I find this relatively intuitive, and it offers a modicum of fine control over air pressure depending on how far I press the button that operates the air valve. The downside is this position can cause fatigue during long painting sessions — hand



A good, basic compressor will handle most airbrushing applications, but try to find one with a regulator to control the pressure and a water trap.

cramps don't improve finishes. Pistol grips, until relatively recently, were more commonly seen at the industrial level as spray guns than in hobby workshops, although not entirely unheard of.

As the name implies, the brush is operated by a gun-style trigger mounted on an ergonomic handle. A single motion controls everything with the initial fraction of an inch starting airflow and the rest moving the needle. They are easy to use and comfortable to hold over extended periods, but they don't allow fine pressure control.

How do nozzle and needle size affect paint flow?

The easy answer is the bigger the nozzle and needle combination, the greater the volume of paint moving through the brush. Most combinations are measured in fractions of millimeters — .2mm, .35mm, .5mm, etc. — and on a lot of brushes, the needle and nozzle can be swapped out to provide different patterns. Be sure to swap

both out when you do this, because the needles are designed to fit their respective nozzles. Using one size needle with an inappropriately sized nozzle can disrupt the spray pattern or damage one or the other.

Many general modeling airbrushes come fitted with a medium, .3mm or .35mm, needle/nozzle combination. They typically spray a pattern from 1/32-inch to 1 or 2-inches wide and can handle all but the finest detail work on up to general coverage.

Fine nozzles, say .2mm or .25mm, are great for fine lines and detail work. If you do a lot of overall coats on larger models, consider going to a .5mm nozzle. It'll take a lot less time to paint that 1/32 scale Lancaster with a .5mm setup than it will with a .3mm, and a .2mm is right out!

What do you think about air supply?

It's not really my thing, but I guess "All Out of Love" is kind of catchy. (Yep, the Australian soft-rock band is the first thing



Once the gold standard of model paint, enamels seem to be losing ground. That doesn't mean you can't find them or they don't airbrush nicely.



Many companies have made a splash with new acrylic paint lines in the last few decades. Be warned that not all acrylics are the same and "acrylic" doesn't mean "non-toxic."



If one type of paint can be considered to be undergoing a renaissance, it is lacquers. Where once there were only two model paint lacquer brands, now there are dozens.

that comes to mind whenever air supply is mentioned. I'm never too proud to go after low-hanging fruit.)

Many of us start airbrushing with a can of propellant because it's there and easy to use. Unfortunately, they are also a finite resource, there's no way to accurately control pressure, and they cool down and lose pressure during use. You can sometimes counter the last by placing the can in a bowl of warm water during a paint session.

You are better off using a compressor. Even a basic, no-frills model without a regulator to set pressure will provide constant, reliable pressure. For better control and consistent finishes, grab one with a regulator, either at the source or on the airline, and a water trap. The latter captures moisture condensed when air is pressurized so droplets don't mar your paint. Constantly running compressors can be noisy and annoying to people around you. Fortunately, there are options to make you a better neighbor. Some compressors come with a built-in tank that is filled by the compressor, which then shuts off and doesn't kick on again until the pressure drops too low.

The always-silent option is a tank of compressed carbon dioxide or nitrogen available from chemical or party supply stores. The initial tank can be expensive and refills unwieldy, but one tank will move a lot of paint.

Can I spray anywhere?

Yes, with caveats. Atomized paint can stay airborne for a long time and that means it will settle in many places you don't want it, including furniture, other models, and your lungs. Additionally, aerosolized paint can also be flammable.

Good ventilation is the number one concern when it comes to airbrushing because it will help clear the air of paint. Airbrushing outdoors is often impractical so use a spray booth, a box that pulls air through a filter and out of the building. They come in many sizes — get one that will accommodate the biggest model you plan on painting — and be sure it moves enough air to clear the booth. Remember to change the filter regularly to keep it in optimum working order.

Is airbrushing safe?

We touched on the health risks of airborne paint, so I should mention other safety precautions. While good ventilation and a spray booth help, wear a respirator when airbrushing; dust masks are not sufficient. Use one with interchangeable filters and a rubber portion that forms an airtight seal



Overcome that fear of getting too close and get in there. Keeping the nozzle within 2-3 inches of the surface will prevent paint drying before it gets where it is going.

over your nose and mouth; if you can smell paint, you are inhaling vapors. Thin exam gloves — latex, vinyl, or nitrile all work — prevent your skin absorbing paint and goggles or safety glasses offer protection from paint splashes. It may seem like a lot, but, hey, you need to live long enough to build all the models in your stash, right?

What type of paint can I airbrush?

Most model paints are one of three types — enamel, acrylic, or lacquer — that differ in the types of binders and solvents used.

Enamels, the go-to choice for years, have become less common in recent decades. But they aren't completely passe, with Testors, Revell, and Humbrol paints still around. Enamels use organic solvents with strong odors and can take a while to dry completely.

Acrylic model paints are everywhere now with brands like Tamiya, AK Interactive, Ammo by Mig Jimenez, and Vallejo widely available. Some are water-based and have almost no smell, others like Tamiya and Mr. Hobby use alcohol as a solvent, so there are odor and flammability issues that may concern you.

Lacquers, once mostly the province of car modelers, have taken off in the last few years with new brands like Mr. Color, MRP, Hataka, and SMS producing large ranges of matched military colors. They contain delightfully harsh chemicals like ketone and toluol, so smell and safety are concerns. However, I love them for the thin but opaque coverage and fast drying. Some lacquers can affect plastic, so start light and test them before spraying your model.

Before you ask which paint you should use, here's my recommendation: Pick a brand that has the colors you need and practice with it until thinning and spraying become second nature.

Why do I need to thin paint?

Smooth paint is a function of atomization, which is in turn a function of paint viscosity. Thin paint atomizes better. While there are paints thin enough to airbrush straight out of the bottle, most are designed for hand-brushing and too thick to spray at less than 100 psi.

OK. So, how do I thin paint?

First, I recommend starting with the thinner recommended by the paint manufacturer — most will sell a proprietary thinner. Check the labels on paint bottles because some suggest thinning ratios and pressure settings. Start there.

Otherwise, add thinner to the paint until you get a consistency of 2% milk. For the lactose intolerant, here's another way to gauge most paint is the right viscosity for airbrushing: After mixing the paint and thinner — by the way, always thin in a container other than the paint bottle, because thinner can break down paint — use a clean stir stick to pick up a little paint and hold it against the side of the container. If the drop runs smoothly down and leaves an even film, it is the correct consistency. If the drop's trail is almost transparent in the middle and thicker at the edges, it is too thin; add paint. If the drop barely moves, it is too thick and needs more thinner. All these methods are just guidelines.



In a perfect world, start each pass off the model, move the airbrush across the surface and past the other edge before reversing course. Each pass should overlap the last so wet paint touches wet paint.

As you get more comfortable with a given paint brand and your airbrush, you will probably experiment with thinning ratios; thinner paint atomizes better, a useful function for things like fine lines and detail work, but, remember, you'll have to adjust air pressure for the thinner paint.

How far away from the surface should I spray?

Like many a modeler, I transitioned to airbrushing from spray cans, which comes

with a particular set of requirements including holding the can 10-12 inches away from the model. That advice stuck when I started using an airbrush.

But there's a big difference between the volume and speed of paint from a spray can and an airbrush, and, at that distance, much of the paint from an airbrush will dry in the air before it hits the model, creating a rough, uneven texture on the model.

The solutions? Get closer! Don't be afraid to work 3-4 inches from the surface

at higher pressures, say 25-35 psi. At lower pressures like 10-15 for details or weathering, you can get even closer. When applying mottling, as on a World War II Luftwaffe fighter, I hold the brush just above the surface; the biggest danger here is scratching the paint with the end of the airbrush. Whether you are applying an overall coat or picking out details, the goal is ensuring paint hits the surface wet.

Can you give us some airbrushing best practices?

Here are a few pointers:

1. Don't hold the brush in one place.

To paraphrase the animated movie *Madagascar*, you've "got to move it, move it." Staying in one spot with paint flowing is a recipe for excess paint build up, paint runs, and drips. Keep the brush moving over the surface while spraying. But don't move too quickly; you want enough paint hitting the model to be wet. Generally, more paint (open nozzle and high pressure) means you need to move the brush faster.

2. Start and finish spraying off the model. Open air and paint flow just past the edge of the surface and move the brush across the model, preferably reversing direction once the nozzle is past the other edge. Starting on the model can cause paint buildup. Plus, if there is any paint collected around the nozzle, it will splatter onto your nearly complete masterpiece. Obviously, if you are painting details, applying post-shading, or adding weathering, you can't always start off the model. Instead, before spraying the model, discharge the airbrush in open air away from the model to clear excess paint.

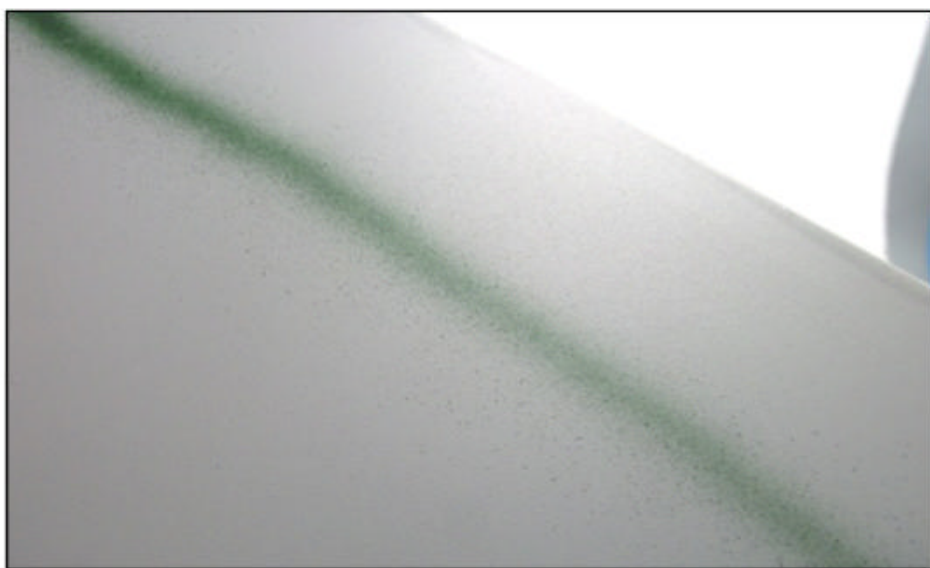
3. Overlap passes. As you apply each line of paint, overlap the last line slightly. Not only will this produce a consistent finish, but this new wet layer will also bond with the most recent, still-wet pass.

4. Start light. Rather than trying to achieve complete coverage on the first pass, make the first layer light so it doesn't completely obscure the plastic or primer underneath. This gives the next layer something to cling to and prevents excessive paint buildup. Working in thin layers allows you to control the amount of paint on the model, so you apply just enough for coverage.

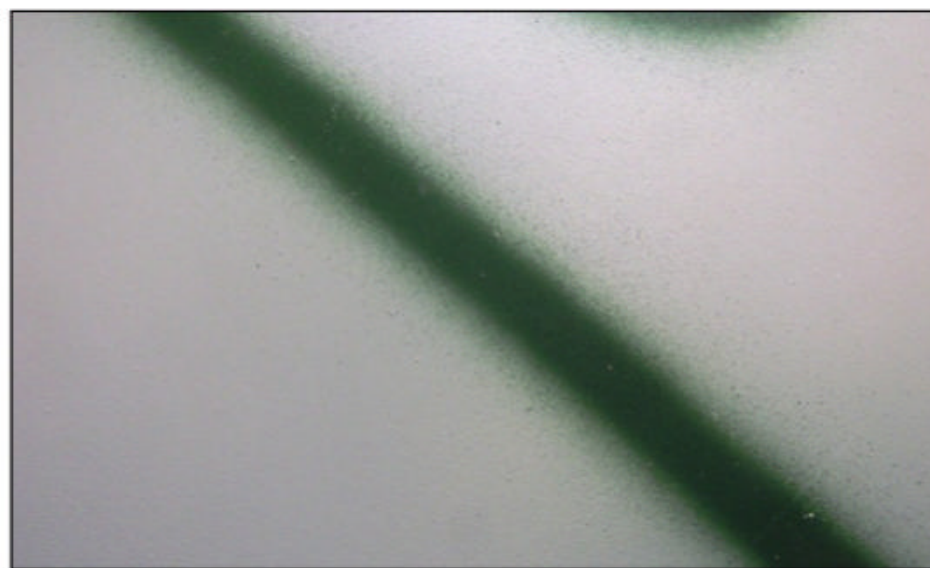
5. Paint edges and corners first. If you start with tight or hard to reach areas rather than general coverage, you can ensure adequate coverage without flooding surrounding areas trying to fill those areas later. I paint aircraft wing roots, pylon edges, and cowl flaps before spraying wider areas like the wings and fuselage. Extrapolating that to other subjects, think



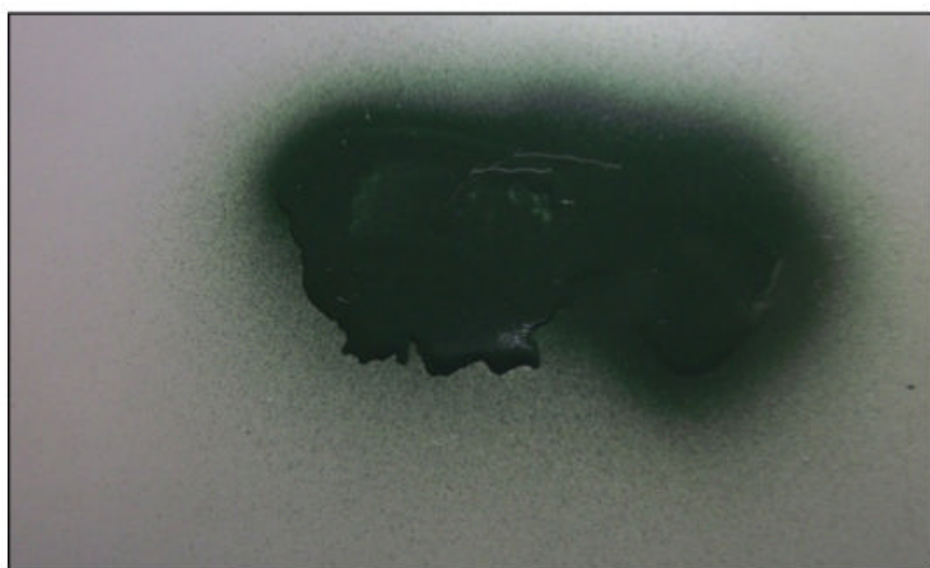
Resist the urge to start spraying the big areas. Instead, begin by airbrushing corners and recesses, such as the wing root on this plane, to guarantee good coverage while minimizing the chance of excess paint obscuring details or producing runs.



Low pressures offer more control because there is less paint hitting the surface, but it affects atomization producing ragged edges. This line was sprayed at 10 psi.



Higher pressures, in this case 40 psi, produce denser lines with tighter edges. The downside is there's a lot of paint hitting the surfaces, so move the brush faster.



Hold the brush in one spot or move it too slowly relative to the pressure at your peril. The paint will go on thick and likely run, which will not enhance the finish one iota.



Higher pressures with thin paint will give you this playful shape referred to as spidering. Check the pressure and thinning ratio lest you want to get spider bit.

car door outlines and wheel arches, the area where ship decks meet the superstructure, underneath tank fenders and around tools, etc. The list goes on.

How do I master airbrushing?

Simple: Practice. Once you've selected an airbrush, use it as often as possible so that you learn its idiosyncrasies, what the spray pattern looks like, and how hard do you need to press the trigger.

The same goes for paint. Try it on styrene sheet or a "paint pig" — an old or partially built model sacrificed as a learning tool — before setting to work on a model. Learn a brand and don't change simply because the first experience was bad. Practice will make thinning and correct pressure intuitive.

How does pressure affect airbrushing?

Pressure is one of the variables you can change that will alter the way paint hits the model as it has a direct correlation to paint flow. Higher pressure, usually measured in pounds per square inch (psi) pulls more paint through the brush. But it can also

atomize the paint more finely, producing a smoother edge. At lower pressure, paint will spatter more along the edges. On a small-scale model, the latter will seem too coarse for the scale of the paint sprayer that would have applied the paint.

The downside of high pressure is difficulty controlling the finish. With so much paint coming out, it is easy to apply too much in one spot leading to runs or drips. Or if the paint is too thin, you can get spidering.

Experience and practice will show the pressures you are comfortable working with and that produce the kinds of effects you are looking for.

Also, read the paint labels, because some brands, such as Alclad II and SMS, provide suggested pressures.

How often should I clean the brush?

Depending on who you ask, there are three basic answers to this question. Some modelers will tell you they clean it after every use, others say they rarely if ever clean their brush. Others are in the middle, doing a full break down and cleanup every so

often, maybe at the end of a major project. I used to be in the "clean it after every use" camp, but I have gradually moved to occasional cleaning instead. Frequent cleaning is fine, but I'm not sure it's necessary, and every time the needle and nozzle are removed, it increases the chance of damaging these critical components. Instead, I flush the brush with an appropriate solvent — window cleaner for water-based acrylics, lacquer thinner for most other paints — after a spraying session. I reserve tearing it down to properly clean the needle, nozzle, and paint channel until after a major project. But I will make an exception after spraying metallics because those pigments look unnatural in other colors. **FSM**

Want to know more?

If you want more info including practical applications of many of these techniques, grab *Airbrushing for Scale Modelers* from Kalmbach Books.



HERE THEY COME!

Make your next project lighting an
AMT 1/32 scale TIE fighter

BY TIM KIDWELL



Star Wars has provided no end of unmistakable ship designs, from the colossal Star Destroyer and hammer-headed Corellian corvette to letter-designated starfighters and an improbable disk with loading arms and an offset cockpit.

Now, Round 2, from its AMT brand, has produced a 1/32 scale version of another exceedingly identifiable *Star Wars*

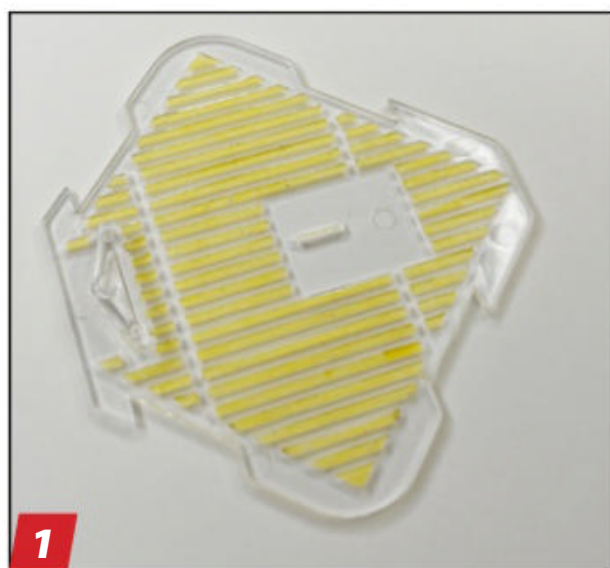
starship, the Imperial TIE fighter (No. AMT1341/60).

A model this large begs to be lighted, and Round 2 engineered the kit with that in mind. If you've never put lights in a kit before, this one is perfect for a first attempt, not despite its size but because of it.

Right off, you'll need LEDs, a power supply, and a switch — you don't want to have to keep connecting and disconnecting

a power lead. I visited Evan Designs (evandesigns.com) and bought six, prewired LEDs, and a 3-volt AAA battery holder with a switch (totaling at the time of writing \$28.50 with shipping). You'll also want a soldering iron, solder, liquid flux, and 1/16-inch heat-shrink tubing.

With those in hand and the TIE fighter kit on my workbench, here's what I did to light it.



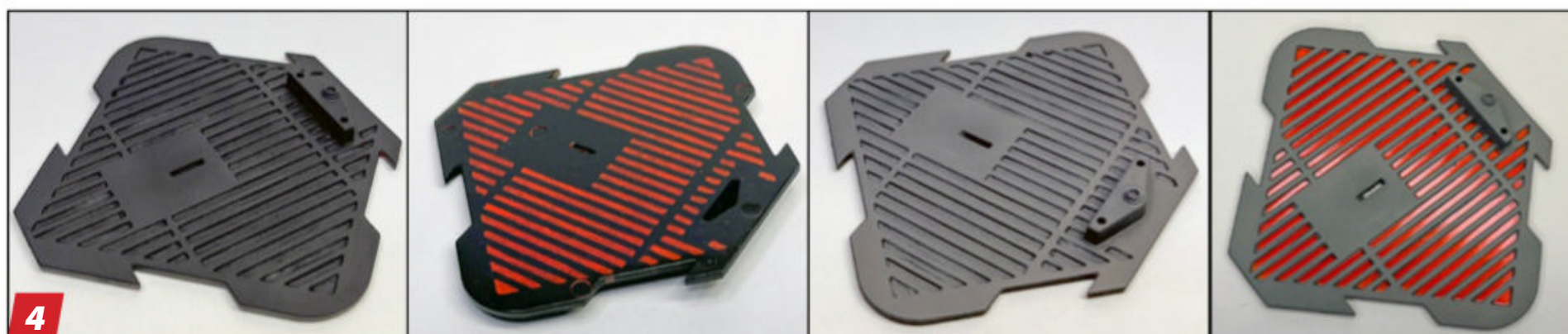
1 Already thinking ahead for modelers who want to light the enormous TIE fighter, Round 2 provides a clear, styrene floor. I masked what would be the gaps in the grate with Tamiya 3mm tape (No. 87208).



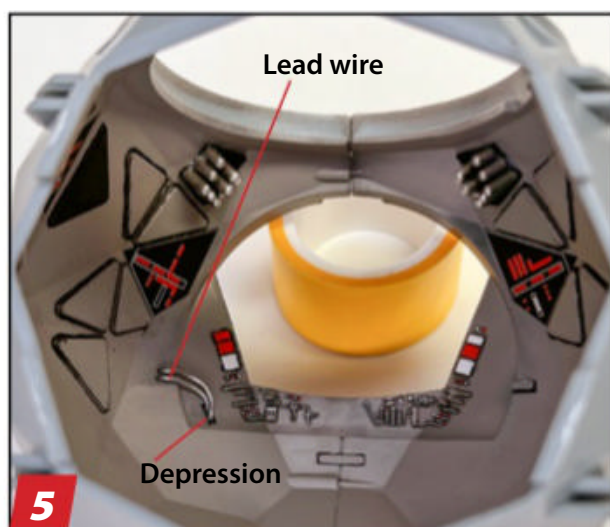
2 I was a bit concerned — needlessly — the light from the LEDs under the floor would be too harsh shining into the cockpit. I rubbed the bottom of the clear floor with a 1200-grit sanding pad to soften and diffuse the light.



3 Before painting, I test-fitted the pilot, seat, and control yoke to the floor part. I wanted to make any fit adjustments first to minimize the chances of marring the finish later.



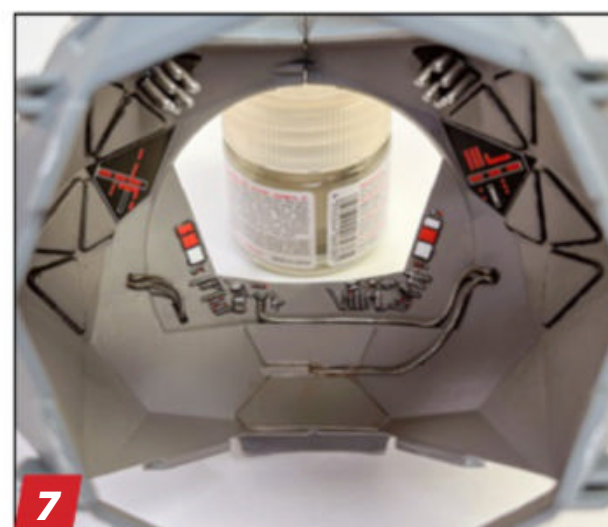
4 To prevent light bleeding through the clear floor, I sprayed the top with Vallejo Black Primer (No. 73.602) and then airbrushed the underside Tamiya Clear Red (No. X-27). After letting the clear red dry, I painted the top Archive-X Dark Reefer Grey (No. AX-005) and then peeled up the masks.



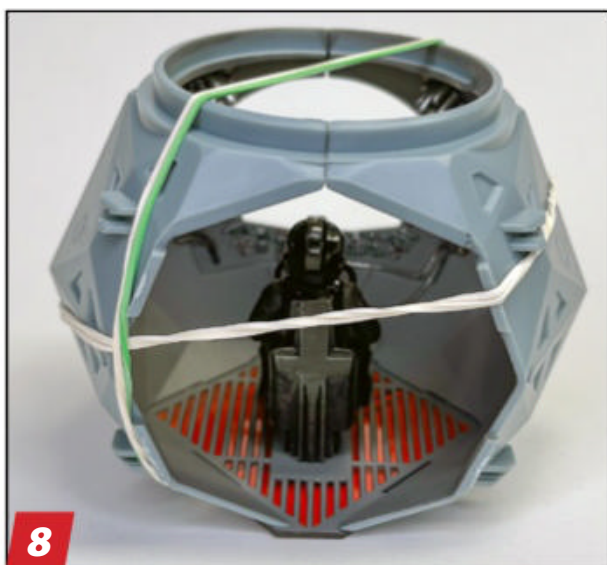
5 Inside the cockpit, after painting, decals, and gluing the halves together, I noticed the large locators for the front coaming were visible. There was also a visible depression to make a detail on the front of the coaming. I disguised the depression and the left locator with exposed cables made from .8mm lead wire.



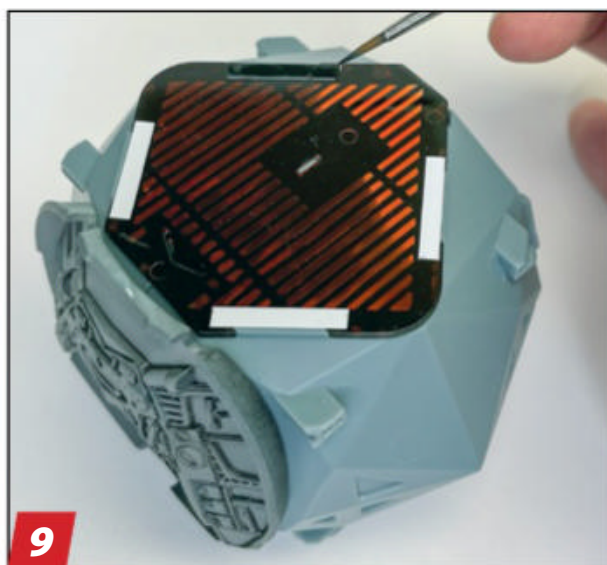
6 More .8mm lead-wire cables hid the other locators. I pressed masking tape into the areas around the visible join between the cockpit halves and traced the edges onto it with a No. 2 pencil. Then I transferred the templates to thin styrene sheet, cut out the parts, and glued them in place.



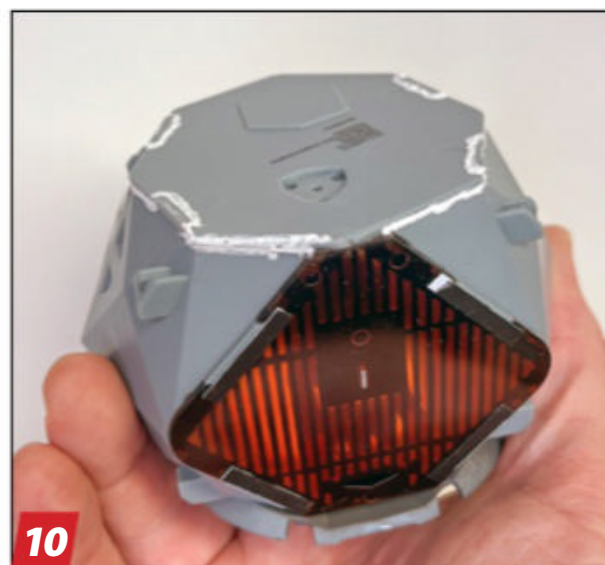
7 I brush-painted the new cables metallic aluminum to match the other greeblies and picked them out with a black wash. The central plates received a coat of dark reefer grey to match the surrounding cockpit walls.



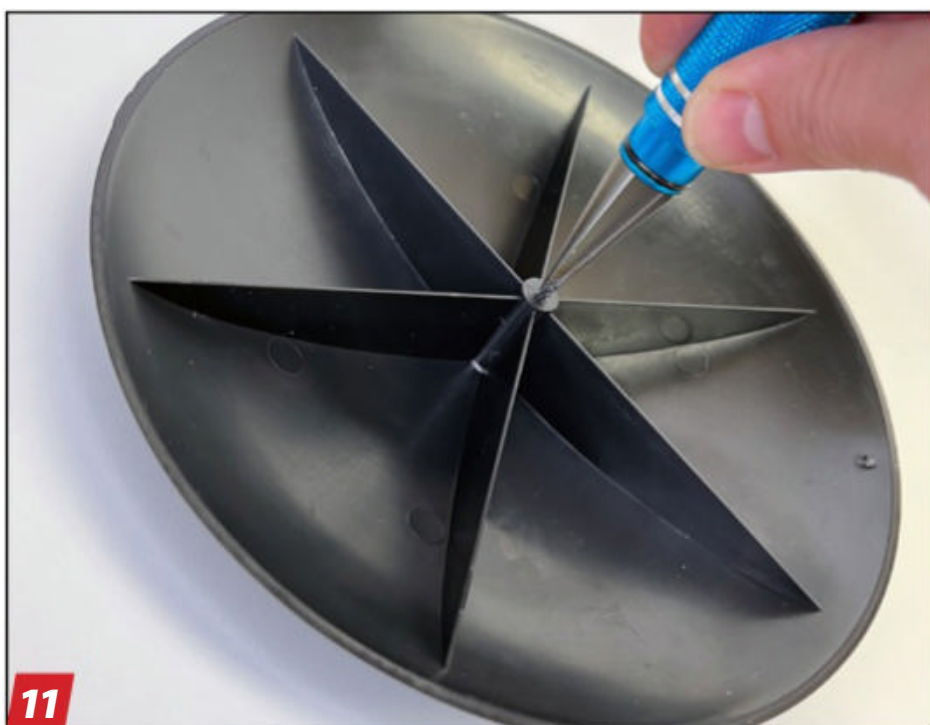
8 Although the kit instructions said to attach the cockpit's rear bulkhead before the floor, I found everything fit tighter if the floor went in first. Therefore, I cemented it in place and used a couple of rubber bands to keep the joints as gap-free as possible.



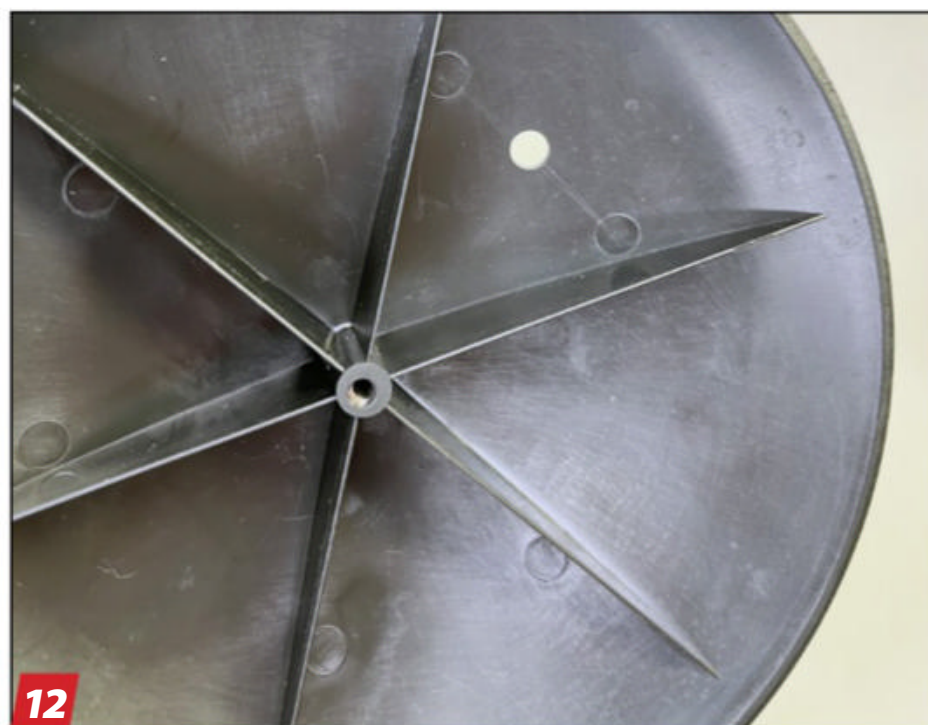
9 Concerned about possible light leakage at the joints near the edges of the cockpit floor, I cut lengths of thin styrene strip, glued them over the attachment points, and then brush-painted them black.



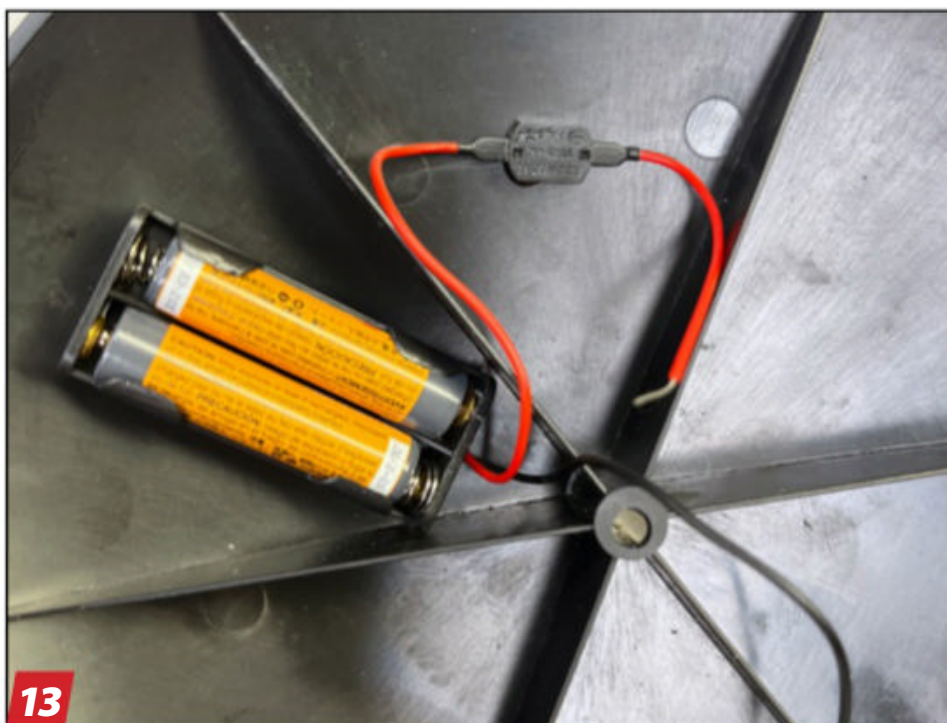
10 Similarly, after gluing the rear bulkhead to the rest of the cockpit assembly, I caulked the edge with Vallejo Plastic Putty (No. 70.401). No need to be super neat about it because it won't be seen. After it dried, I painted it black, as an extra precaution against light leakage.



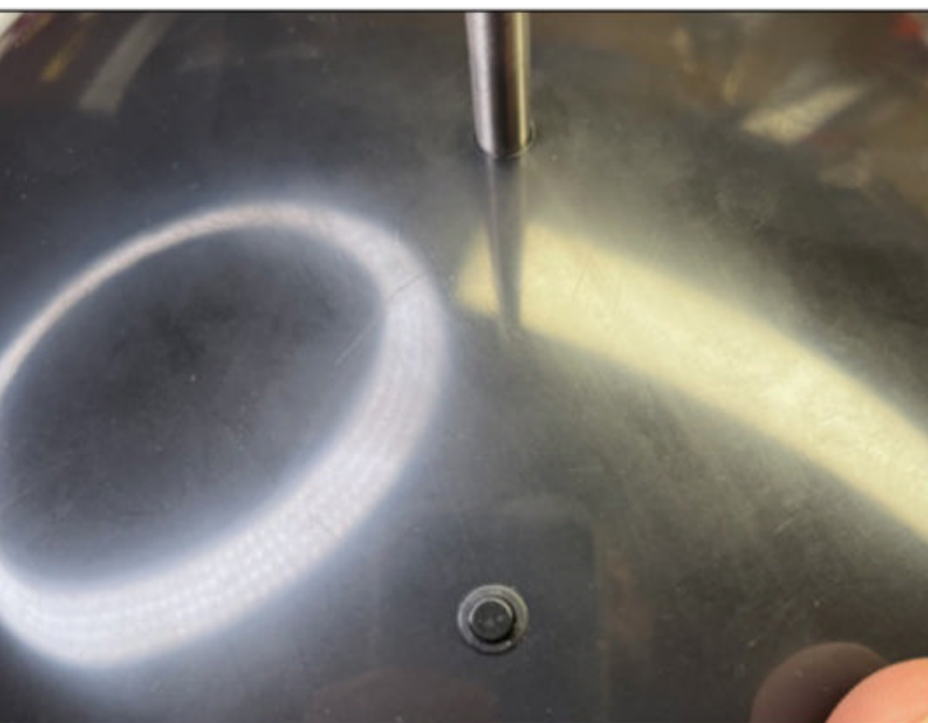
11 While the putty on the back of the cockpit dried, I turned my attention to the base, because, before long, I was going need power for the lights. First up was to take a reaming tool (a tool harkening back to my radio-control days) to open a hole to pull wires through.

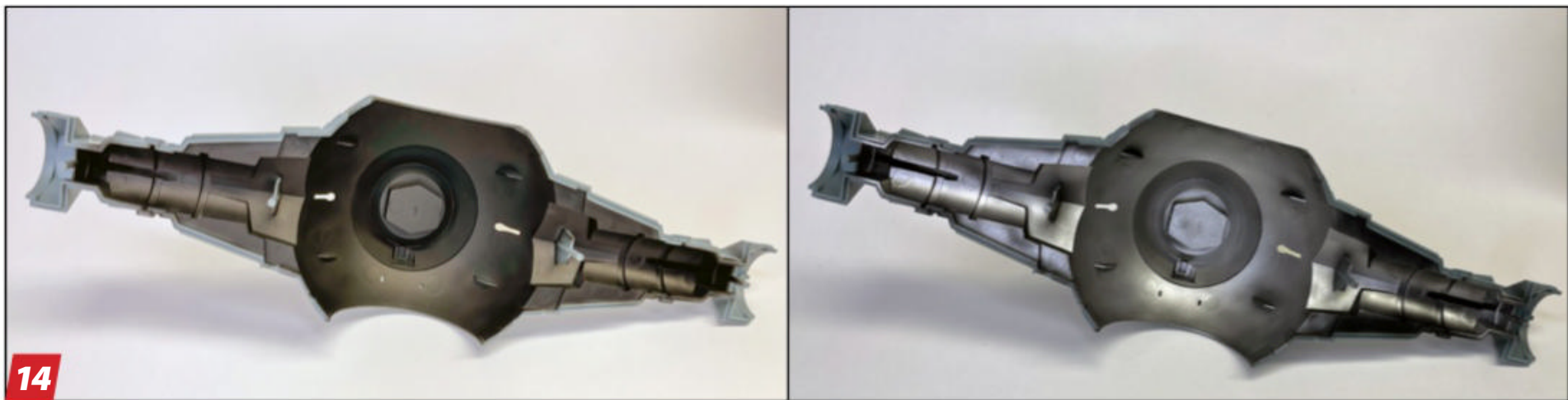


12 Very scientifically, I sketched a line between two ejector-pin marks, eyeballed the center, and made a hole for the power switch using the same tool.

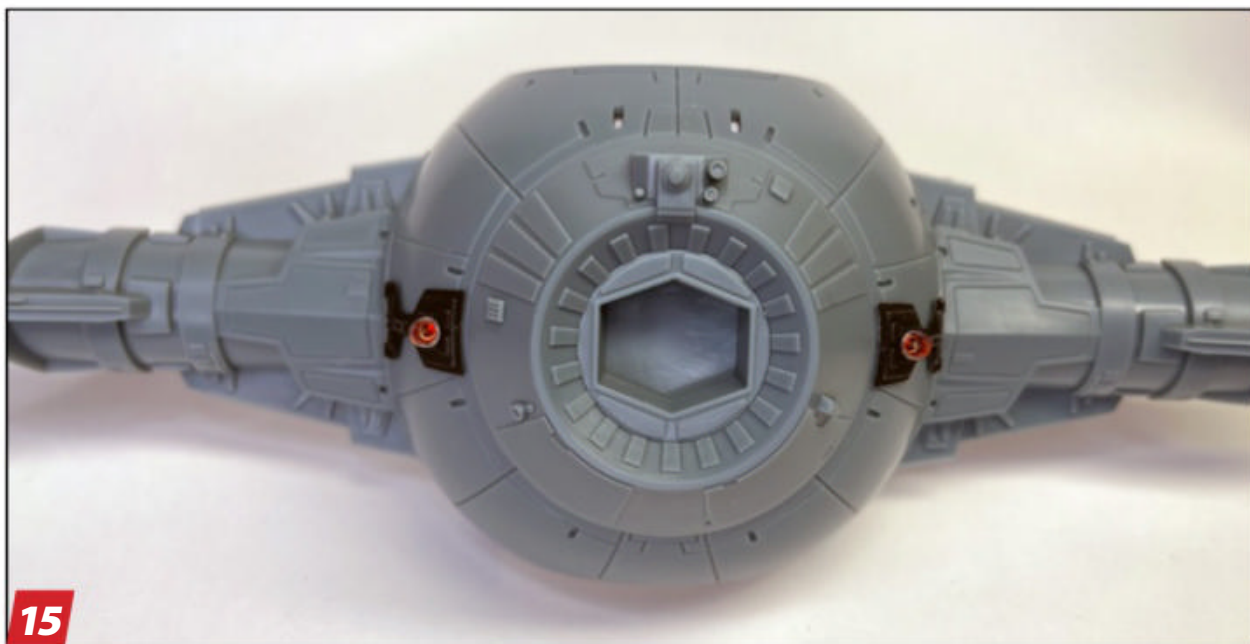


13 Keeping it simple, I mixed 5-minute, two-part epoxy and glued the battery box and power switch in place. At this point, I tested all of my LEDs to make sure they worked.

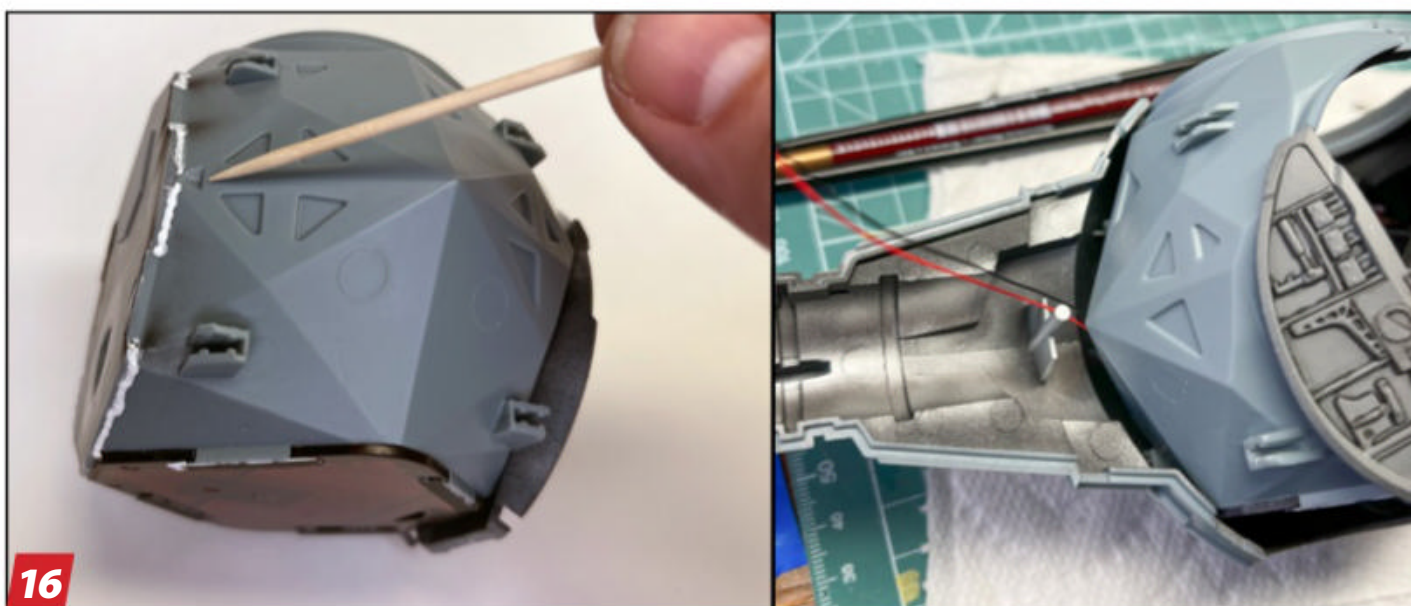




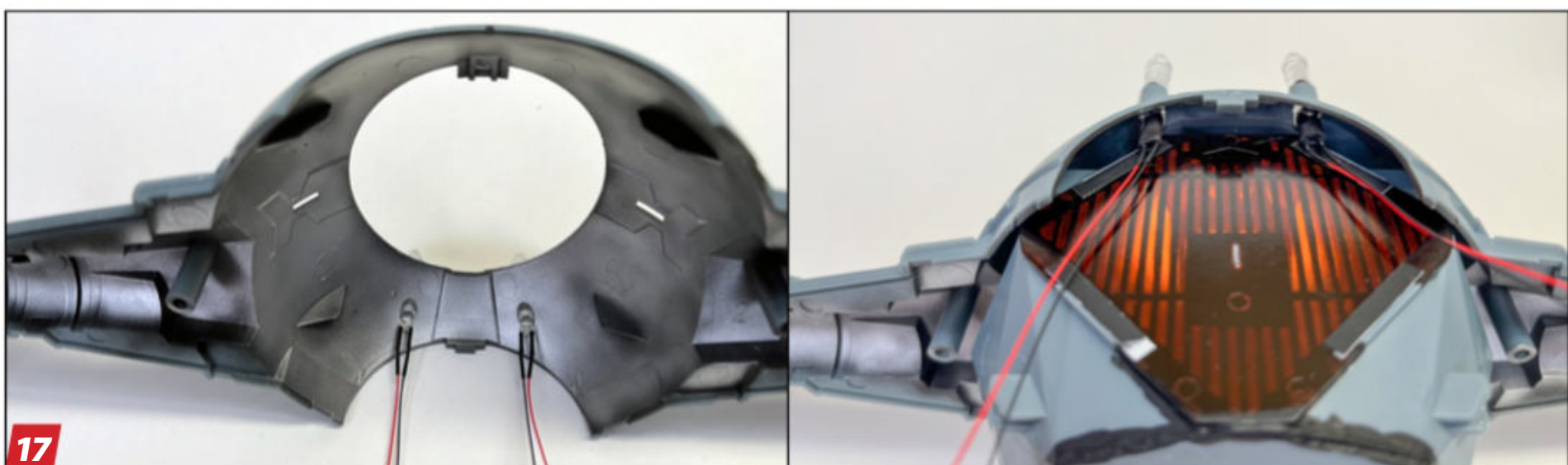
The interiors of both halves of the fuselage received a coat of black primer followed by a coat of silver paint. This helps block light shining through the plastic itself. Be sure to get inside the openings for the laser cannons on the fuselage front. It's a spot where light will penetrate the plastic.



Another spot where light can and will penetrate the plastic is around the housings for the twin ion drives. I primed the parts, inside and out, before attaching the clear engine parts. I pre-painted them clear red, and then brush-painted a couple of coats of primer on the outside to match the housing.



Round 2 provides small recesses on the rear of the cockpit exterior to accommodate 3mm LEDs. To make sure the cockpit sat flush in the rear half of the fuselage, I sanded the corner behind the LED recesses (see toothpick). That allowed the cockpit to sit correctly with space to run the wires.

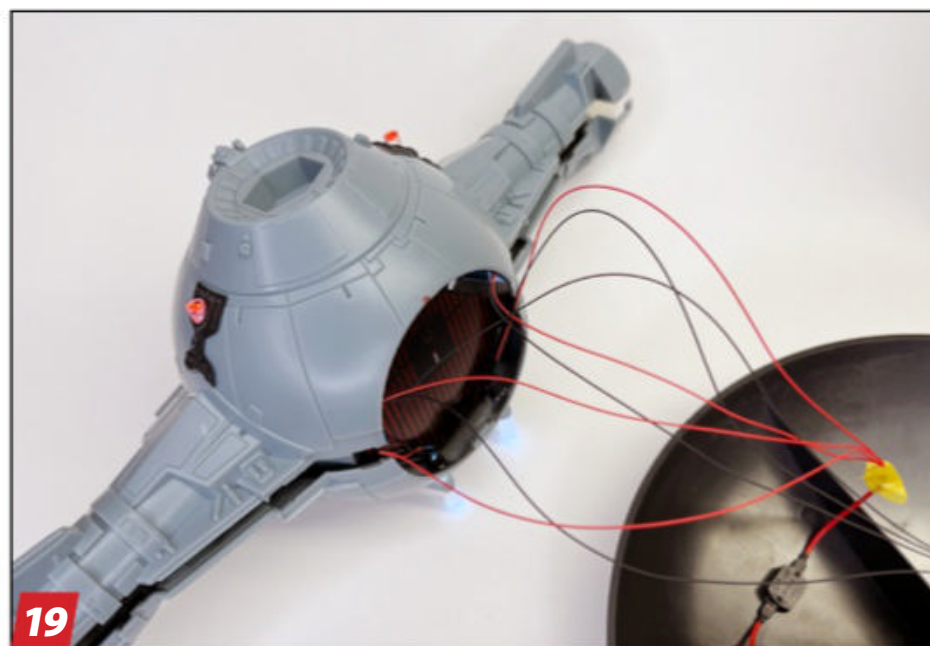


I glued the clear laser cannons into their housings and then epoxied LEDs to the rear of each. Test-fitting showed that the front coaming did not sit flush with the interior of the front fuselage half, so I hedged my bets against light bleed and wrapped the LEDs with $\frac{3}{16}$ -inch heat-shrink tubing.



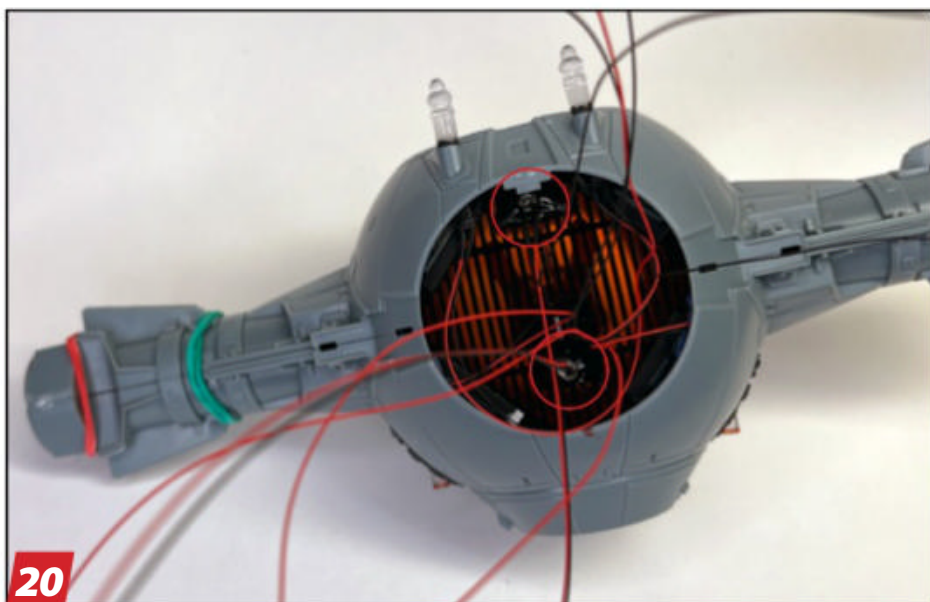
18

With the cockpit glued in the front of the fuselage and no good access to the seam between the fuselage and coaming, I worked sections of microcell sponge into the space between the cockpit and fuselage and up tight against the back of the seam. Flexible and dark, it did a great job of blocking any light and couldn't be seen from the outside.



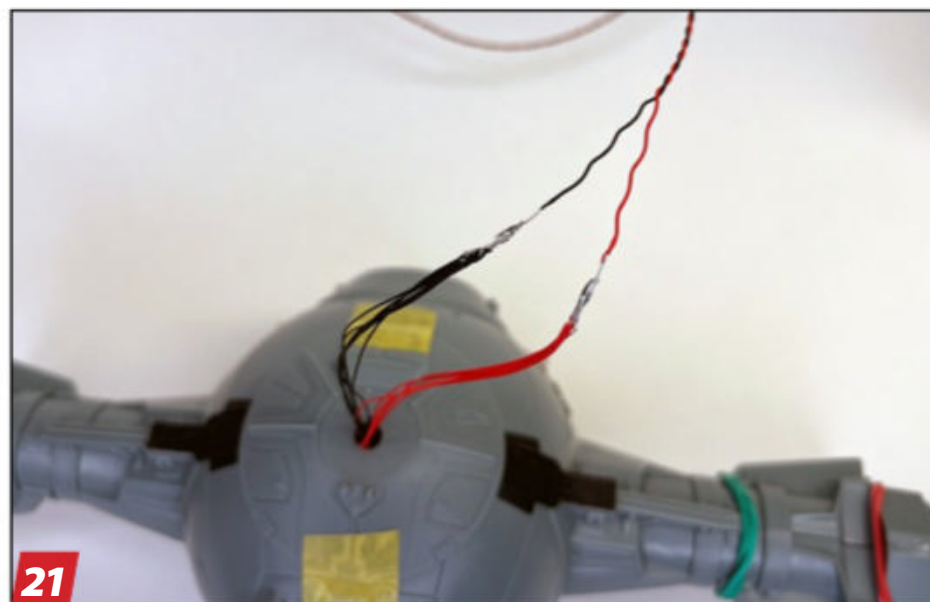
19

One final light test before gluing together the fuselage halves and sealing away access to the cannon and engine LEDs. Again, Round 2 was thinking ahead and contoured the mating surfaces of the fuselage halves to block light. I applied Revell Contacta liquid cement, pressed the halves together, and clamped them with rubber bands.



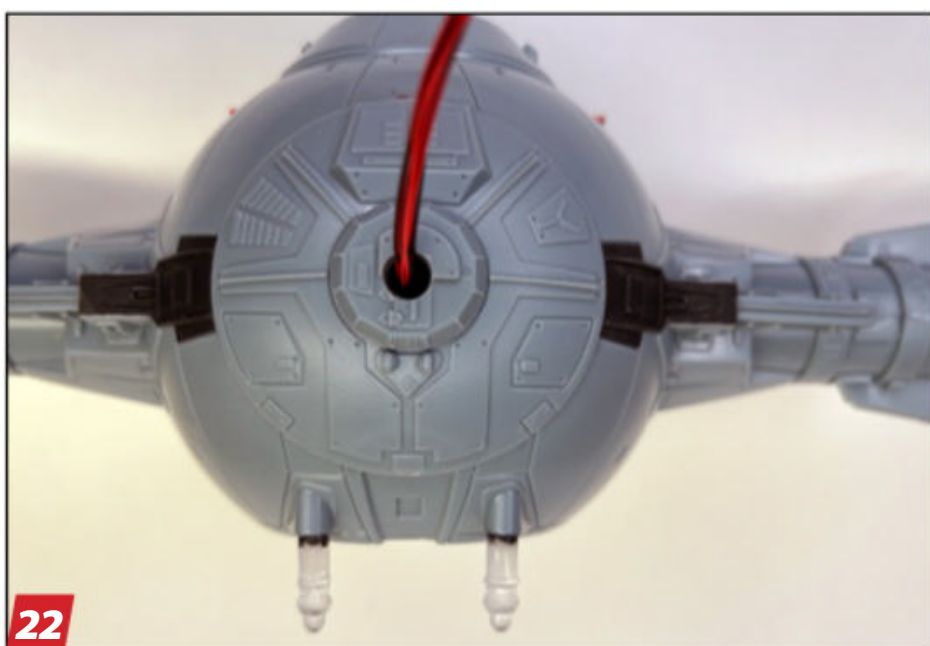
20

Peering through the wires, you can see the final two LEDs epoxied into position on the floor (circled in red), one under the pilot's seat and the other under the controls. It seems Round 2 thought those the proper spots because there are two shallow placement suggestions on the bottom of the floor, so I used them.



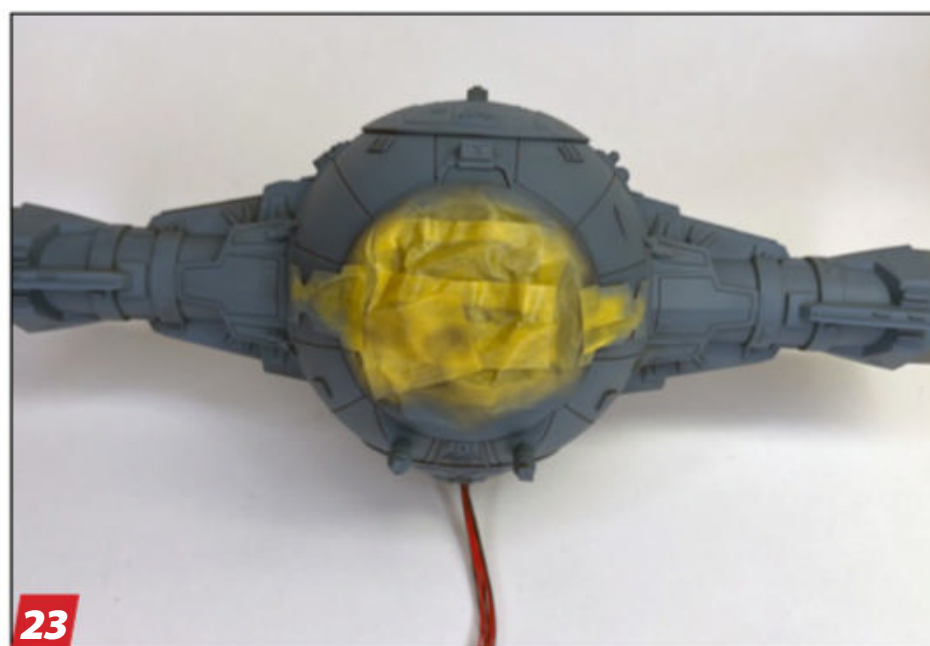
21

I gathered together the positive (red) and negative (black) LED leads separately and twisted their ends together after pulling them through the bottom of the fuselage. Because I was wiring in parallel, not series, each connection was soldered to matching lengths of wire and covered with heat-shrink tubing.



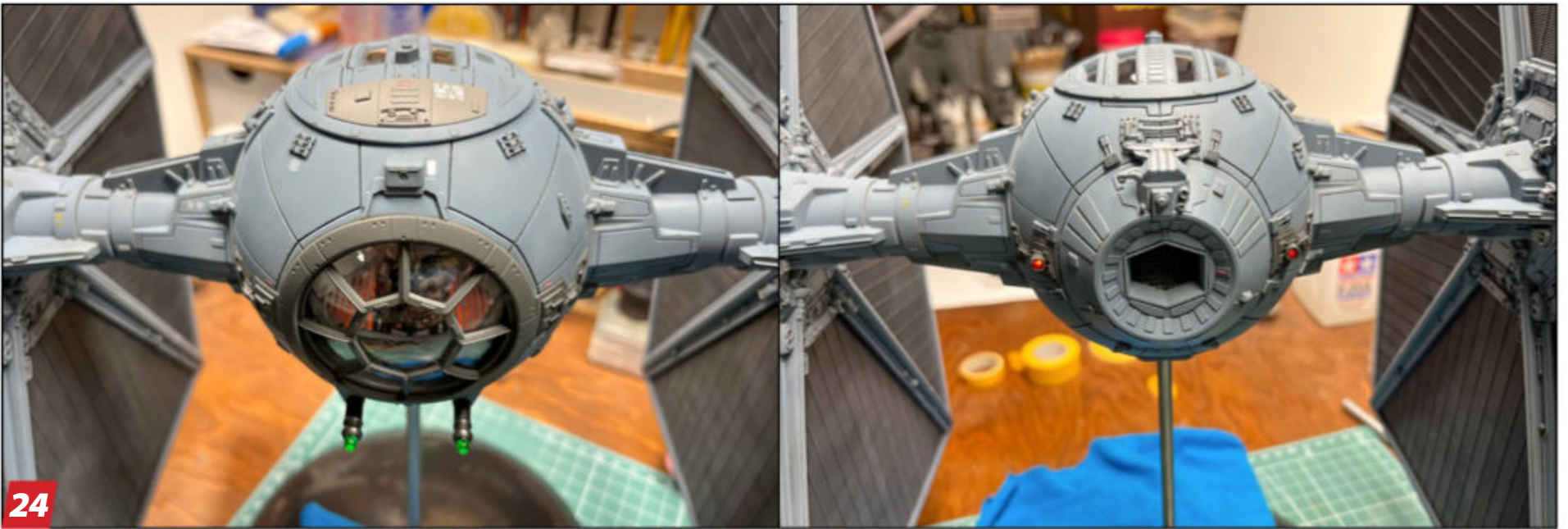
22

The kit makes the very bottom part of the fuselage optional and doesn't have a hole to accept the metal stand. Once again, I turned to my reamer and, using the locator post on the back of the part as a guide, opened a hole to accept the aluminum stand. This provided detail where the kit would have left a flat expanse.

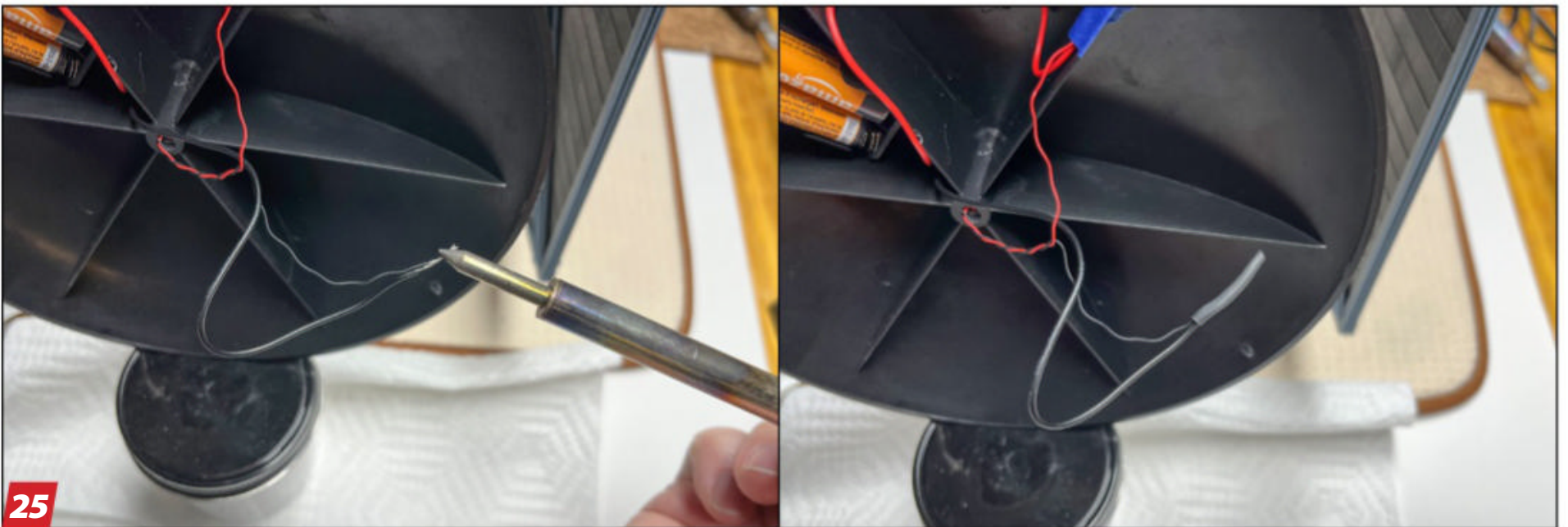


23

At this point, it was time to finish building the rest of the TIE fighter and paint. I went with Archive-X ILM Stormy Sea (No. AX-042), 1975 Engine Black (No. AX-011), SP Dark Lark Grey (No. AX-008), and Light Grime (No. AX-004), all color matched with the original paints used on the ILM studio miniatures.



After final paint, assembly, and decals, all I needed to do was pull the wires through the metal stand into the base. Not that there was much I could do if the lights didn't work at the is point, but I needed to run one more test, just in case something was amiss. Everything worked!



With that, I soldered the leads from the TIE fighter to the leads in the base — red to red, black to black — and covered each with a final bit of heat-shrink tubing. After tucking the wires up under the base and taping them in place, this enormous TIE fighter was ready to hunt some Rebels! **FSM**





◀ **JOHN R. THURBER**
CONWAY, ARKANSAS

John made this Tamiya 1/35 scale M60A1 with Explosive Reactive Armor straight from the box and added stowage from his spares box.

▼ **MARCELO PABLO VISINTIN**
PIANELLA, PESCARA, ITALY

Italian modeler Marcelo painted his Kinetic 1/48 scale FMA IA-58A Pucará with colors from Ammo by Mig Jimenez, replaced the wheels with Reskit aftermarket parts, and detailed with Eduard photo-etched metal.



▲ **GREG MAIOCCO**
EBENSBURG, PENNSYLVANIA

Greg's 1/4 scale bust of Uncle Fester of *The Addams Family*, as portrayed by Christopher Lloyd, is a single-piece, 3D-printed model distributed by J.S. Studios. Greg painted Fester with acrylics and shaded him with chalk.





◀ **ROBERT HOLMSTROM**
MORRISVILLE, NORTH CAROLINA

Using Vallejo acrylics and 502 Abteilung oils, Robert painted and weathered a Tamiya 1/35 scale M60A1 with ERA that he detailed with Eduard photo-etched metal. He said that the vinyl “rubber band” tracks from the kit were challenging to weather. It sits on groundwork made using Vallejo terrain products.

▲ **PAUL RIDER**
RICHMOND, INDIANA

Paul built his Fine Molds 1/72 scale Kayaba Ka-1 autogyro out of the box. He used Tamiya paint and the kit markings supplemented by Warbird Decals. Paul added model railroad grass and a photo background from an Apple iPad.

◀ **RAÚL RODRÍGUEZ GONZÁLEZ**
FUENLABRADA, MADRID, SPAIN

Raúl built an Airfix 1/72 scale A-4B gear-up in flight over Vietnam. He painted the Skyhawk with Vallejo acrylics and weathered with Ammo by Mig Jimenez products. Raúl mounted the plane on an acrylic rod.

A LIFELONG MODELER

*building what brings
him joy*

BY JIM KAMPMANN AND TIM KIDWELL
PHOTOS BY TIM KIDWELL



Bill Jenkins 1965 Plymouth A990 'Black Arrow'

This is a replica of Bill Jenkin's first NHRA win at the season opening Winternationals 1965. A Moebius Models 1/25 scale kit serves as the base for the model, but a lot of kitbashing went into this project, including additional engine details. The body wears Tamiya paint, Bare-Metal Foil, and Slix decal.

Jim Kampmann remembers his first model: an AMT 1/43 scale Barracuda given to him by his father in 1968. That same year, Jim's father and grandfather took him to the races at the Donnybrooke Road Course in Brainerd, Minnesota, and the rest is, as they say, history.

"I was always attached to cars and trucks as a boy, so when I was introduced to plastic models by my dad, I was hooked!" Jim said.

Although an architect now, Jim was once a photographer at Brainerd International Raceway and has remained a huge fan of racing, its history, cars, and drivers ever since that first taste in '68. Drag

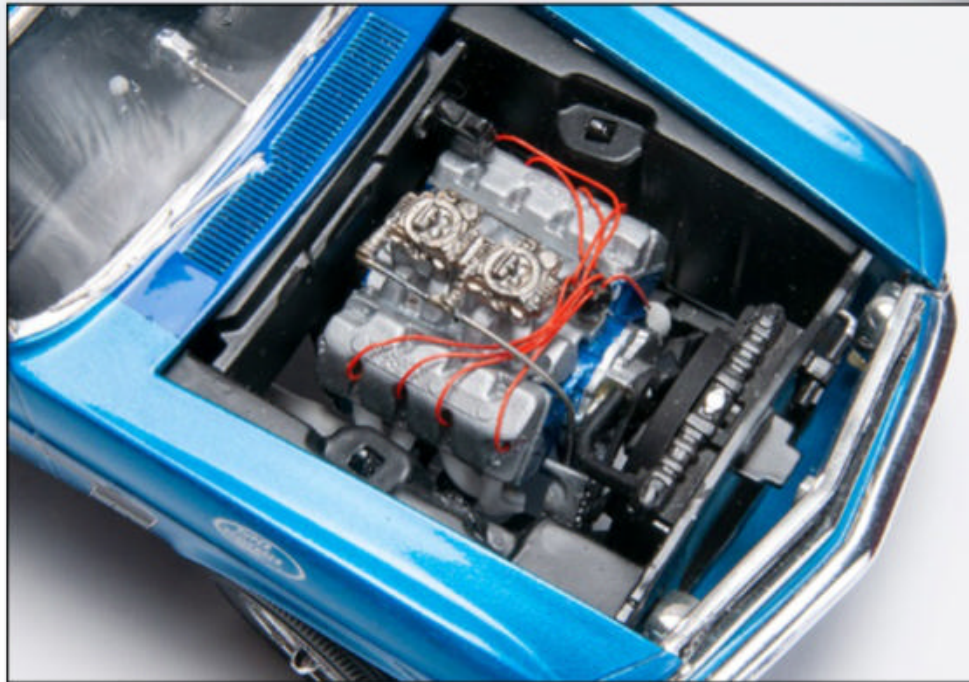


racing became another obsession after watching races live in the early 1970s, but his love affair with cars hasn't been limited to the racetrack.

"I own a 1932 Ford coupe that a friend and I built in his garage," Jim said. The choice in topic shouldn't come as a surprise to those who know him and his admiration for the Revell 1932 Ford series of kits from the mid-1990s. Designed with several build options, Revell manufactured a number of

different body choices, included extra parts, and were accurate to allow modelers to replicate real cars, making them, in Jim's opinion, a landmark kit series.

Over the years, Jim has explored all aspects of modeling, from box-stock builds to conversions and kitbashing to scratchbuilding. He also prefers resin aftermarket products in no small part because he and a friend used to own a resin company called The Good Stuff. Focused



Butch Leal/Mickey Thompson 1969 Boss 429 Mustang

A replica of a car owned by Thompson and raced by Leal nursed out of a Revell 1/25 scale 1969 Mustang CJ kit. I modified the front half of the chassis with one from an AMT 1967 Mustang for the posable steering. The engine and hood scoop came from the Monogram 1970 Boss 429 Mustang, and I took the wheels from a Revell "Miss Deal" Studebaker Funny Car. My spares box offered up the tires. I added headers, tunnel ram intake, and four-barrel carburetors, scratchbuilt the carb linkage, and ran fuel lines and spark-plug wiring. The two-tone blue paint is decanted Tamiya colors, and I marked the car with Slix decals.



1965 Dodge Coronet A/FX 'Hemi A Go-Go'

I had to include one of my models built from The Good Stuff, the resin company Jim Johnson and I owned for many years. This was one of the many 1/25 scale kits we offered and included everything except the tires, engine, headers, roll bar, steering wheel, and driveshaft. We even provided reference drawings, glass, and instructions. I employed my good friend John Robinette to draw up the decals for me, painted with Testors lacquer, detailed with Don Kerns aluminum velocity stacks, and trimmed it with Bare-Metal Foil.

on drag racing and street rods, The Good Stuff became well known among car modelers who enjoyed those subjects.

When he's building a replica of a real car, Jim dives in and tries to make it look as close to the actual subject as possible. With as many model-building friends as he has, a compliment like, "It looks real," means a lot to him.

"I really try to make everything look as clean and crisp as possible," he said. "First impressions are huge, and whatever you can

do to draw a person in to want to look closer I feel is important."

That ethic has worked well for Jim over the years, having garnered recognition at shows and contests for his scale models, including the Cult Theme award at NNL Toledo Nationals back in the late 1980s and the final show in 2019. Another win special to him was taking first place in the Open Wheel category at the 2011 IPMS/USA National Convention, a contest that has been challenging for car modelers.

"The awards that are the most rewarding, for me, are the ones you don't expect to win," Jim said.

A long-time *FSM* reader, Jim considers himself a closet aircraft modeler and has always been fascinated with World War I and World War II planes, but don't think that's going to displace cars for him. He has plans for several drag-racing models.

"As a good friend likes to say, 'Whatever brings you joy.' I think that's true with most everything."



1932 Ford five-window coupe

The Revell 1/25 scale 1932 Ford kits were a game changer! There are endless possibilities, we just needed a blank canvas. Like a lot of the hot rods I build, I get ideas from going to car shows and our local event is the Back to the '50s annual show in St. Paul, Minnesota.

This '32 five-window features carbs, intake, brake drums, and headers from Replicas & Miniatures Co. of Maryland. Like 99% of my models, I used Alclad II Chrome lacquer because it looks "real" to me. The front axle is turned aluminum by Bob Dudek, and the rear wheels and tires are from a Monogram "Little Coffin" kit. I painted with Testors Inca Gold lacquer and made a personalized "HEMI 32" license plate with Acme License Maker.





Cobra Daytona Coupe

I inherited a Starter 1/43 scale Cobra Daytona coupe resin kit from a collection of a long-standing friend and RPM club member who fell onto hard times, and we had to clear out a storage garage that he could no longer afford. Essentially built out of the box save for the Goodyear tire decals (including the spare) from Indycals, one of the unique challenges of the kit are the vacuum-formed windows that go in from the outside. I used Pledge Floor Gloss to adhere the clear headlight covers to the body. The color is Splash Paints Guardsman Blue.

I was able to photograph one of the original cars (there are only six!) and that inspired me to build the model.



1930 Ford roadster

This is one of a couple of Revell 1/25 scale 1930 Ford roadster kits I've built, and, if you haven't tried one yet, they are a lot of fun. I pulled the front wheels and tires from an AMT "Ala Cart"; the rear tires are from an AMT Parts Pack, and the wheels came out of an AMT '56 Ford Victoria.

I modified the windshield to tilt open like the real car, added an ignition key to the kit's dash, and fashioned seat belts from Tamiya white masking tape and Detail Master photo-etched metal buckles. Last, but not least, the front axle was lowered and narrowed to better accommodate the Buick brake drums. For this roadster's body, I chose Chevrolet Honduras Maroon metallic.



Slingster dragster and '61 Ford Ranchero push car

I built these two models at the same time because I wanted a push vehicle for the Revell 1/24 scale Slingster. Other than lowering the AMT 1/25 scale '61 Ranchero, it was built straight from the box and finished with Tamiya lacquer and Bare-Metal Foil.

The Slingster (aka, Monogram "The Sizzler") was detailed with Testors lacquer, photo-etched metal wheels, fuel lines and spark-plug wires, and Alclad II on the rear wheels. I also included seat belts and a harness.

I've always admired the drag racing models by Ken Andrus, and he inspired this project.



1951 Anglia

We have a "white elephant" gift exchange at one of the modeling clubs I belong to, and I received a Revell 1/25 scale 1951 Anglia one year. I started by gluing the separate front clip to the body to make it one piece, cut open the hood, and then I was off to the races.

The chassis and interior are a combination of parts from several kits including a Revell '69 "Chi-Town Hustler" Funny Car and a Revell Oldsmobile Pro Stock. The 392 Hemi engine came from a Revell '32 Ford coupe. I added Don Kerns aluminum injectors to a parts-box intake manifold along with plug wires and a magneto.

Front wheels and tires were imported from a Revell "Hawaiian Charger" Funny Car, and I used rear wheels and Goodyear Blue Streak slicks from an AMT Parts Pack. I chose yellow tinted glass for all of the windows and custom mixed the body color from Tamiya lacquer. I decided not to glue the doors shut, which is my only regret. **FSM**

Brush out a **WARTHOG**

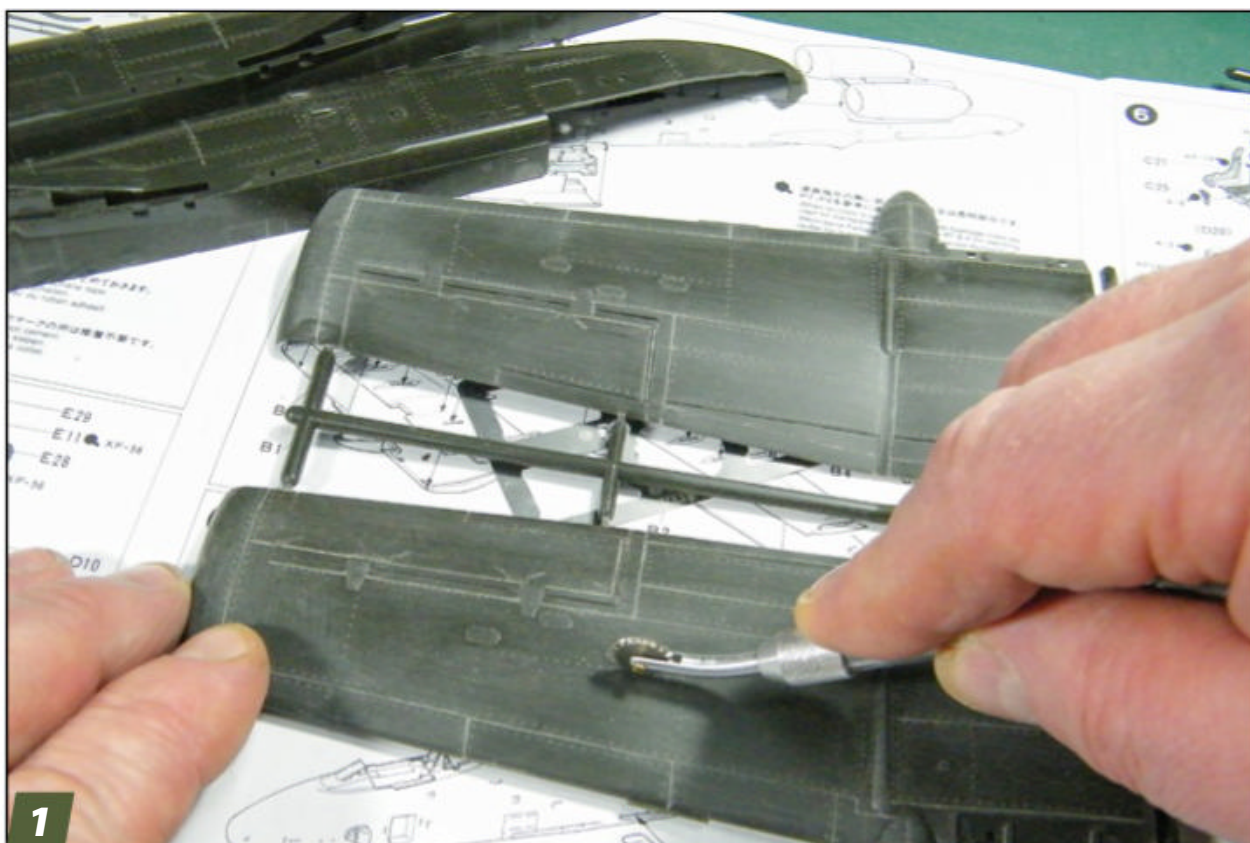
**Easy modifications improve
an old Tamiya kit**

BY JOHN C. BACKENSTROSS

The 174th Tactical Fighter Group, a unit of the New York Air National Guard, began transitioning to the Fairchild Republic A-10A Thunderbolt II (affectionately known as the Warthog or Hog) close air-support fighter in 1979. With the Hog's arrival, the Guard changed the 174th's status from fighter group to tactical fighter wing (TFW). Known as the "Boys from Syracuse," I wanted to commemorate the switch with a Warthog of my own and began research and planning.

Digging into my stash, I found a Tamiya 1/48 scale A-10A (No. 61028). Originally released in the late 1970s, followed up with a new box in the early '80s, and re-released in the '90s with new decals, I wasn't surprised by the raised surface elements and lack of detail — the antithesis of Tamiya's current kits. But what would it take to make bring this one up to snuff? I was about to find out.





1

Beginning with the wing halves, I recessed raised panel lines by guiding a scribing tool along the edge of a 6-inch steel ruler. Next, I added rivet detail with a pounce wheel.



2

Initially, I planned to add an abundance of aftermarket parts to the A-10. No dice. The only product I found available and compatible with the decades-old kit was an Eduard photo-etched metal (PE) detail set (No. 48328).



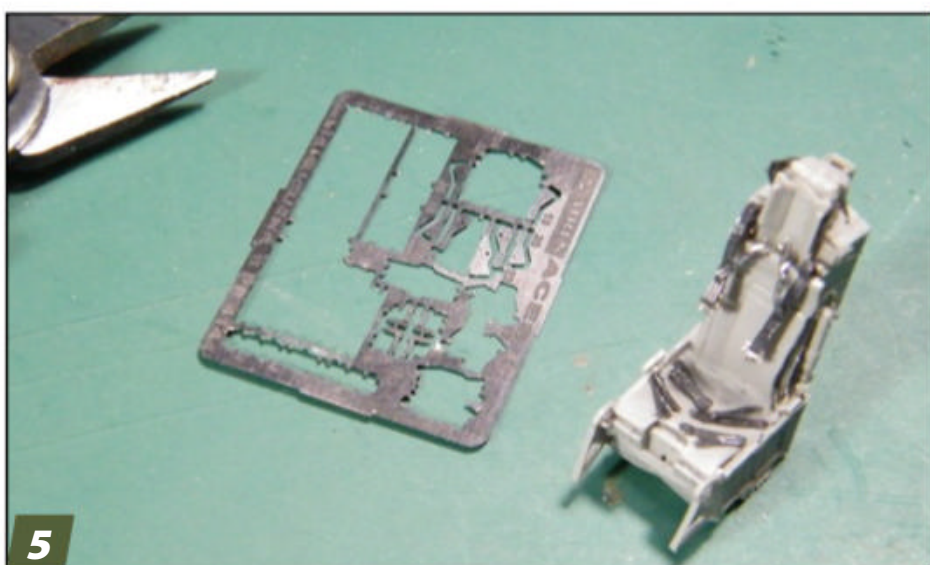
3

Tamiya's instructions called for 45–50 grams of weight in the nose. I always add weight to my aircraft models, but this seemed extreme. I eased off and superglued two fishing sinkers up front for a combined 23 grams. (Psst! They did the job, but any less — tail sitter!)



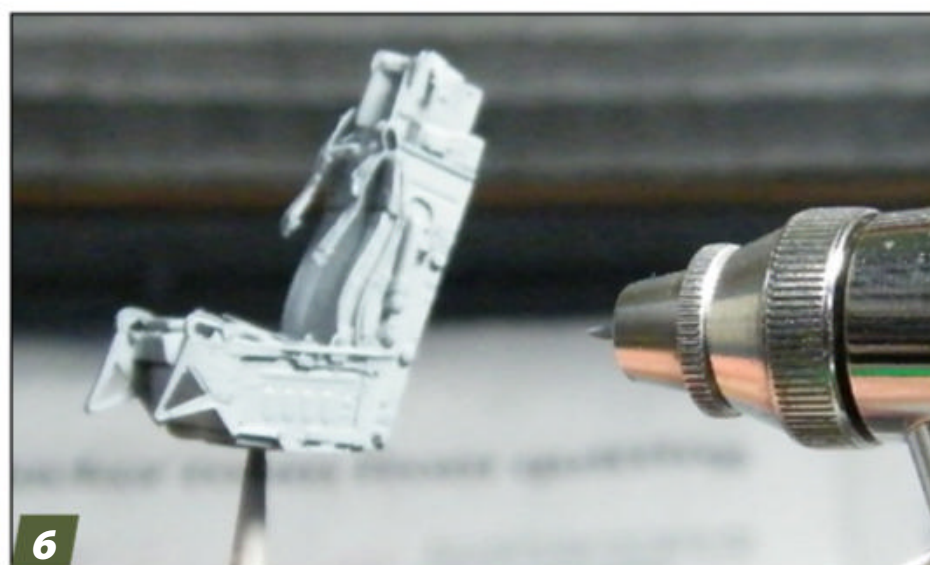
4

The scratchbuilt fuel transfer pipe leading from the aerial refueling receptacle was fashioned from .076-inch styrene rod. I replicated the couplings by wrapping narrow strips of masking tape and set them with thin superglue. Eduard PE details the top of the nose-gear bay.



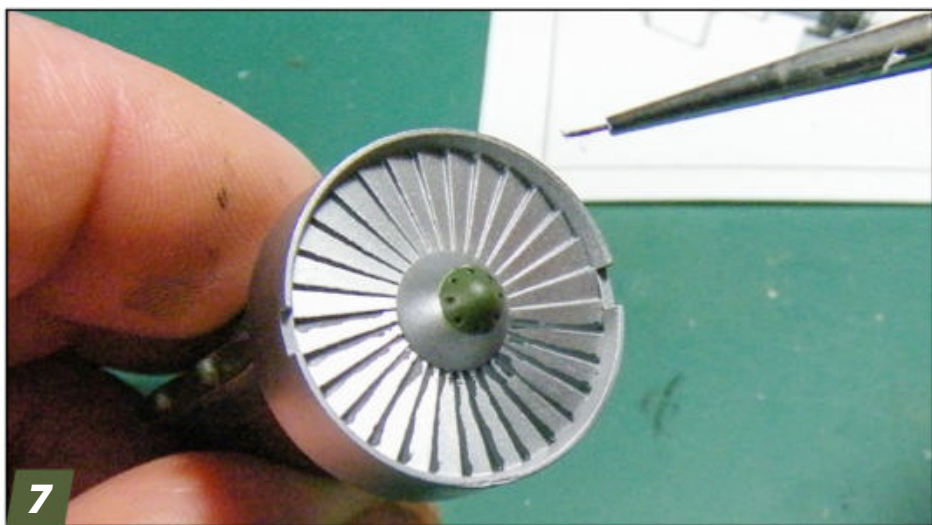
5

I scrounged up an Aires Aces II resin ejection seat (No. 4144) left over from a two-pack and detailed it with the accompanying PE. Similarly, I added the Eduard PE parts to the cockpit tub and forward console.



6

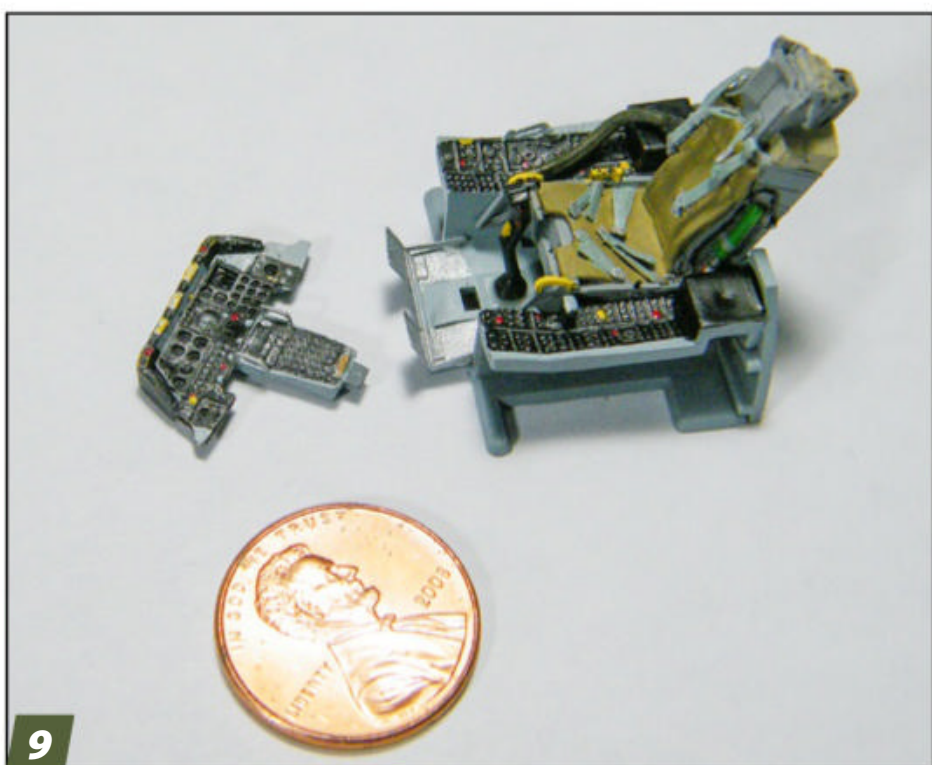
I primed the cockpit tub, console, and ejection seat with Tamiya Fine Surface primer. I base-coated the tub and console Mr. Color Semigloss Gray (No. C308); the ejection seat was painted dark gull gray.



7 While allowing the “front office” to dry, I focused on engine construction. I painted the housings Alclad II Aluminium (No. ALC101) and the fan blades Dark Aluminium (No. ALC103). For depth, I added shadows with flat black and a 30/0 brush.



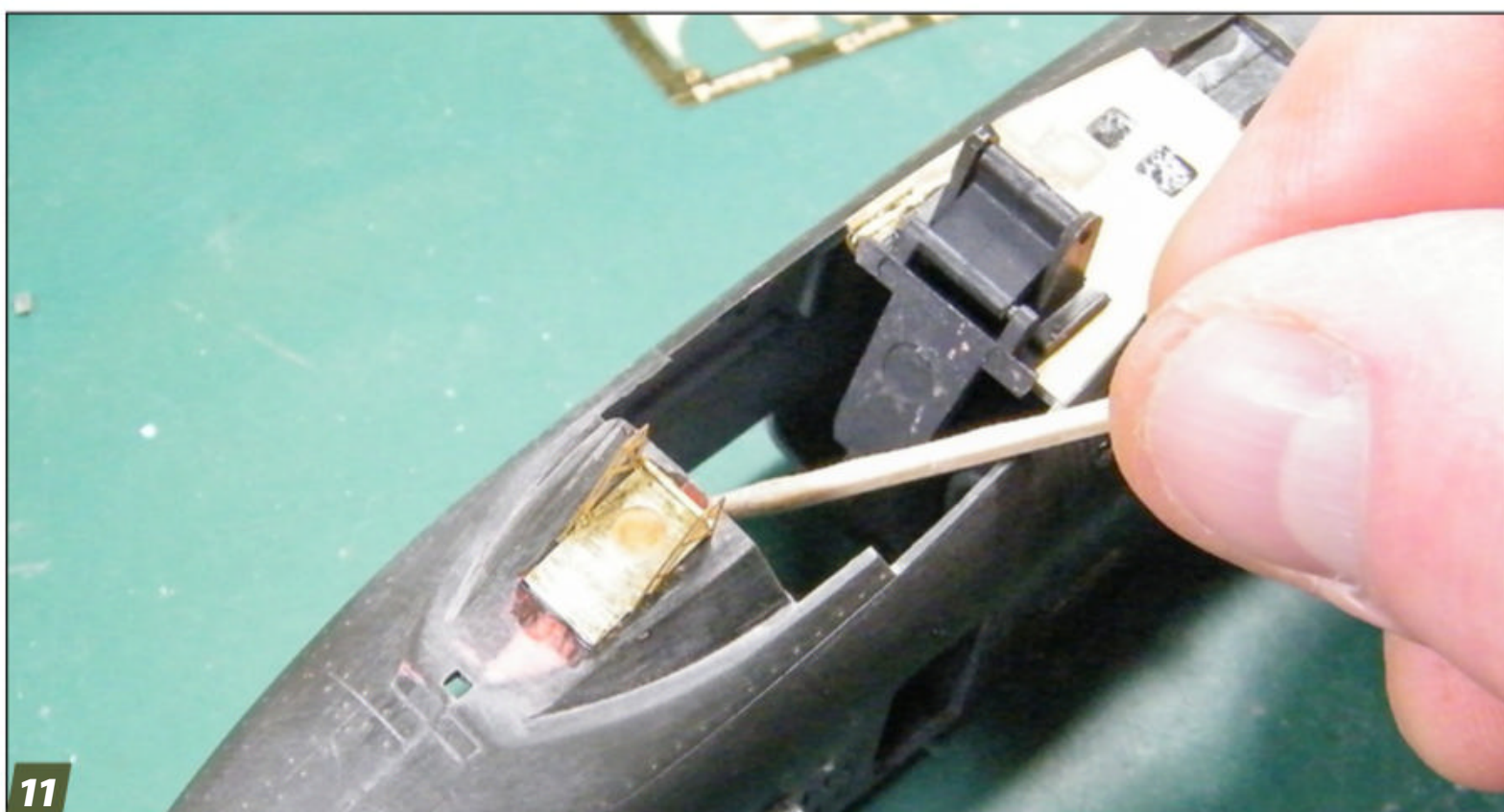
8 I airbrushed the engine housings Alclad II Pale Burnt Metal (No. ALC104) and the exhaust nozzles — what else? — Jet Exhaust (No. ALC113).



9 Climbing back up front, I airbrushed the instrument consoles flat black followed by dry-brushing to pop the details. A dab of Microscale Micro Kristal Klear on each of the gauges produced convincing glass.



10 Enhancing detail on the engine nacelles was much more challenging than on the wings and flatter surfaces. Rescribing panel lines and using pounce wheels to add rivet detail required a steady hand and patience. But you can see the improvement compared to the untouched nacelle on the port side.



After joining the fuselage halves and cleaning up seams with putty, I added PE details to the cockpit. When they were dry, I airbrushed the upper cockpit surfaces flat black. Then I installed the finished cockpit tub assembly and masked it for protection as the build progressed.



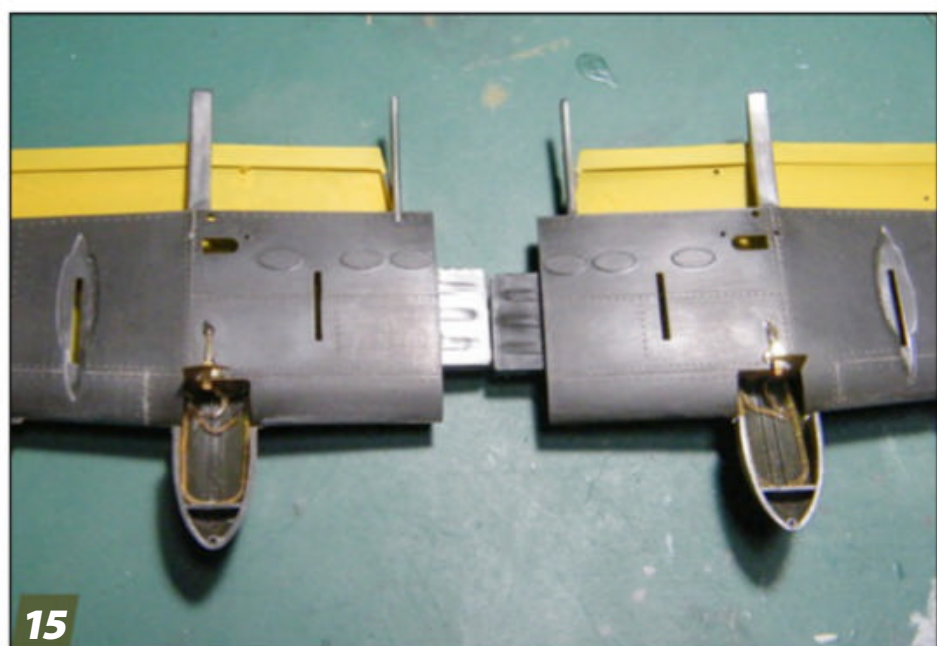
12 I fashioned the auxiliary power unit (APU) exhaust baffle from .125-inch round tubing mitered at a 45-degree angle. The APU baffle directs exhaust down and aft of the engine pod. It's an important detail that's often overlooked.



13 I'd added rivets and recessed panel lines to the wings, but I wasn't done yet. In order to modify the flap positions, I needed to first cut the necessary surfaces from the upper and lower wing halves. I made the incisions with a razor saw and hobby knife.



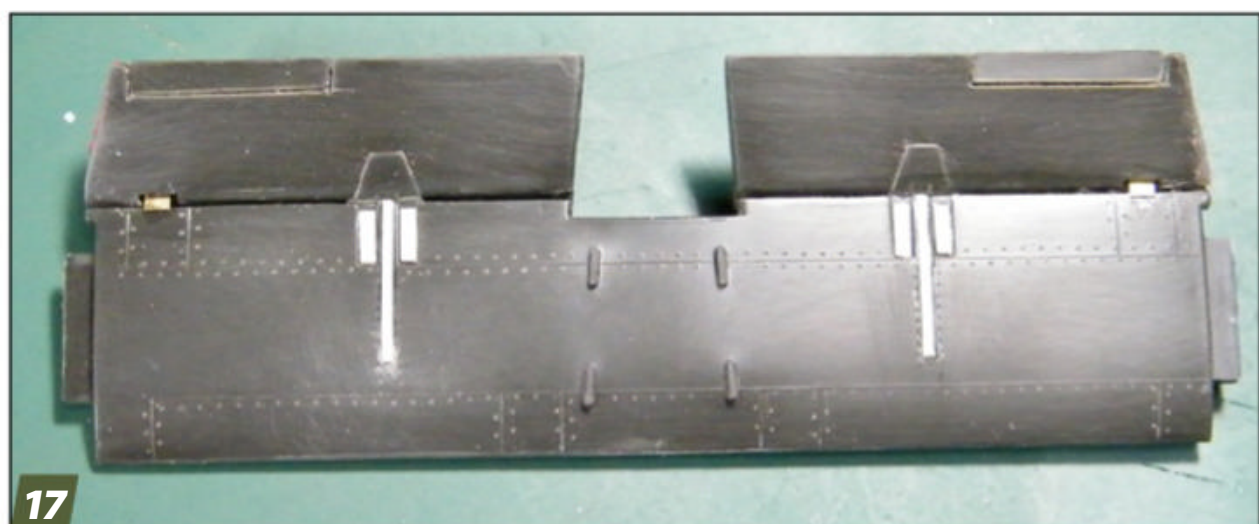
14 Next, I reconstructed the underside of the flaps using .020-, .030-, and .040-inch styrene strip and sheet and cemented them to the flap parts removed in Step 13. I modeled the flap actuators from .020-inch music wire glued to ¼-inch lengths of .092-inch styrene tubing.



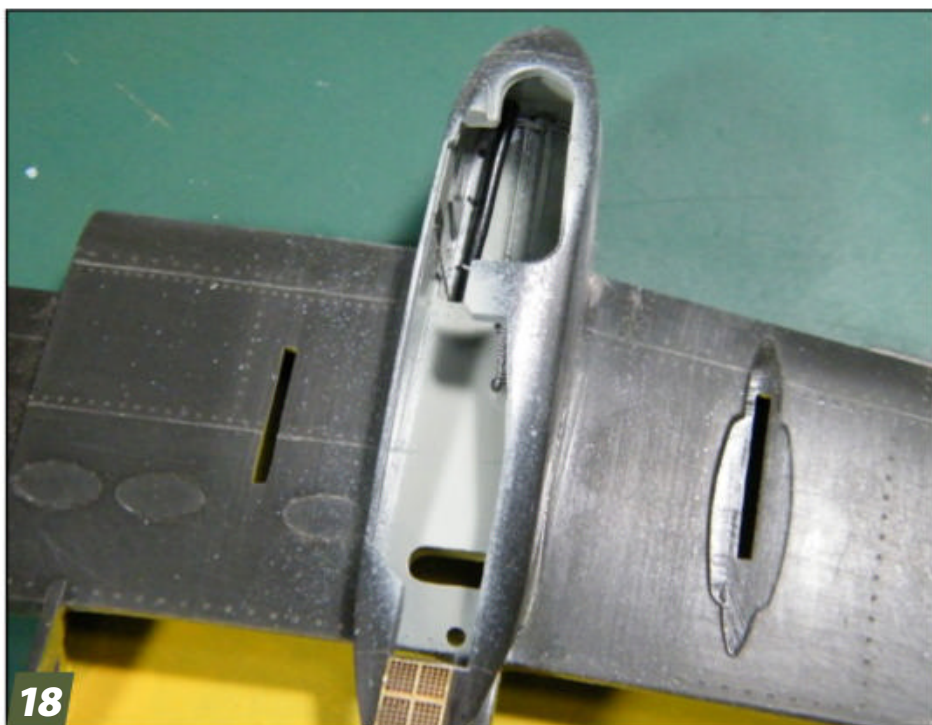
15 Before mating the wing halves together, I airbrushed yellow zinc chromate on the internal surfaces. Then I installed PE details to the upper gear-bay housing.



16 I noticed in various photos the A-10's elevators rest upwards while on the ground. I took a conservative approach and cut partially through the seam line so the elevators could be bent up. I removed the trim tabs from the lower elevators and partially cut the trim tabs on the uppers to position downward.



17 I improved the stabilizer's upper surface detail with .040-inch half round styrene strip and .020-inch flat strip narrowed to size. Outboard hinges were added using scrap PE. Underneath, a length of .015-inch wire replicated the trim tab actuator push rod.



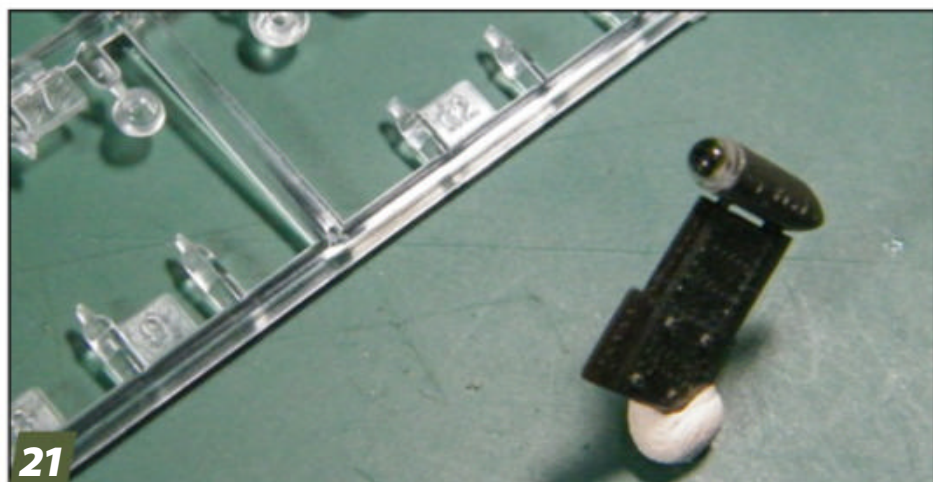
18 The landing-gear bays and struts received a coat of aircraft gray (FS16473). The fuel pipe leading to the single-point ground pressure refueling receptacle was made with .058-inch o.d. electrical wire painted black.



19 The pylon sway braces were improved with PE from the Eduard set, .014-inch wire, and .038-inch-diameter discs punched from .010-inch styrene.



20 I cut the rudder halves from the fins before assembly. The mass balance at the top of the rudders was made from .030-inch styrene and corresponds to a slot cut into the fin's trailing edge. The rudder hinges are .030-inch square strip, and the push rod is .015-inch wire.



21 For a quick improvement to the AAS-35 laser seeker pod, I cut off the forward tip of the pod. My spares box offered a dome lens that fit and looked better. I applied a drop of Tamiya Clear Green (No. X-25) to the inside of the lens followed by a 3mm plastic gemstone.



22 After the primer coat dried, I lightly sanded everything with a Scotch-Brite pad to smooth out gritty areas. Panel lines were pre-shaded with flat black enamel, thinned 3:1 thinner to paint. I always use an Iwata Eclipse gravity feed airbrush for pre-shading with the air pressure set to 15 psi.



23 For the camouflage, I used Euro dark green (FS34092), medium green (FS34102), and Euro 1 gray (FS36081). I thinned my enamels 1:1 with thinner to get the translucency I wanted. You'll have to adjust your mix for specific paints. I usually airbrush camo free hand, sketching the pattern first with a pencil.



I airbrushed Pledge Floor Gloss (PFG) over the airframe as a foundation for the decals. After applying the markings I'd found on eBay, I sealed them with another coat of PFG and applied a wash of black artist-oil paint and mineral spirits over the entire model.



After allowing the oil wash to dry one week, I flattened the sheen with Testors Dullcote and incorporated the landing gear and ordnance. Gray pastels applied with a half-inch sable brush followed, adding a slight variation to the weathering. With the canopy on, I called it finished! **FSM**

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A-10 Warthog – *Walk Around No. 17*,
Ken Neubeck, Squadron/Signal
Publications, ISBN 978-0-897474-00-9





To the moon, **ARTEMIS!**

Launch NASA's
newest rocket with
tape and paint

BY AARON SKINNER

With NASA focused on sending astronauts to the moon and ultimately to Mars, the agency has a new rocket — imaginatively named the Space Launch System. When an SLS lifted off from Launch Pad 39B at the Kennedy Space Center on Nov. 16, 2022, carrying the Orion spacecraft to its eventual lunar flyby, I wondered how long it would be until a kit depicting the Artemis I mission appeared. Not long apparently. Within a few months, Round 2 announced a 1/200 scale kit of the vehicle under its AMT label (No. AMT1423), which matches the scale of the brand's other spacecraft.

Let's face it, rockets make relatively simple models — AMT's Artemis I is a bunch of cylinders split in half with separate caps and details. It doesn't take a rocket scientist to build it. Painting is a whole other thing. There are stripes, pure- and off-white areas, and don't even get me to try and describe what's going on with the core stage. It's T-minus 8 feet of tape, so let's get started.



1 Leaving the main section and Solid Rocket Boosters (SRB) separate and omitting details such as conduits and engine bells, I airbrushed everything with Tamiya Liquid Surface Primer White (No. 87096) mixed with Mr. Color Leveling Thinner.



2 As desired, the primer revealed small gaps, so I pulled out my handy Glue Looper and flowed medium viscosity superglue into the seams. After applying accelerator and sanding the areas smooth, I reprimed the parts.



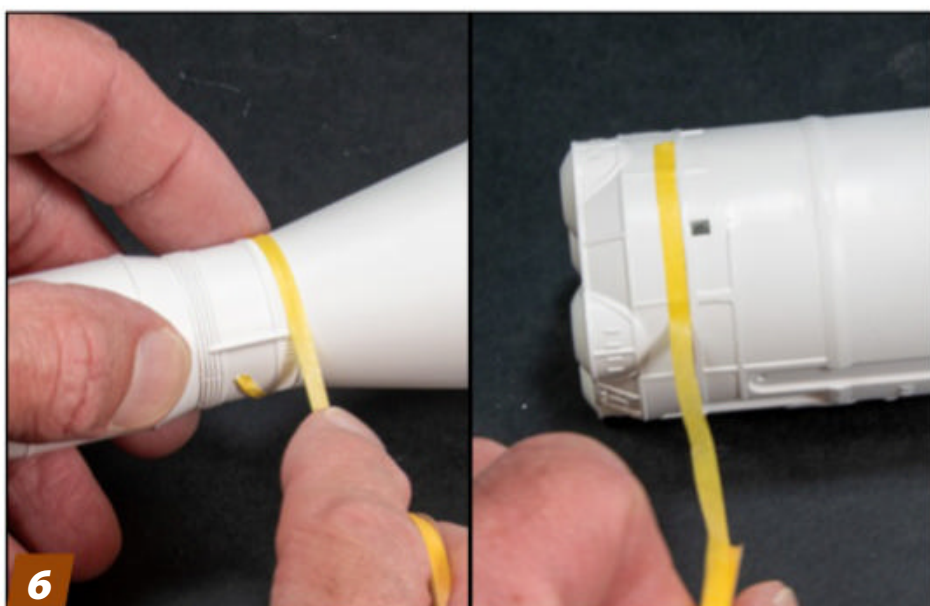
3 The gap between the Core Section and the Launch Vehicle Stage Adapter proved to be a tad uneven and required a degree of filling and sanding. To restore the uniformity of the seam that should be there, I dragged a razor saw along it.



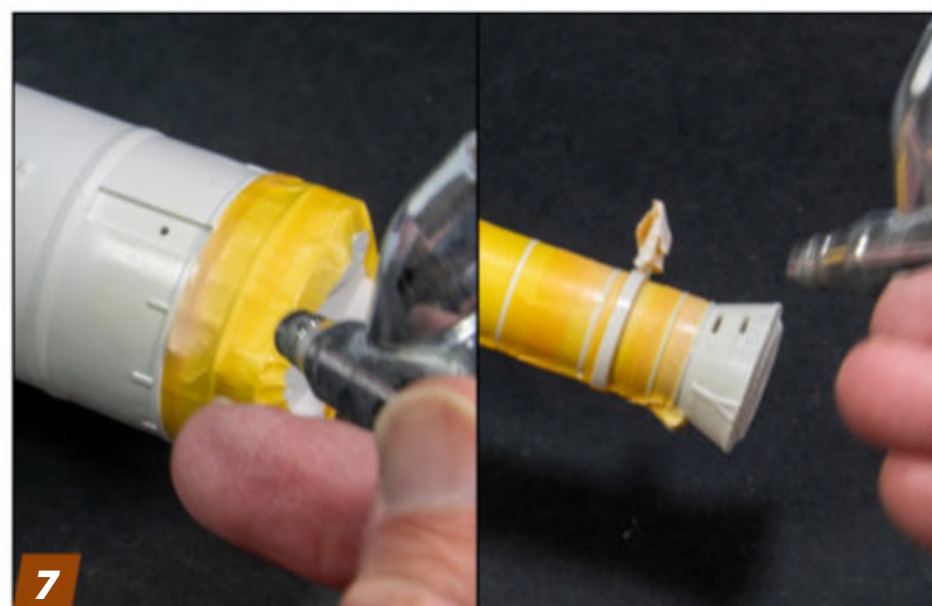
4 Once everything was primed, filled, and sanded, my workbench resembled anything but a NASA clean room. But it was ready for paint. I hit the SRB bodies and the upper and lower sections on the main rocket with several light coats of Tamiya Pure White (No. TS-26).



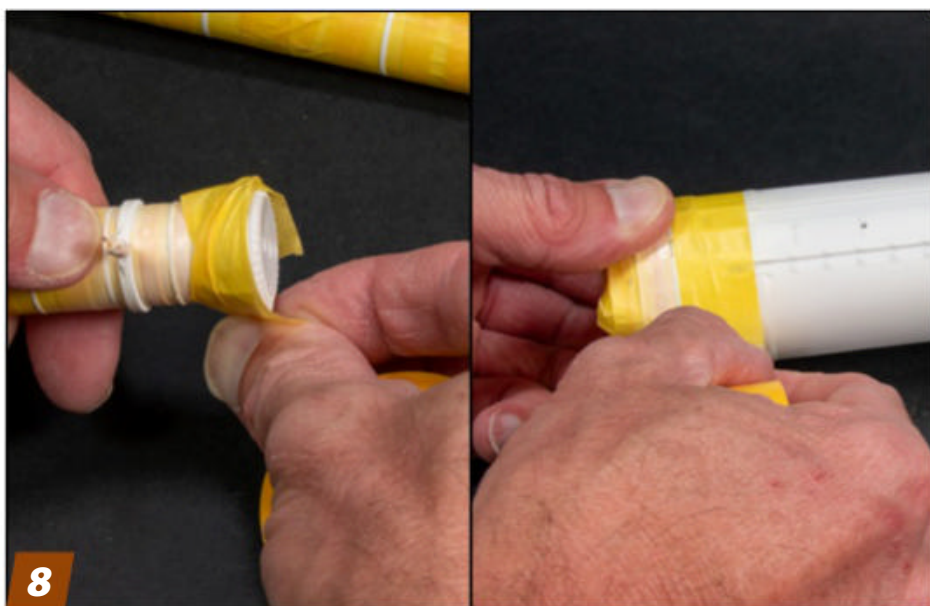
5 Wishing I had stock in Tamiya, I started masking the SRBs. They have off-white nose and lower sections and black bands. Two strips of 10mm Tamiya tape fit perfectly between the bands, but as it turned out only every other one is black. At least that was an easy fix.



6 More tape found its way onto the model as I masked the Orion spacecraft and the Interim Cryogenic Propulsion Stage at the top and the engine section at the bottom. Starting each with 2mm Tamiya tape helped seal the edges on these slightly uneven surfaces.



7 The SRB nose cones, rocket sections, mounting brackets, and the area immediately above the main rocket are off-white. Tamiya Racing White (No. LP-39) looked a good match, so I mixed it with equal parts leveling thinner and airbrushed these spots.



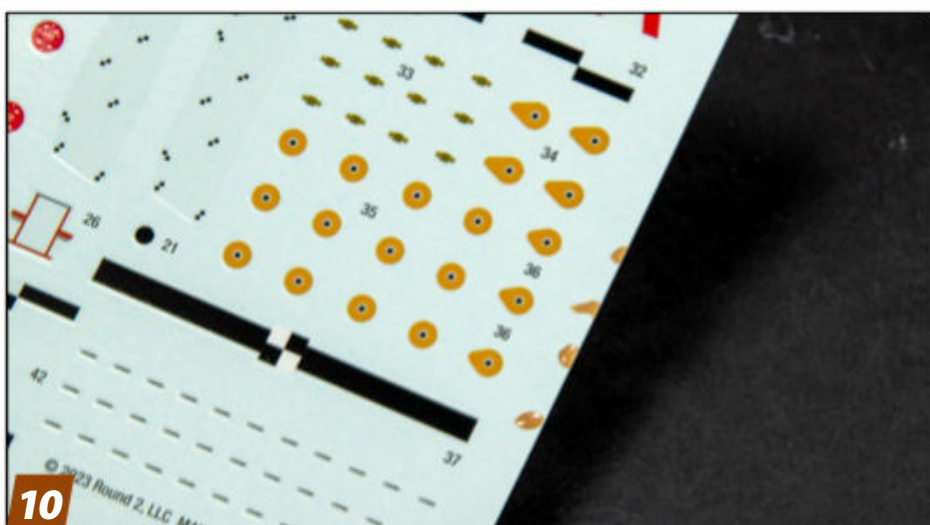
8

I masked the SRB noses, engine sections, and brackets in preparation for airbrushing the black bands. Taping off the lower off-white section of the core section was easier, but no less important.



9

To avoid paint bleeding under the tape, I airbrushed Tamiya Black (No. LP-1) lightly over the bands and gradually built up the density.



10

Like the space shuttle's external fuel tank, insulation foam covers the SLS Core Stage. It goes on tan, but exposed sections weather to an orange-brown. For the tan, I mixed 2 parts Tamiya Dark Yellow 2 (No. LP-55), 1 part Light Sand (No. LP-30), a little Yellow (No. LP-8), and a little Orange (No. LP-51). I dabbed color onto the decal sheet to make sure my tan color matched the tan color around attachment points.



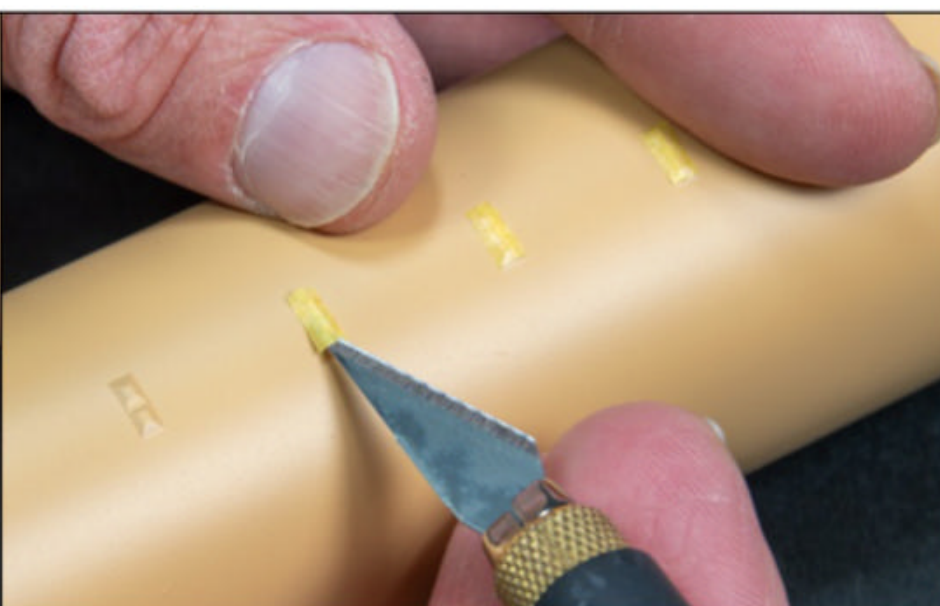
11

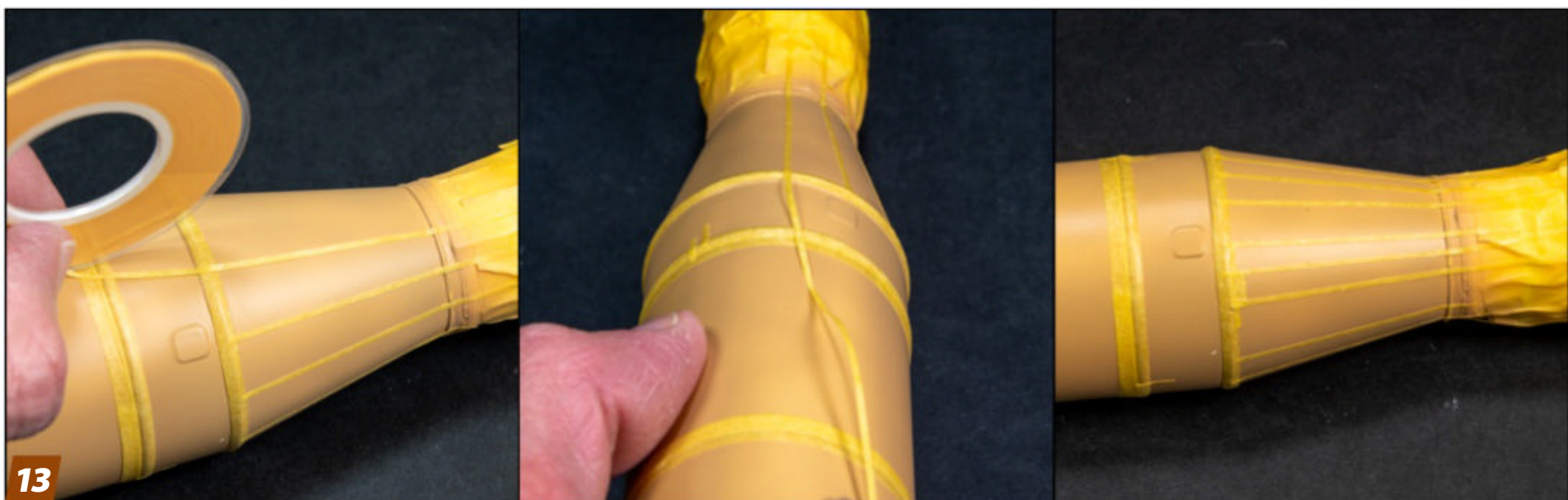
To seal the masks and minimize bleeding, I sprayed this tan along the edges first. Satisfied with that coverage, I sprayed the rest of the rocket. Although I focused on areas I knew would remain tan, I covered the rest as a base coat for the orange-brown to come.



12

Using a combination of 1mm and 2mm Tamiya tape, I masked the various bands around the body. The kit instructions pretty much match photos of the SLS on the pad for these. The brackets for the conduits and pipes were masked with 1mm or 2mm tape strips depending on the bracket.





13

Vertical stripes on the conical launch vehicle stage adapter provide Artemis I with a distinctive appearance. Tamiya 1mm tape proved the perfect mask for this and it was easy to stretch sections across it. Looking along the rocket at an oblique angle ensured alignment. The kit instructions indicate even spacing for these, but photos contradict that, so I did my best to match real-world images.



14

Using photos and the kit diagrams, I applied short strips of 1mm tape at various spots.



15

Photos also showed some round and not-quite round patches of tan. I dabbed Microscale Micro Mask (No. MI-7) to match the pattern in the images.



16

Doing my best to match the color, I mixed 1 part Tamiya Dull Red (No. LP-18), 1 part Red Brown 2 (No. LP-57), and 3 parts orange. As before, I started by airbrushing thin layers of this color along the tape edges, then filled in the rest. It doesn't need to be super even as the fading is patchy on the real thing.



17

Masking removed and major components of the Artemis I SLS are looking pretty good. Next, it was time for touch-ups, clear gloss, and the many decals.



18

Using a fine brush, I carefully touched up the SRB bands with Tamiya black lacquer. (Let me tell you, magnification is a glorious thing.) Trimming a Green Stuff World 800-grit sanding pad to a point allowed me to precisely remove black overspray around the conduit on the side. I mixed a little of the sun-darkened orange to hand-paint touch-ups around the pipe attachments on the core section.



19

I painted the exterior of the SRB engine nozzles white with everything else. After masking them, I airbrushed their interiors and the core section engines flat black. Next, I airbrushed the lower edges of the main engine bells with Tamiya Light Gun Metal (No. LP-20), then masked the lower-most ridge and airbrushed the rest of the bells with Tamiya Dark Iron (No. LP-54).



20

The final color was light gun metal airbrushed onto the heat shield between the SRBs and their engine shrouds. The gap around this part makes applying tape then slicing around it with the point of a No. 11 blade easy.



21

Preparing for the kit's many decals, I airbrushed the subassemblies with Hataka Gloss Clear (No. XP09). AMT decals have proven themselves recalcitrant in the past, so I wasn't taking any chances



22

Given that most of the model's surfaces are smooth curves, the decals preformed OK. The exception was the large NASA "worm" logos on the SRBs that lay across the conduit. Multiple applications of increasingly stronger decal solvents failed to get them to settle to my complete satisfaction.



FINAL THOUGHTS

BRINGING ALL THE PAINTED and decaled elements together and placing it on the stand made the SLS look very sharp. It wasn't a particularly difficult project, but, like the Artemis program itself, it required some careful planning to get the paint right. What the heck? From now on, I am going to call myself a rocket scientist. I wonder if NASA is hiring? **FSM**

While the kit decals are relatively comprehensive, they omit a couple of stripes on the Orion spacecraft housing. I added them with black and silver stripe decals from Fündekals, but similar products are available from other manufacturers.



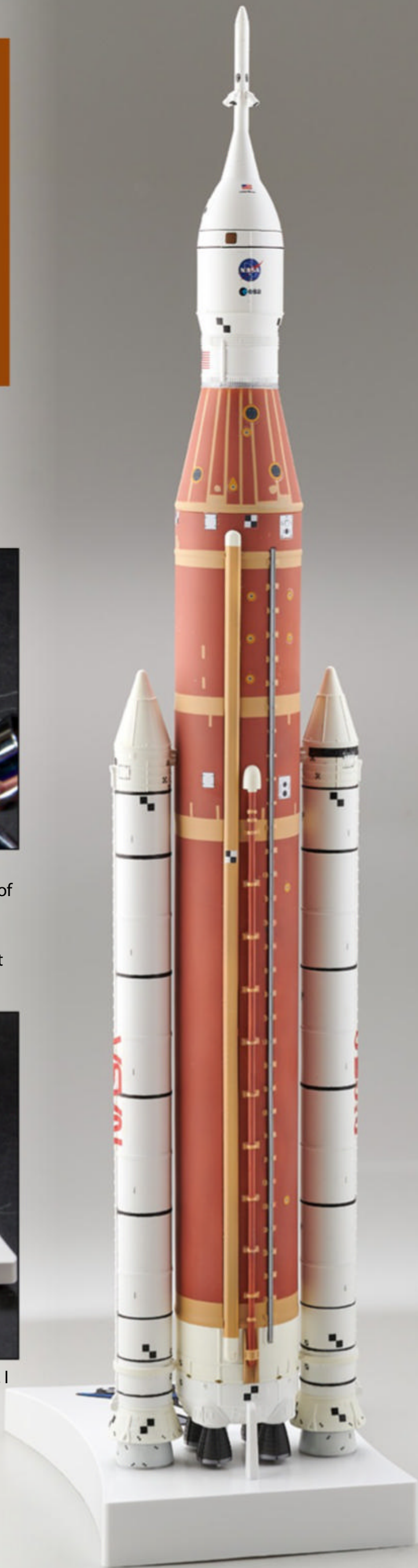
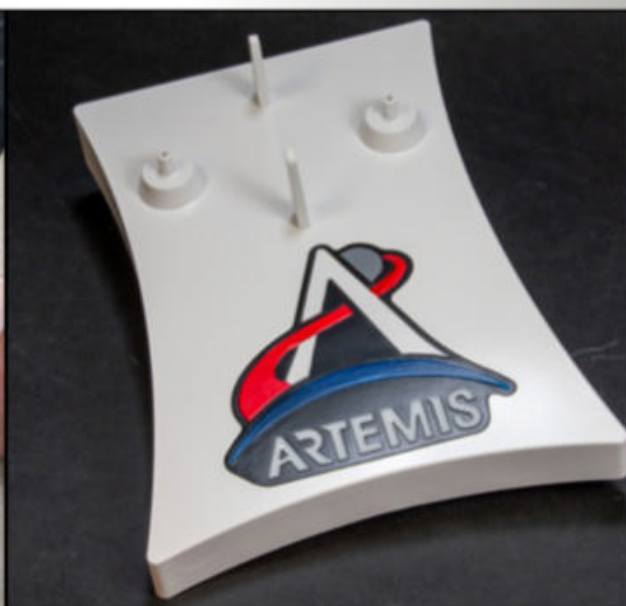
To display the rocket, the kit provides a stand with the Artemis program logo as a separate insert. I painted the entire piece white, then masked the A and painted various sections of it red (the stylized path), gray (the moon), and blue for the arc of Earth.



After removing the protective tape from the name, I airbrushed it with a substantial coat of gloss clear to help protect it. Then I sprayed the entire plate black. Peeling away the masking revealed the other components but the name was still black



I taped around the raised letters and sanded the black paint off them to reveal the white name. I sprayed the rest of the stand white and inserted the logo.



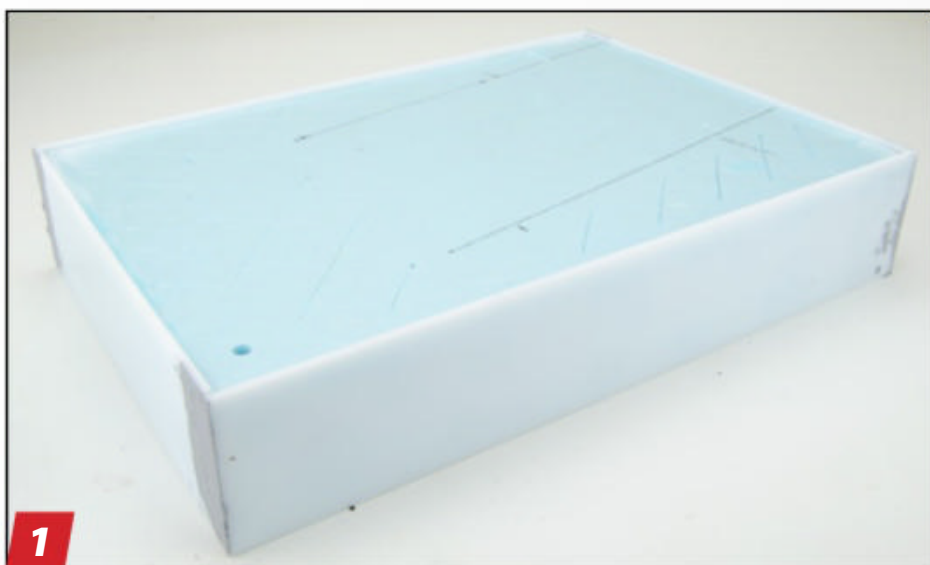
Hit the ground in a **STURMI**

How to build a simple base
for a Finnish StuG

BY JARI HEMILÄ



In the January/February 2024 *FSM*, I showed how to convert a Dragon 1/35 scale StuG III Ausf G into one of the vehicles sent to Finland in 1944. With the conversion of a Dragon StuG III to a Finnish Sturmi assault gun complete, it needed a base. Groundwork helps put a model in context and implies action, especially when combined with figures. The aim is to produce something simple, but effective. Let's get started.



1

Cut a section of 40mm (approximately 1½-inch) thick insulation foam measuring 21cm x 14cm (8½ inches x 5½ inches) and cover the edges with 2mm (.08-inch) sheet styrene filling gaps at the corners with putty. Mark the vehicle's position on the foam.



2

Keeping it simple, cover the foam with Ammo by Mig Jimenez (Ammo) Acrylic Mud Dry Earth (No. A.MIG-2101) avoiding the area where the Sturm's tracks will sit.





3 While the acrylic mud is still wet, push small stones into it; Accion Press Landscapes in Detail Stones (No. LANDS103) work well, but you can find similar items in the model railroad section of a hobby store.



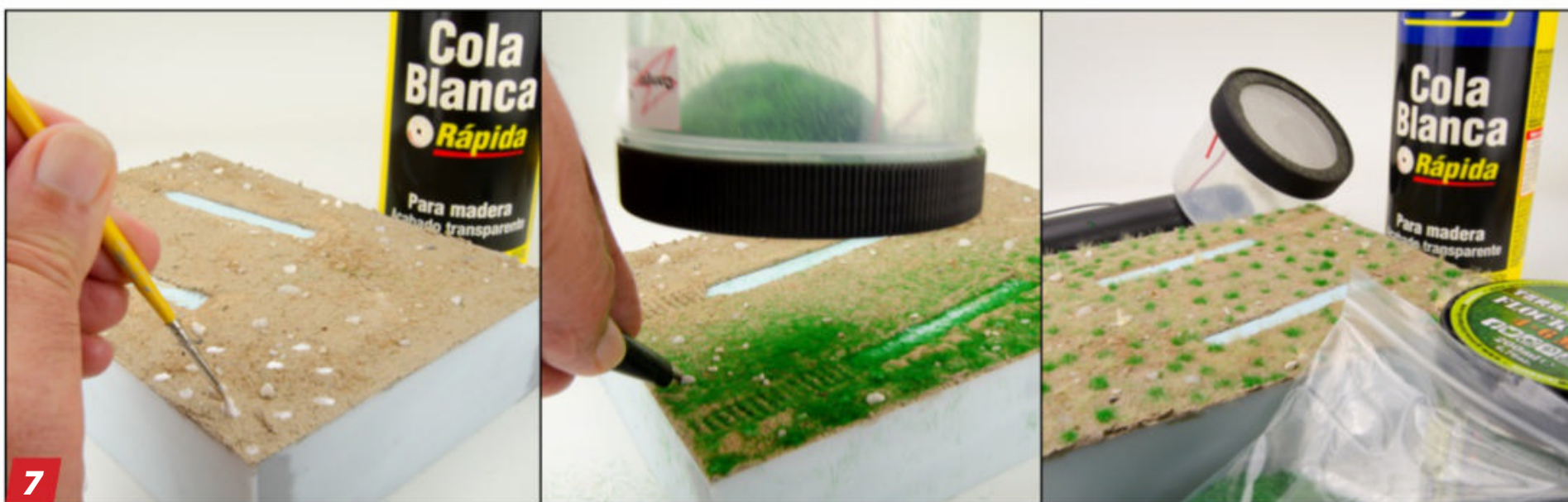
4 Leave the mud to dry for two hours and then sprinkle fine sand over the surface. Now you can push the model or spare tracks into the surface leading to the bare patches; the sand prevents the acrylic paste sticking to the tracks when they are removed.



5 Next, add some dry grass to the ground. I used AK Interactive Dried Sea Grass (No. AK8045), which comes in a ball and is easily cut into short sections and sprinkled over the groundwork.



6 With the stones, sand, and dry grass in place, drip on Ammo Sand & Gravel Glue (No. A.MIG-2012) to fix it all in place. Let the base dry overnight.



7 To represent a dry field, add 3mm and 6mm static grass using white glue and a static grass applicator — I picked up an inexpensive version from Amazon. Load the 3mm static grass into the applicator, apply dots of white glue to the surface, and apply the grass over the base. After the working area is covered in grass, tap off excess and repeat the process with the next area until the whole base is covered with short grass. The longer grass can be applied the same way. The color of the static grass is unimportant because everything will be painted.



With the static grass glued, prime the base with Mr. Finishing Surfacer Black. This produces natural shadows and definition as more color is added.



With the base primed, start painting the plants. Airbrush a base coat of Tamiya Dark Yellow (No. XF-60) over each clump and follow with progressively lighter applications of dark yellow lightened with Flat White (No. XF-2), NATO Green (No. XF-67), and Yellow Green (No. XF-4).



Mix 5 parts Tamiya Flat Earth (No. XF-52), 2 parts Deck Tan (No. XF-55), and 1 part German Grey (No. XF-63) and combine the resulting color with 50% Tamiya Lacquer Thinner (No. 87077). Airbrush the ground between the vegetation with this shade.



Thin 1 part Vallejo acrylics with 5 parts water and pick out each of the stones on the base by hand. The choice of colors is up to you, but think about the general colors of rocks in the area being modeled. This is time consuming, but I find this step is quite relaxing.



12 Reflecting the weathering steps applied to the Sturmi, mix Ammo Splashes Dry Earth (No. A.MIG-1750) with enamel thinner and brush it over the ground between the plants. It is the lighter shade in this image.



13 Follow up with Ammo Nature Effects Earth (No. A.MIG-1403) mixed with a little enamel thinner and applied around the grass clumps and the clods of earth around the vehicle's final position. A little thinner can be used to blend the shades and change the tone.



14 Darken the tread marks by applying Ammo Nature Effects Earth straight from the bottle into each groove. Leave that to dry 15 minutes before blending the color with clean enamel thinner.



15 Finally, flow Ammo Brown Wash for Green Vehicles (No. A.MIG-1005) into each groove more sparingly than the previous color. After 15 minutes, blend it with clean thinner.



16 Before attaching the model, paint the sides to give the base a clean professional appearance. Start by picking out the upper edge of the styrene by hand with Vallejo Matt Black (No. 70.950), and then airbrush the rest with Mr. Color Flat Black (No. C33).



BONUS! Let's crew the Sturmi. To make it relatively easy, I enlisted the commander figure from two Tamiya 1/35 scale Finnish StuG III kits (No. 35310). For the loader, who I have dubbed Tanker Marjanen (left), I removed the shoulder strap and repositioned his left arm to fit the hatch. For the other guy — let's call him Sgt. Rissanen — to fit inside the commander's hatch, I clipped his shoulders and lowered his arms. Turning his head slightly helps differentiate the pair.



18



19

To expedite painting the figures with an airbrush, hit them with an overall layer of black Mr. Surfacer (left) and then airbrush Mr. Finishing Surfacer White (No. SF291) from overhead (right). This process pre-shades the tankers quickly.

Paint the Finnish uniform with thin glazes of Vallejo grays that allow the pre-shading to show — Black Grey (No. 70.862) for the trousers, Neutral Grey (No. 70.992) for the caps, and Light Grey (No. 70.990) for the tunics. Finish the leather belts with shades of brown and apply brass for the hardware.



20



Start the flesh with a glaze of Vallejo Medium Fleshtone (No. 70.860), then add shadows with glazes of Cavalry Brown (No. 70.982) and apply the deepest shadows with German Camo Black Brown (No. 70.882). Next, add highlights with progressively lighter shades — a mix of medium flesh tone and Flat Flesh (No. 70.995), straight flat flesh, a mix of flat flesh and Basic Skintone (No. 70.815), and then straight basic skin tone on knuckles, noses, and fingernails. Apply a little glaze of Prussian Blue (No. 70.899) under the chin and on the neck.



21



Apply pinwashes — I mixed Ammo Oilbrusher Black (No. A.MIG-3500) and Starship Bay Sludge (No. A.MIG-3532) — to emphasize molded details. To integrate the figures and the model, use the same weathering techniques including dust and earth washes with highlights and shadows. Photos show World War II tankers covered in dust, mud, and grease. With that, the figures are done. My dudes are not perfect — I'm a tank modeler, not a figure painter — but, they add humanity and life to the scene. **FSM**



Arma Hawker Hurricane Mk.IIC

For several years, I've listened to friends with better eyesight than mine rave about the quality of Arma Hobby's 1/72 scale kits, but now I get to see that quality for myself with its 1/48 scale Hurricane Mk.IIC kit. In addition to beautiful plastic parts, you also get die-cut masks, three marking options, and stencils on a single decal sheet. Bombs, drop tanks, two types of cannon barrels, and two canopies (open or closed) are included. Sprue gates are more numerous and larger than most other manufacturers, so it can be difficult to determine where the gate ends and the part begins.

Decide your marking scheme before building. The instructions and a small errata sheet show modifications unique to each scheme that need to be made to surface details and holes to open for ordnance.

It has become cliché for reviewers to say, "This is the best surface detail I've ever seen." But it is. I could feel the rivets on the wing, but I could not see them until I base-coated. Also, the razor-thin trailing edges on the flight surfaces look fantastic but can be easily damaged.



The multipiece cockpit assembly went together easily, as did the three-part seat. Fitting the seat to the armor plate/rear bulkhead was one of the few places I had issues. It just didn't line up.

As much as I dislike working with photo-etched metal (PE) parts, some seat belts would have looked better than the decals provided in the kit. Be sure to follow the errata sheet and trim the stringers in the wing so the lights fit. Also, be careful removing the delicate tubular cockpit framework from the sprues, or they can crack. Don't forget the decals for the side-walls because they can be tricky to add after closing the fuselage. Test-fit Part A16 to ensure that the seat fits over it. The bottom of the "V" should be in front of the lateral structure, not on top of it.

Repeated test-fitting and light sanding resulted in a perfect wing-to-fuselage join, and the lower, aft fuselage is a separate part. The remainder of the construction was trouble free, with one exception.

When I added the gear legs, I thought the retraction strut pinned into the side of the structure in the wheel well. Doing this, the hydraulic cylinders added in Step 1 met the appropriate points on the retraction strut. However, this caused the main legs to be canted in about 15 degrees. References showed the legs at right angles to the underside of the wing.

Further examination revealed a small notch on the edge of the wheel-well structure. Placing the pin on the end of the retract strut results in the correct 90-degree stance, but the ends of the hydraulic rams float in space.

I did need to use filler where some of the sprue gates had been located.

Most of the decals went down well over a gloss coat, but the stubborn wing roundels did not want to conform to all those lovely rivets. A hair dryer and multiple decal solvents did the trick. Weathering with pastels and pencils finished the project.

The Arma Hobby 1/48 scale Hawker Hurricane Mk.IIC only took 12 hours to build. That is slightly more than half what I usually spend on a single-engine fighter. Masking and painting added another 14 hours. Fantastic detail and easy construction made this kit a joy to build, and I look forward to what Arma Hobby will release next in 1/48 scale.

— Andy Keyes



Kit No.: 40004 **Scale:** 1/48 **Mfr.:** Arma Hobby, www.armahobby.com (Sample courtesy of manufacturer) **Price:** \$72
Comments: Injection-molded plastic (gray; clear); 131 parts; decals
Pros: Excellent surface detail; good overall fit **Cons:** Seat-belt decals don't work well; some instruction diagrams could be better detailed

AMT 2021 Ford Bronco

The AMT 1/25 scale 2021 Ford Bronco First Edition kit, a newly tooled model of Ford's reimagined and updated legendary SUV, has nicely molded parts, although there is a little more flash than I expected, considering it is new. The fill points off the runners are also a bit heavy, so expect a little more cleanup after clipping them off. I found that a photo-etched metal saw works very well to remove them and made cleanup easier.

The parts fit well, with the plastic tending toward the soft side, which makes cutting and sanding easy. Assembly went quickly because many of the parts fit almost like a snap-together kit.

The smoke-colored tinted windows seem more fragile than the other clear parts. I recommend using a razor saw or similar tool to remove them from the sprue and clean them up with a sharp hobby knife or fine sandpaper. The prepainted black trim on the windshield is a nice touch, and its installation was a breeze.

The body mold lines are well-placed and easy to eliminate. The removable roof needed a little filler to eradicate the mold lines over the doors.

The hood fits well, and I shaved the sides slightly for paint clearance.

To match the Cactus Gray that is common in my area, I used Tamiya Neutral Gray (No. AS-7) from the can. I was disappointed that after the second light coat (of the four or five I intended), the plastic showed signs of swirls and uneven etching,



primarily on the doors and front fenders. This is not a tragic issue, but one to be aware of if you plan to use solvent-based sprays. I let the paint dry overnight and wet-sanded the affected areas. Then I resprayed with dry coats that worked well as a barrier.

The grille is part of the vehicle's personality, and the model captures it well; the headlight bezels and lenses are engineered to be easily installed.

The kit comes with many decals and the artwork looks nice on the sheet. Many of the smaller decals have duplicates and multiple color options, but my sample was printed out of registration (both the clear and one or two of the colors). I started with the interior decals and found that when applying them, even strong decal solvents did not have any effect on them. I worked my way up from both Tamiya Mark Fit solutions to Walther's Solvaset, and while the latter seemed to soften them somewhat, it was not enough to get them to conform. Even using a blow-dryer with the solvent did not help. They also did not adhere well.

My workaround was to brush-paint the areas with acrylic gloss clear and float the decals on while the clear was wet. This also eliminated silvering. I found it easier to hand-paint some of the raised details than to use the decals. To minimize silvering, trim all the clear on the decals around the images before application.

The decals for the wheels (No. 12) didn't look right because the white and clear are so out of registration that the white wasn't fully visible; the black on about 1/4 of each decal stayed on the paper without any clear.

There are four license-plate options.

While the Bronco is a curbside model, it has a lot of chassis detail. The chassis also builds up nicely with minimal cement.

Final assembly is easy and requires very little cement. After painting all the parts, the model goes together quickly.



The AMT 1/25 scale 2021 Ford Bronco First Edition's fit and ease of assembly make it fun and enjoyable to build. Unfortunately, the issues with the decals took some of that enjoyment away and would prove frustrating for beginners. The registration problem may be an isolated issue, but the decals' inability to conform or work with traditional solvents makes them the weak point of this otherwise nice, all-new offering.

— Mark Jones



Kit No.: AMT1343M **Scale:** 1/25

Price: \$33.99 **Mfr:** Round 2, www.round2corp.com (Sample courtesy of mfr.) **Comments:** Injection-molded plastic (white, chrome, clear, clear smoke, and clear red); 114 pieces (4 vinyl tires); decals **Pros:** Soft plastic is easy to work with; parts fit together nicely **Cons:** Decals out of registration and easily silver

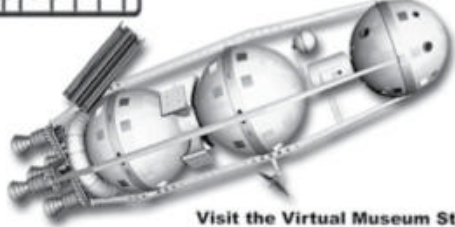
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CA, VENTURA: MODELFEST '24. Sunday, February 25, 2024. 8:30am-3:00pm. Plastic model contest and swap meet to be held at the Seaside Park / Ventura County Fair Grounds. 10 W. Harbor Blvd., Ventura, CA 93001. Admission: \$10 per person. State parking fee \$10. For more information contact Vernon Morseman at 805-658-8138

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By Tim Boyd

Fujimi Ferrari 288 GTO

The Enthusiast Model series hinted the future of kit manufacturing, but held back on one

Nearly 40 years ago, Fujimi shocked the scale model car hobby with its introduction of a series of 10 Enthusiast Model Porsche 911 kits. With an asking price roughly two-and-a-half times that of the average domestic 1/24 and 1/25 scale kits and a part count twice that of its competitors, Fujimi's kits were a bold stroke targeted at an emerging market of accomplished adult model builders. (See *Scale Auto*, December 2014, for more on this).

Less noticed at the time, however, was that the Enthusiast Model series presaged a time when multiple, product-correct, kit variations, sometimes 10 or more in number, could be made based

FUJIMI 1/24 SCALE FERRARI 288 GTO

Kit No.: EM-22

First Introduced: 1988

Current Value: \$50

on a single tooling set. An anomaly back then, this multiple-release capability is now a top-line consideration for newly tooled kits, with the Moebius Models 1950s Hudson and 1960s F-Series kit ranges as good examples.

Fujimi continued this approach for its Enthusiast Model offerings of various Ferrari 365 GTB/Daytona, 246 Dino, Lamborghini Countach, BMW 635, Lancia Stratos, and Porsche 356 products. But strangely, the subject of this column, the Fujimi 1/24 scale Ferrari 288 GTO, was the only kit in the Enthusiast Model catalog to have just a single version issued.

What justified this singular exception to Fujimi's single-tool, multi-kit approach? Perhaps it was that the 288 GTO was a profound, mid-1980s statement by Ferrari that firmly reestablished its position atop the exotic sports car hierarchy. Highly influential at the time, today the 288 GTO is considered among Ferrari's all-time production greats, commensurate with its 250 GTO and F40.

In developing the 288 GTO kit, Fujimi left no stone unturned. The kit surpassed 250 parts, dedicating over 80 of them to the turbocharged V8 engine assembly alone. Molded in red, the body included open louvers on the front hood and fender tops, rear quarter panels, and rear roll panels. To be clear, tooling open louvers is a difficult challenge for injection-molded kits, and they are more often than not omitted even in today's kits.

Operating parts included the front boot and rear engine cover, popup headlights, and turntable steering. The application-specific "big'n'better" Dunlop Denloc SP Sports tires were an anomaly at the time when most other kits adapted generic tires to their sports and exotic car kits. The kit's decal-detailed instrument cluster, two-part mirrors, separate plated door handles and wipers, and body marking decals were also ahead of their time.

Fujimi's Enthusiast Model kits developed a reputation as being difficult to assemble. Yet, by the time this kit was released, Fujimi's

engineers had learned valuable lessons, so such complaints were more the exception than the rule.

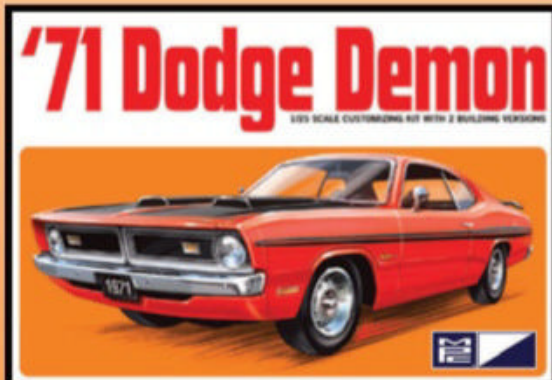
While Fujimi has reissued this kit each decade since its introduction, with some releases including minor parts additions and livery changes, Fujimi's original 1988 release, with its striking box imagery depicting a bird's-eye perspective positioned vertically and its subtly embossed Ferrari logo, is worth searching out. It's an anomaly among a model kit series that proved to be 35 years ahead of its time. **FSM**





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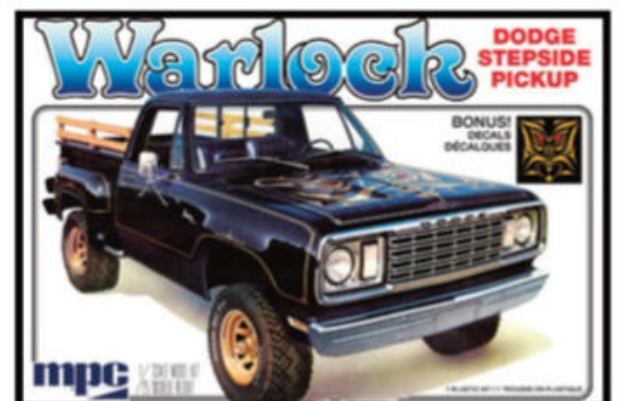
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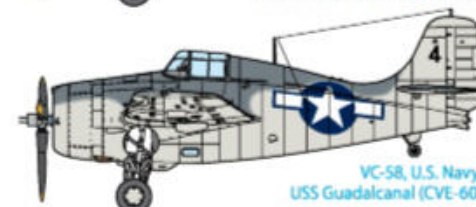


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