FineScale Modeler
SPECIAL ISSUE

11 STEP-BY-STEP HOW-TO ARTICLES

PAINT AWARD-WINNING FIGURES

SPECIAL 2024

80 TIPS & TRICKS

FOR PAINTING REALISTIC HAIR, SKIN TONES, EYES, CLOTH, LEATHER, METAL, AND MORE!

FROM BUSTS...

... TO LARGE SCALE FIGS ...

... AND ALL SIZES IN BETWEEN

WE HAVE YOU COVERED!

Judy Jetson as you've never seen her! Matt Mrozek zooms you through his process for building, painting, and finishing this superb 1/5 scale fig.

CONTENTS

PAINT AWARD-WINNING FIGURES


86


25


12


38


92

By Tim Kidwell

Paint your best figures!

When Aaron Skinner and I sat down to start planning *Paint Award-Winning Figures*, we were determined to go in a new direction. In a periodical, stories need to move, and so, as editors, we look to tell the best stories in the fewest words possible. We hammer and hone a story until it is as lean and as sharp as it can be.

With *Paint Award-Winning Figures*, we gave contributors the chance to dig deep and focus on their craft, expand on their approaches, and demonstrate the breadth of their techniques. Still sharp, the stories you hold in your hands present an arsenal of ideas for you to browse, choose, and deploy as you prefer, all dedicated to improving your figure-modeling skills.

However, no manual, regardless of the expertise presented, can bestow perfected technique. That comes only through practical application. Take what you learn in the following pages and implement it in your figure modeling. But remember, even the pros mess up. Practice, fix mistakes when they happen, and learn as you go.

Above all, enjoy your hobby!

tkidwell@kalmbach.com

Award-winning figure modelers share their secrets, including color mixes, airbrushing and hand-painting techniques, and best practices for building, modifying, and prepping your figure models. Keep going. A whole world of modeling prowess awaits!

PAINT AWARD-WINNING FIGURES

Editor, Scale Modeling Brand Group Tim Kidwell
Editor, FineScale Modeler Aaron Skinner
Assistant Editor, Digital Kendra Bell
Assistant Design Director Scott M. Krall
Editorial Associate Monica Freitag

ART & PRODUCTION
Design Director Tom Danneman
Illustrator Kellie Jaeger
Production Coordinator Sue Hollinger-Klahn

EDITORIAL
262-796-8776

ADVERTISING DEPARTMENT
888-558-1544
Advertising Sales Representative
Michael Wieloch, Ext. 625
mwieloch@kalmbach.com
Ad Production
adservices@kalmbach.com

RETAIL, TRADE ORDERS, AND INQUIRIES
Selling *FineScale Modeler* magazine or products in your store:
Phone 800-558-1544
Outside U.S. & Canada 262-796-8776, Ext. 818
Fax 262-798-6592
Email tss@Kalmbach.com
Website retailers.kalmbach.com

CUSTOMER SALES AND SERVICE
Phone 877-246-4847
Outside the U.S. and Canada 847-313-3921
Customer Service
FineScaleModeler@Omeda.com

For the purpose of marketing goods and services to our customers, we may make certain customer information and our customer list available to carefully screened companies that offer products and services that we believe would interest our customers. Please visit our privacy policy at www.kalmbach.com/privacy for more information. If you do not want to have your information transmitted to third party companies that offer products and services to our customers or to database cooperatives, please advise us at Kalmbach Media Data Protection Office, P.O. Box 1612, Waukesha, WI 53187-1612, email us at privacy@kalmbach.com or call us at 877-246-4847.

KALMBACH MEDIA
Chief Executive Officer Dan Hickey
Chief Financial Officer Christine Metcalf
Chief Marketing Officer Nicole McGuire
Vice President, Content Stephen C. George
Vice President, Operations Brian J. Schmidt
Vice President, Human Resources Sarah A. Horner
Circulation Director Liz Runyon
Director of Digital Strategy Angela Cotey
Director of Design & Production Michael Soliday
Retention Manager Kathy Steele
Single Copy Specialist Kim Redmond

Paint Award-Winning Figures (ISBN 978-1-62700-983-6, EISBN 978-1-62700-984-3) is produced by **FineScale Modeler** magazine and published by Kalmbach Media, 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187. Single-copy price $13.99 in U.S.A.; $15.99 in Canada and other countries. Canadian price includes GST. BN 12271 3209 RT. Canadian and international orders payable in U.S. funds. Canadian International Publications Mail Products Agreement no. 40010760. EXPEDITED DELIVERY SERVICE: Domestic First Class-$2.50, Canadian Air-$2.50, Foreign Air-$6.00. Address all correspondence to **Paint Award-Winning Figures**, P.O. Box 1612, Waukesha, WI 53187. Printed in the U.S.A.

MEET THE CONTRIBUTORS

PAINT AWARD-WINNING FIGURES

JEFF CAMP

By day, Jeff works at a design studio in the Chicago suburbs. By night, he is a painter, sculptor, and photographer. Jeff discovered resin figure kits in 1997 and has made a name for himself as an award-winning, garage-kit artist, teaching painting classes, writing how-to magazine articles, and painting master statues for companies like Sideshow Collectibles and Hollywood Collectibles Group.

JOE HUDSON

Joe Hudson, a former U.S. Army military policeman and civilian police officer, began figure modeling in the 1990s. Semiretired for 22 years, he has won numerous figure-modeling awards, including four World Model Expo competitions, authored the *FineScale Modeler* "Form and Figure" column and recently debuted his first book, *Painting Military Figures*, published by Kalmbach Media.

MATT MROZEK

Matt Mrozek has been a serious modeler since 2008 and a professional modeler since 2020. He gained his painting chops restoring first-generation T-birds. Initially, Matt modeled Gundam and sci-fi and transitioned to figures in 2015. He's won multiple awards for his work, specializing in large-scale superhero figures. Find Matt on Facebook (mattsmodelscustoms) and YouTube (@mvm3897).

ANNYA SHETININA

Annya Shetinina always had a knack for painting and started finishing resin figures in 2004. She enjoys painting anime and comic-book characters, as well as more realistic designs. Recently, Annya has taken to 3D-printing her models, which adds another creative layer to figure modeling, allowing her to both make and paint her kits. She lives in St. Paul, Minnesota.

DON SURATOS

Don Suratos started scale modeling as an action-figure painter and by making dioramas after graduating art school. Shifting focus to Gunpla, he won the Bandai Action Kits World Cup 2008 World Champion title. After multiple awards for his Gundam models, Don became a sponsored artist for various hobby brands, most notably Acrylicos Vallejo, and has been a full-time model maker since 2020.

JOHNATHAN HO

Johnathan Ho has been an avid miniature painter and gamer since 2000. His hobby journey started with *Warhammer* and *Warhammer 40K* but has since expanded to other skirmish games like *Star Wars Shatterpoint* and *Marvel Crisis Protocol*. Johnathan has won Golden Demon and Crystal Brush awards, as well as The Path of the Worthy at Adepticon 2023.

SIMON LAM

Simon Lam has been building models since his teens, focused on figures, sci-fi, and Gunpla. He debuted as a competitive Gunpla modeler in 2017, when he represented Canada in the Gunpla Builder's World Cup, following up with a similar win in 2021. In 2023, Simon became the first North American to win the GBWC World Champion title. His "Baby Kappa" figure won Best of Show at Sword and Brush 2022.

ROBERT RAVER

Robert Raver has been a modeler since before he could read instructions. He enjoys creating miniatures, including plastic models, figure painting, and even LEGO, but finds the artistic and creative aspects of miniature-making most appealing. Robert lives in Northern Illinois (where winter provides ample opportunity to hone his skills at the workbench) with his wife and two sons.

AARON SKINNER

Aaron Skinner built his first model when he was 4 years old and has had something on his workbench pretty much constantly ever since. After a career as a newspaper photographer, Aaron landed his dream job at *FineScale Modeler* magazine. In addition to modeling big-scale figures, he likes to build sci-fi vehicles, airliners, and anything Australian, an interest born from growing up Down Under.

BRIAN WILDFONG

Brian Wildfong began scale modeling at 8 years old when his parents gifted him two aircraft kits for his birthday. After university, his focus changed to figures when he realized he bought armor kits based on the crews shown in the box art. Busts have become Brian's latest concentration for the simple fact that they're easier to see. A retired social sciences teacher, Brian lives with his wife in Ontario, Canada.

The daughter of the demon Trigon and a human mother, Raven is a powerful empath and sorceress. She has been a member of the Teen Titans fighting evil alongside DC heroes including Robin, Beast Boy, Starfire, Cyborg, and Wonder Girl.

Build a 3D-

PRINTED SUPERHERO

Parts prep makes all the difference

BY AARON SKINNER

Modelers have been using 3D-printed parts for more than a decade, and the quality of the printers and the items produced by them have continued to improve. While the technology hasn't replaced traditional plastic and resin kits, it does allow us to build some subjects mainstream manufacturers are unlikely to produce.

Such was the case when I went looking for a kit of Raven, my favorite member of DC Comics *Teen Titans*. Rather than a kit, I found several sellers offering files that could be fed into a 3D printer to produce parts. After finding one I liked, I purchased the files and had a friend with a high-resolution printer make the parts for me in UV-curing resin.

Most of the parts were printed as solid pieces, so they strongly resemble cast resin. The parts were pretty clean when I received them, with only a little layering visible on the surfaces.

Large locators and matching holes aligned and secured the parts. But almost all of them were a tad oversized resulting in gaps like this one between Raven's right leg and body.

Using a razor saw, sprue cutters, and sanding sticks, I trimmed all of the tabs until the fits were perfect.

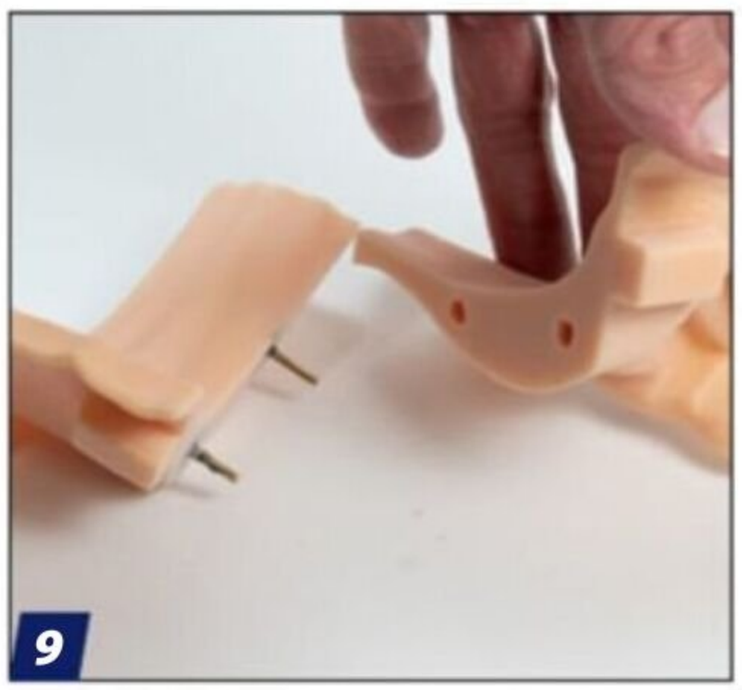
The printer produces a framework of thin struts to support the parts as the layers are laid down. When these are removed, they leave lines of small dimples or pimples on the surface. The latter are easy to sand away.

I treated the dimples just like pinholes in resin, filling each with a dab of superglue and sanding it smooth after flowing on accelerator. Most were shallow and only required one application, but a few needed two or three treatments.

Priming all the parts with Mr. Surfacer 1000 revealed a few areas that needed attention, including some of the minimal layering common to 3D printing. The thick primer and sanding combined to blend the surface.

Sanding the Mr. Surfacer also revealed a series of striations on some parts. I had to prime and sand the legs several times to eliminate them. Manicure sanding blocks are perfect for cleaning up 3D-printed parts combining a medium grit surface with a dense sponge core.

I was concerned the cloak that supports the figure wouldn't be strong enough because of its flat mating surfaces didn't have any interlocking tabs. To bolster it, I glued brass tubes into holes drilled into one piece.



To mark locations for corresponding holes on the other piece, I applied black paint to the ends of the tubes and held them against the surface. I intentionally drilled the opposite holes oversize to provide a little wiggle room when joining them.

I filled the holes with JB Weld KwikWeld epoxy and applied more to the mating surface. The steel-reinforced epoxy can be sanded, so I wanted excess to squeeze out and fill most of the gaps.

Placing the joined lower sections into its locators on the base as the epoxy set ensured everything aligned properly.

I joined the halves of the base with two-part epoxy and discovered a mismatch at the front edge, of course. A sanding drum in a rotary tool quickly evened out the edges, and I filled gaps with Tamiya putty.

Satisfied that I had sufficiently prepared the parts, I added a final layer of primer. I used white for the flesh and gray for the clothing and base.

Raven is usually portrayed with pale, muted skin tones. I mixed equal parts Tamiya Buff (No. XF-57) and Pink (No. X-17) as a base color, added Tamiya lacquer thinner, and airbrushed the face, hands, and legs.

I progressively lightened the base color with White (No. X-2) to add highlights to the forehead, cheeks, nose, and chin. I wanted the light to appear to be coming from up and to the left of the figure, so I kept that side of face slightly lighter.

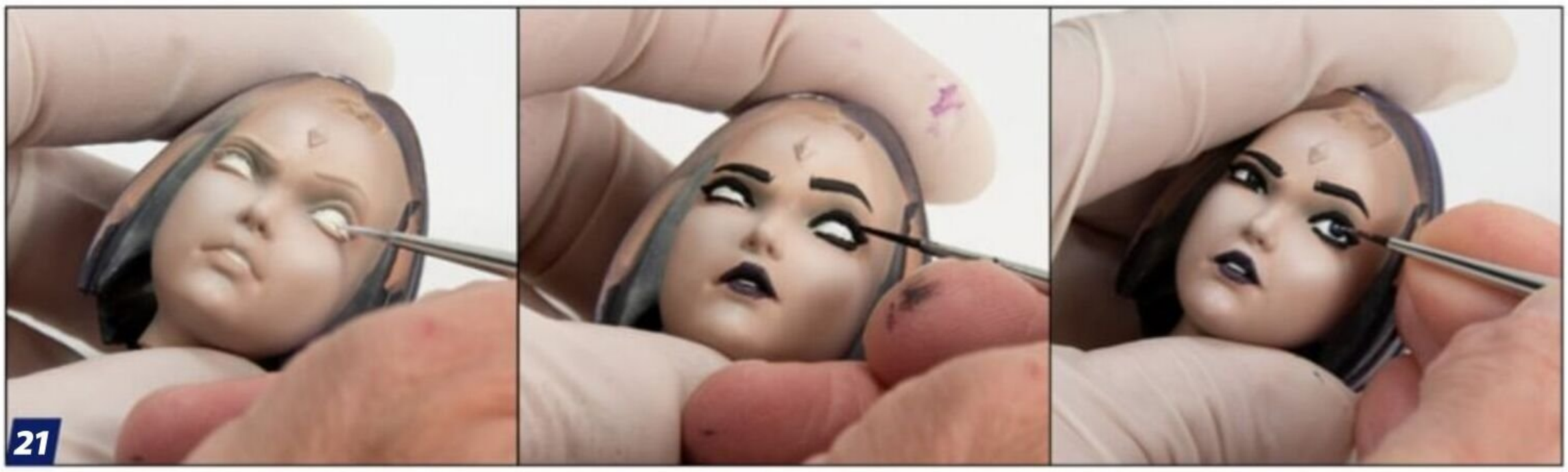
For shadows under the chin and hair and around the eyes, I added a drop of Tamiya Blue (No. X-4). The blue can have a drastic effect on the color, so be careful not to add too much.

Given how prominent the legs are and the fact that they are crossed, I added more obvious highlights and shadows, always keeping the source of the light in mind.

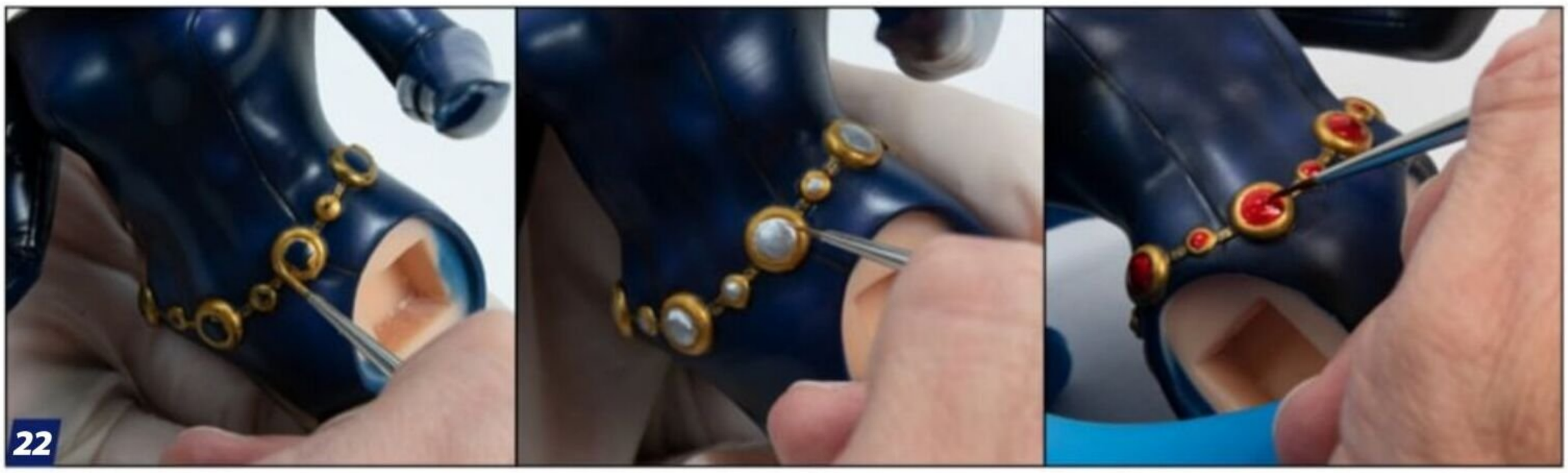
After masking the face with Silly Putty, I airbrushed the hair with a base coat of Tamiya Flat Black (No. XF-1) with a little Royal Blue (No. X-3) added. I added Purple (No. X-16) to paint the lower third of the hair. The ends were painted with straight purple.

I base-coated the leotard with royal blue, creating shadows by adding black. For highlights, I added increasing amounts of purple.

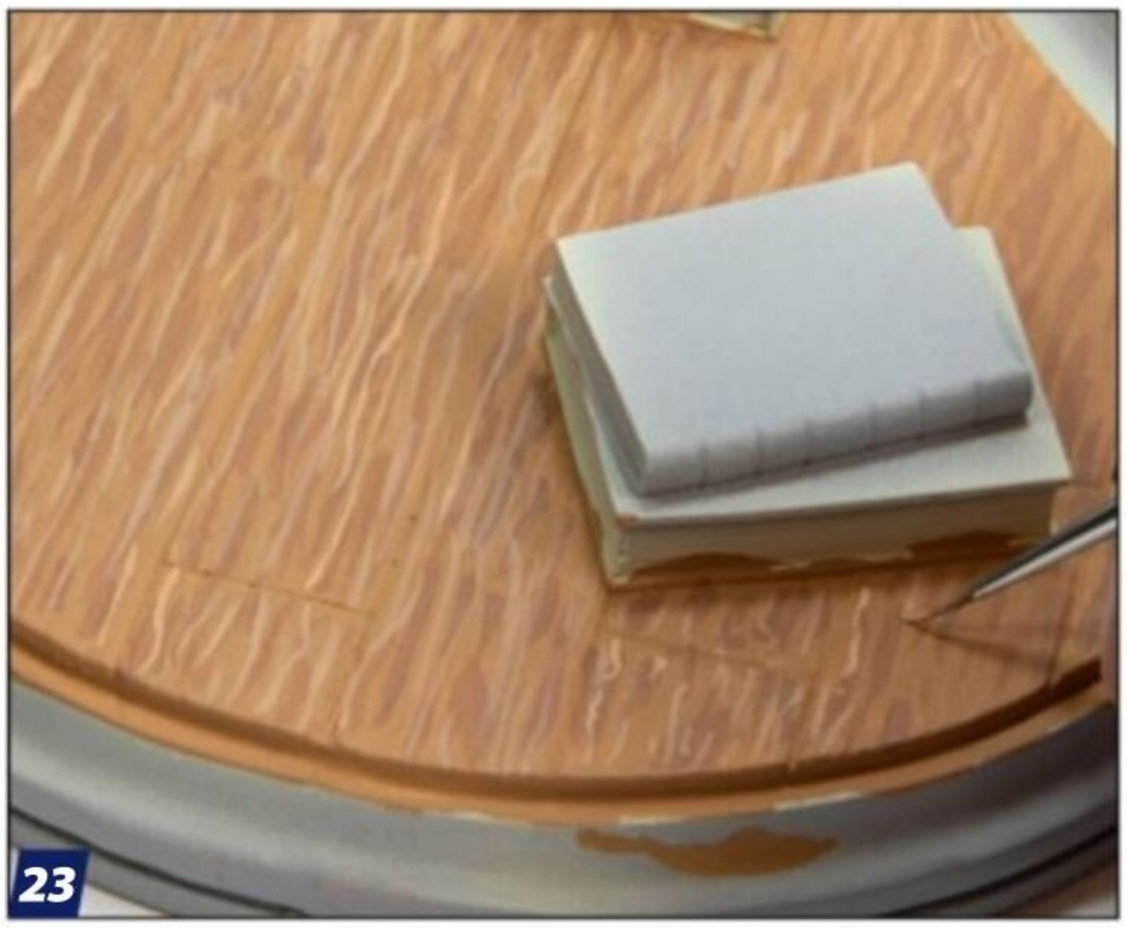
The base color for the cape is Tamiya blue. For highlights, I mixed progressively more Sky Blue (No. X-14) and sprayed the shoulders, hood, and ridges on the folds. The shadows were done by adding royal blue to the mix and applied it to the recesses and under the hood. To reinforce the shadows, I painted a thin mix of royal blue and black into the deepest fold around the jewel at the front and around the hood.



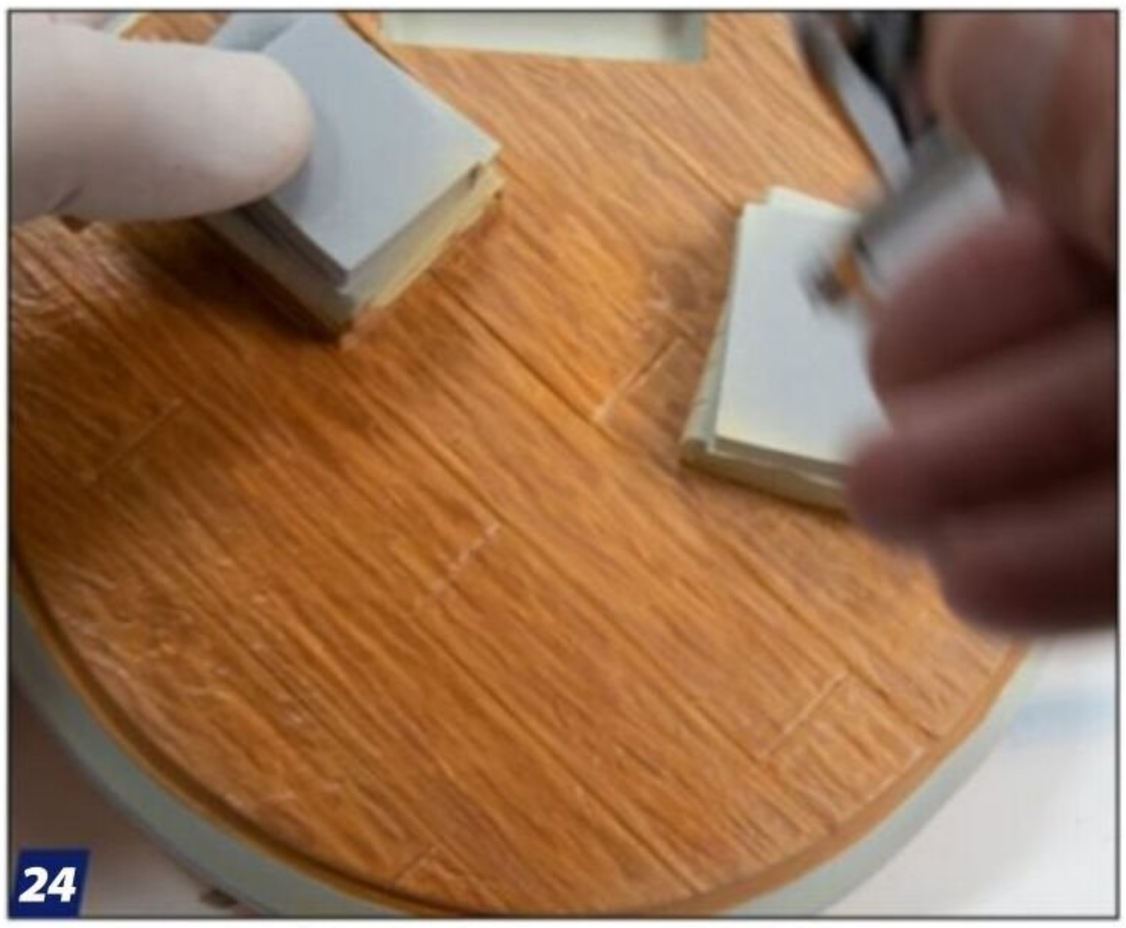
Moving back to the head, I hand-painted the eyes with Vallejo Model Color Gloss White (No. 70.842) and the teeth Ivory (No. 70.918). Adding a touch of water to the paint helps it flow smoothly. I painted the well-defined eyelashes and eyebrows with Black (No. 70.950) mixed with a touch of Dark Prussian Blue (No. 70.899); the lips were painted with a mix of black and Royal Purple (No. 70.810). After defining the irises with black, I painted a mix of black and dark Prussian blue and added dots of black for the pupils. The final touch was matching white catchlights in the irises. Having the eyes looking left accentuates the pose and the lighting choice.



I picked out Raven's belt and the brooch on the cloak with Model Color Brass (No. 70.801) and then painted the actual jewels with Revell Silver acrylic (No. 36190) with highlight arcs of Model Color white. Finally, I brushed on two layers of Tamiya Clear Red (No. X-27) to bring the bling. A black enamel wash around the belt and clasp separated them from the clothing.



After brushing the floor with a base coat of Italeri Wood (No. 4673), I used a fine brush to hand-paint wood grain first with a mix of wood and Model Color Mahogany (No. 70.846) and then with Model Color Buff (No. 70.976).



I sealed the wood with Tamiya Clear Orange (No. X-26), which blends the grain and makes the floor appear to be varnished. I masked the planked area and airbrushed the lower area of the base with Tamiya Flat Black (No. XF-1).

To finish the books, I painted the pages ivory and the covers with contrasting shades so they popped. The two large volumes' spines will be visible under the cloak, so I used Italeri Gold (No. 4671) to add something resembling titles.

Before flat coating the base and adding the figure, I flowed Tamiya Brown Panel Line Accent Color into the gaps between the planks.

FINAL THOUGHTS

I ASSEMBLED THE VARIOUS components with two-part epoxy over the course of 24 hours to be sure each join was set before proceeding and minimize the risk of something falling off the model as it dried. I'm really pleased to have Raven in my collection, something I could only do thanks to 3D-printing — and it wasn't any harder than working with styrene or resin. All large-scale figures require work at the front end to guarantee a good result. And she won bronze at WonderFest! FSM

ALIEN SKIN,

LEATHER, AND METAL?

No problem!

Base coats, washes, and an airbrush bring a large-scale figure to life

BY ANNYA SHETININA

Figure modelers, and those new to the hobby in particular, often find painting female subjects, skin, leather, and metal intimidating. This amazing hobby we share can be enormously fulfilling, but, as with most things, it takes practice and patience to realize your full potential. And help with techniques doesn't hurt!

I enjoy painting a range of subjects, and I've been on a Marvel Cinematic Universe kick for a bit. This large-scale *Guardians of the Galaxy* Nebula from Wicked scratched a lot of itches for me, and because it has many features that can intimidate new figure painters, it's a perfect piece to demonstrate a range of techniques.

Let's get started and focus on Nebula's uniform, playing with different textures, and then finish her head. Don't worry! She's an alien species with blue skin. For me, painting "alien" skin isn't as scary as painting realistic skin tones because you can take some liberties with it that you wouldn't otherwise.

1

Cleaning up your kit parts, no matter if they're 3D-printed or cast from resin or white metal, will improve the end result. Here, I'm test-fitting the parts to see how they fit, using tape to temporarily hold them together. Nothing distracts from a great paint like seams or misaligned parts.

2

To clean up parts, I use a variety of tools, including a hobby knife with a No. 11 blade, cordless rotary tool with 180- and 320-grit abrasive buffing wheels, and sandpaper and sanding pads in grits up to 1500. When cleaning up seams and joins, do not rush the process. Your patience now will pay off in the end.

3

For most of my projects, especially 3D-printed models, I start with gray Rust-Oleum Automotive Filler Primer. It covers nicely and is helpful for filling in small imperfections. Also, you can find this primer in just about any hardware store at a reasonable price, unlike many hobby primers.

4

After cleaning Nebula and applying gray primer, I followed up with a white base coat. I prefer to work from lighter colors to dark. Many other modelers prefer going from dark to light, but the opposite works better in my estimation. The process allows me to create a vivid finish without using too many extra layers of paint.

5

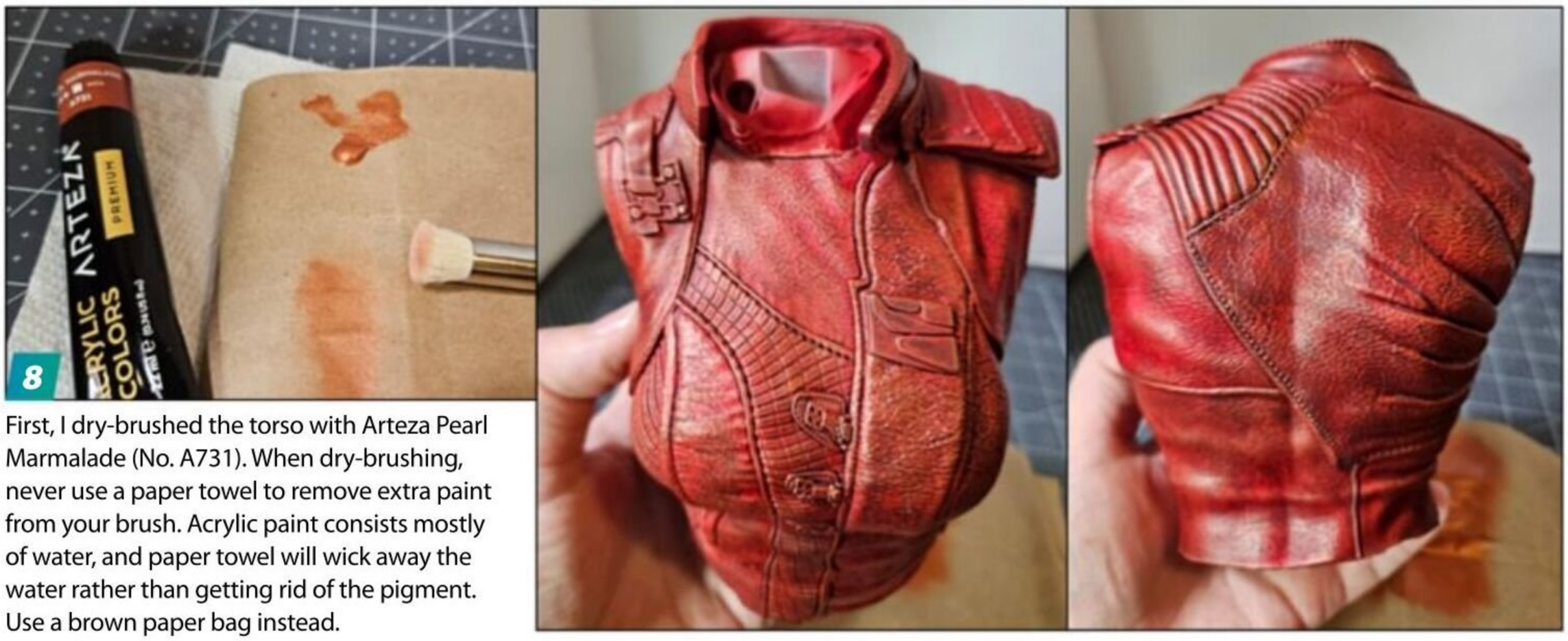
At this point, I disassembled Nebula and started by airbrushing sections of her leather jacket GarageKits Colors True Red and Dark Red. When airbrushing GarageKits paint (now, out of production), there's no need to thin them, and I set my air pressure to 20–25 psi. My go-to airbrush is a Harder & Steenbeck Infinity CR Plus with a .15mm nozzle.

I mixed a wash of Golden Acrylic Glazing Liquid (No. 3720) with equal parts water and a couple of drops of Com Art Colours Transparent Shade Additive (No. 2031). I brushed this purple color wash over the reds and allowed it to pool in craters and crevasses, darkening those areas. I let the first wash dry and then reapplied it a couple of more times to refine the appearance to my liking.

PRO TIP

ADDING MORE ACRYLIC GLAZING LIQUID to the mix creates a glaze, which is a thin coat that covers and tints a surface rather than gathering in recesses.

Finished with shading, time for highlights. You may hear that metallic and pearl paints are for beginners, but I believe in using what works. I find dry-brushing Arteza pearl and metallic acrylics works well for bringing out the folds and details in clothing.



First, I dry-brushed the torso with Arteza Pearl Marmalade (No. A731). When dry-brushing, never use a paper towel to remove extra paint from your brush. Acrylic paint consists mostly of water, and paper towel will wick away the water rather than getting rid of the pigment. Use a brown paper bag instead.

Using the same dry-brushing method, I applied Arteza Pearl Copper Gold (No. A729) and then Gold (No. A703). The key is not to overdo this step. I started with the darker color for the highlights to bring up the contrast on larger areas, then applied the pearl copper gold in a smaller area, and finally the gold in select spots for the top-most highlights.

The leather looked good, but to bring up the contrast, I turned to PanPastels Phthalo Blue Shade (No. 560.3). To work, pastels must be applied on a matte surface so they will hold. I used a single color here, but if you are using multiple colors, I recommend sealing your work with a coat of flat clear — like Behr Chalk Matte Clear — between colors to prevent the colors from getting muddy. Plus, if you make a mistake on your current application, just wipe it off with a cotton swab without fear of messing up your previous work! I apply the pastels in the shadow areas, underarms, and places where leather touches other materials. This helps to create dimension to your painting.

Compare how the leather looks now, after the pastels, to how it did in Step 9 after highlights. The blue pastel has added a natural contrast to the leather without eliminating or muting any of the highlights. When using a clear coat to seal your pastels, make sure to test them off the model first to see how they react. Sometimes a clear coat will darken pastels or make them disappear. Better to know before mixing them on your model.

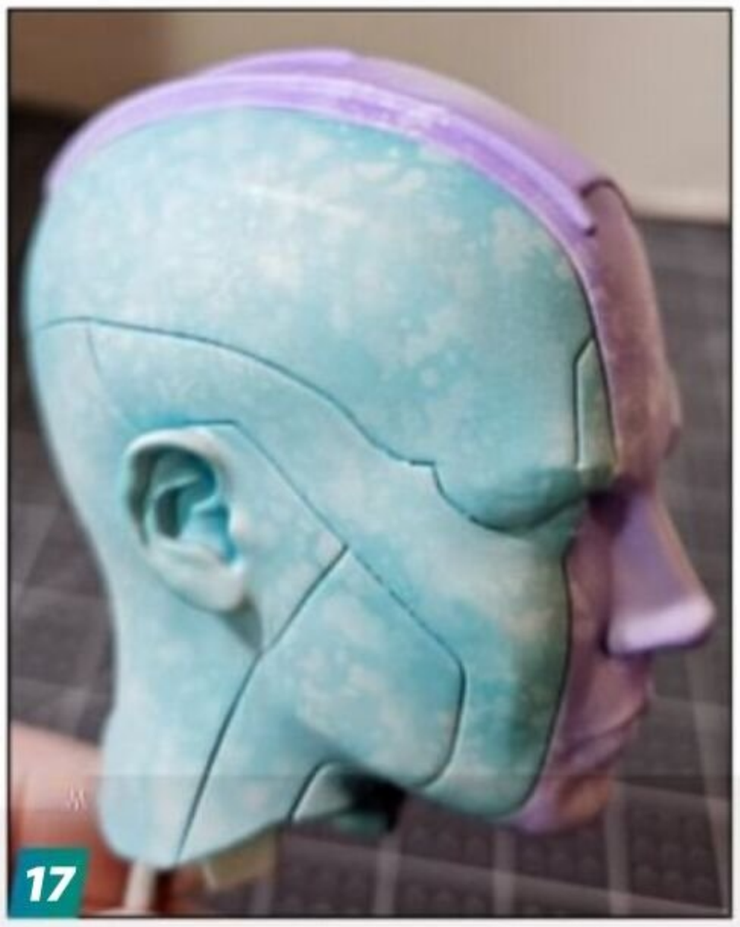
To tie all of the work together, I misted ComArt Transparent Shade Additive (No. 2031) over the rougher leather accents and repeated the process with a wash-thin mix of Createx Blood Red (No. 4560) over the rest.

As a final step, I brush-painted the brown accents and gold buckles on Nebula's uniform. For the accents, I first painted them Citadel Nuln Black and then followed with Citadel Seraph Sepia shade. The gold buckles are Model Master Gold enamel.

Turning to Nebula's head, I airbrushed the left and right sides Golden Teal (No. 8547-1). After sealing it under a clear coat, I let it dry completely so I could mask it without the paint peeling off. There is nothing more frustrating than ruining your work because of impatience.

After masking the right and left sides of Nebula's head, I airbrushed the rest GarageKits Colors Lavender. These base colors are extremely vibrant, but they serve as the base for the steps to follow and will be toned down with further applications of color.

I carefully removed the masks and made sure there were no bare spots. Next, I airbrushed GarageKit Colors Semi-transparent White through Artool Texture FX Mini Series Set Freehand Airbrush Template (No. FHTFX1MS) over the whole head. The point is to create random, mottled patterns to make the skin look more organic and add realism.



After I was happy with the mottling, I went back with the transparent white and lightened certain raised areas, like the crown of the head, brow, and cheek bones. This gave the face and skin more depth, which is something that can be easily overlooked.

Using extremely diluted ComArt Transparent Shade Additive, I shaded some deeper recess areas on Nebula's head, like behind the ear, along the separation lines, and around the metal plates. Again, I'm building the realistic look by using different transparent colors for shading.

For the purple area of her skin, I used PanPastels Violet Shade (No. 470.3) to bring out her features. Applying pastels with small brush on such areas gives you more control over where color is applied. More control means better results.

I masked around the cheek and neck panels and darkened them and lightly painted squiggly lines to imitate veins. I mixed 1:1 Golden Glazing Liquid (No. 2065) and water and then added a few drops of GarageKit Colors Midnight Blue for the consistency of a wash.

The colors can seem a bit stark, so I airbrushed thinned Liquitex Acrylic Ink Prussian Blue Hue thinned with Golden Glazing Liquid and water like in Step 20 to darken some of the shadowed areas and help transition the highlights to darker skin tones. Inks are great for trasparent painting because they are pure pigment without any fillers.

Now, it's time to paint Nebula's metal implants. I started by masking and then airbrushing those areas black and then sealed them with a flat clear coat.

Rub'n Buff metallic wax finish works well for creating realistic-looking metal on figures. In this case, I dry-brushed Silver Leaf (No. 76370K) on Nebula's cybernetic headgear. Then I sealed my work under flat clear and shaded with touches of Citadel Nuln Oil Shade, diluted Golden Carbon Black (No. 2040), and black pastel powder. After shading, I highlighted select areas with the silver leaf just to brighten those spots.

How I use Rub'n Buff finishes

It took me some time and experimentation to figure out how to use Rub'n Buff wax metallic finishes, but now, they are my go-to for painting metal. First, I always start with black as my base color, sealed with flat clear, which helps the Rub'n Buff finish to adhere better. Here's my process:

1. Put a small amount of Rub'n Buff in plastic palette with spherical depressions; a paper surface will absorb all the liquid from the paint and quickly make it unusable.

2. Using an old paint brush, I dry-brush my model with very light strokes. This allows me to see the grooves, crevices, and other details. Remember, use a brown, paper bag, not a paper towel, to remove the excess paint from the brush.

3. After applying the Rub'n Buff, I seal it with flat clear. The wax finish doesn't dull down under the flat coat like other paints can. This makes them easy to shade and adjust.

4. For shading I use black paint diluted to the point of transparency and black pastels. The point when applying them is to add dimension and volume to the metallic areas.

5. Last, for extra sparkle, I apply a small amount of Rub'n Buff to a few areas as highlights. I don't usually seal this last layer.

24

I applied Rub'n Buff Silver Leaf to both Nebula's base and her cybernetic arm, and then, as with her head, I shaded with the black mix from Step 23 and black pastel powders.

25

With most of the parts painted, I'll put the figure together and check how it looks overall. I'll ask myself if there are things I want to change. Maybe what I envisioned isn't happening and something needs to be reworked. My advice: Don't be afraid to change or repaint something if it needs it. Remain flexible and keep practicing! **FSM**

How to GET AHEAD in modeling

Convert a bust using a 3D-printed head

BY BRIAN WILDFONG

One of my favorite details from the 1990 film *Memphis Belle* is the headgear worn by the titular B-17's copilot. At several points in the film, 1st Lt. Luke Sinclair played by Tate Donovan has on a garrison cap with a pair of earphones casually pushed up on his temples. With that in mind, I bought a Young Miniatures 1/10 scale USAAF Fighter Pilot 1944 bust (No. YM1856) planning to convert it to depict a B-17 pilot like Sinclair. That required replacing the fighter pilot's leather helmet and goggles with the garrison cap and headset. Replacing the entire head was he only real option, but I was stymied by the dearth of bare 1/10 scale heads on the market. Most available busts had headgear cast as part of the head, requiring complex modifications.

The advent of 3D-printing has opened a whole new world of custom aftermarket products, including detailed bare heads in many scales. Looking online, I discovered a beautifully printed head in a figure of Tom Cruise from *Top Gun: Maverick* offered by Scale Collectables that would be perfect for my conversion. All it took was a bit of preparation, minor sculpting, and the courage to dive in and try. Hopefully, the simple tools, basic materials, and logical steps I used will encourage you to convert an existing bust to a subject that fires your imagination. Good references for the technical equipment like the headset were essential. Fortunately, there are dozens of period photos of 8th Air Force crew and their equipment online. I also watched *Memphis Belle* about a dozen times; I justified it by calling it "research."

So, off with the kit-supplied head, which conveniently came separate in the Young Miniatures kit and on with the conversion!

I had Scale Collectables print just the head from the Maverick figure at 1/10 scale and test-fitted it on the Fighter Pilot torso with poster putty until I was happy with the position and angles. I noted a couple of places where I would need to do a little epoxy putty work to fill gaps between the head and the collar for his uniform shirt.

I temporarily mounted the head on a dowel that would serve as a handle while I modified it for the new headgear. I sketched a pencil line against the forehead to mark the approximate position of the cap's lower edge, then used a hobby knife and sandpaper to remove most of the hair above the line.

To begin the garrison cap, I roughly shaped a wedge of Apoxie Sculpt putty on top of the head with my fingers. A toothpick dipped in water and rolled against the putty shaped it; the tip added folds and seams. Finally, I used a water-damp paintbrush to smooth the putty and left it to harden overnight.

I made a ribbon of Apoxie Sculpt by rolling a blob of talc-covered putty inside a plastic sandwich bag with a hobby-knife handle. This ribbon was wrapped around the head, cut to length, and shaped with a dental pick and brush to form the outer flap of the cap with its piped edge. I sculpted a little extra hair to blend the cap into the head.

When the putty was completely cured and hardened, I smoothed it with a Scotch-Brite scouring pad, so the finish better matched the resin head and body.

I superglued the head to the body, pushed small worms of Apoxie Sculpt into gaps between the parts, and smoothed them to blend the neck and shirt collar.

PRO TIP

WHEN WORKING WITH LAYERS of two-part epoxy putty, it's critical to let the initial application cure completely before adding the next. Failure to do so risks damaging the underlying work as you press, sculpt, wet, and smooth the next layer. When it comes to producing award-winning figures, there are no shortcuts. So be patient and don't rush.

7

To make the HS-23 headset, I pieced together the headphone receivers by gluing slices of two different diameters of styrene sprue. Those were attached to the sides of the head with superglue. The initial result looks a bit goofy but more putty work will fix that.

8

After wrapping worms of putty around the sprue receivers, I rolled and blended them together with moist paintbrushes, toothpicks, and metal dental picks to replicate the foam rubber earpieces that surrounded the receivers.

9

Using a variety of materials — styrene sheet, steel wire, and thick aluminum foil cut from a pie plate — I added the fittings for the headset. The disparate materials were joined with superglue.

10

The trickiest parts of the headset were the two rounded straps connecting the headphones. I made each from doubled-up pieces of an aluminum pie plate and achieved the smooth curves by rolling them around a hobby knife handle. To attach them, I superglued one end to the head and left it to dry completely. Then I carefully guided the other end over the top of the head with tweezers, trimmed it to size, and superglued it to the opposite ear piece.

11

I wired each headphone with short pieces of .15-inch, lead, fly-tying wire superglued in place.

12

To unify the diverse materials and see how the new head blended with the torso, I sprayed the bust with a couple of coats if light gray Tamiya Fine Surface Primer. Satisfied everything was where I wanted it, it was off to the painting table.

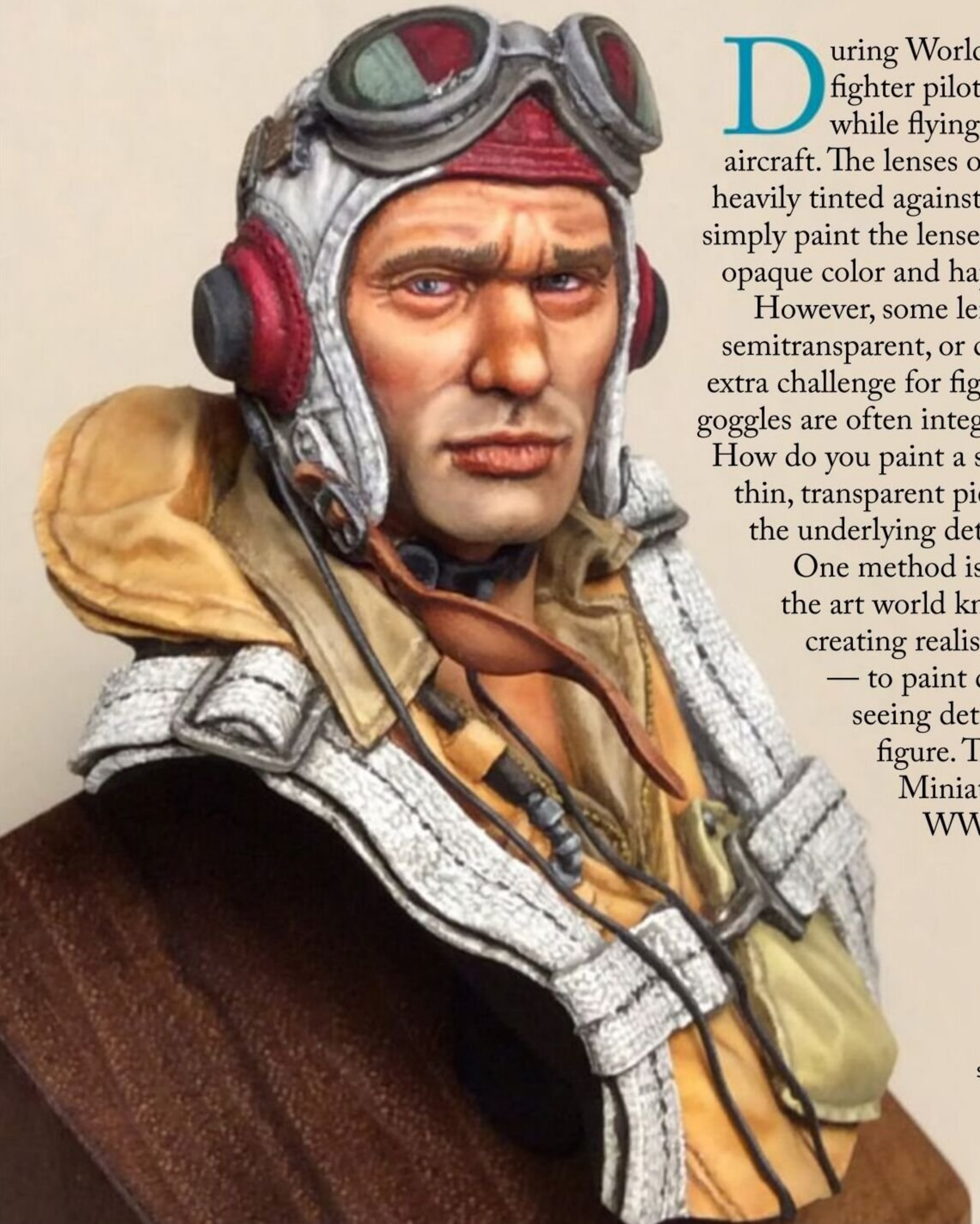
FINAL THOUGHTS

IT TOOK COURAGE on my part to "wreck" the beautifully rendered hair on the 3D-printed head. Once past that, breaking the job into smaller steps — for example, the two-stage process of sculpting the garrison cap — made a seemingly complex project less intimidating. Now, I just need to come up with a conversion project using the kit's original head ... **FSM**

A clear CHALLENGE

Simulating transparent lenses with paint

BY BRIAN WILDFONG



During World War I and World War II, fighter pilots frequently wore goggles while flying, especially in open-cockpit aircraft. The lenses of these goggles were often heavily tinted against the sun and many modelers simply paint the lenses on figures with a dark, opaque color and happily move on.

However, some lenses were lightly tinted, semitransparent, or completely clear. That poses an extra challenge for figure or bust painters, because goggles are often integral with the figure's headgear. How do you paint a solid resin lens to look like a thin, transparent piece of plastic through which the underlying detail can be seen?

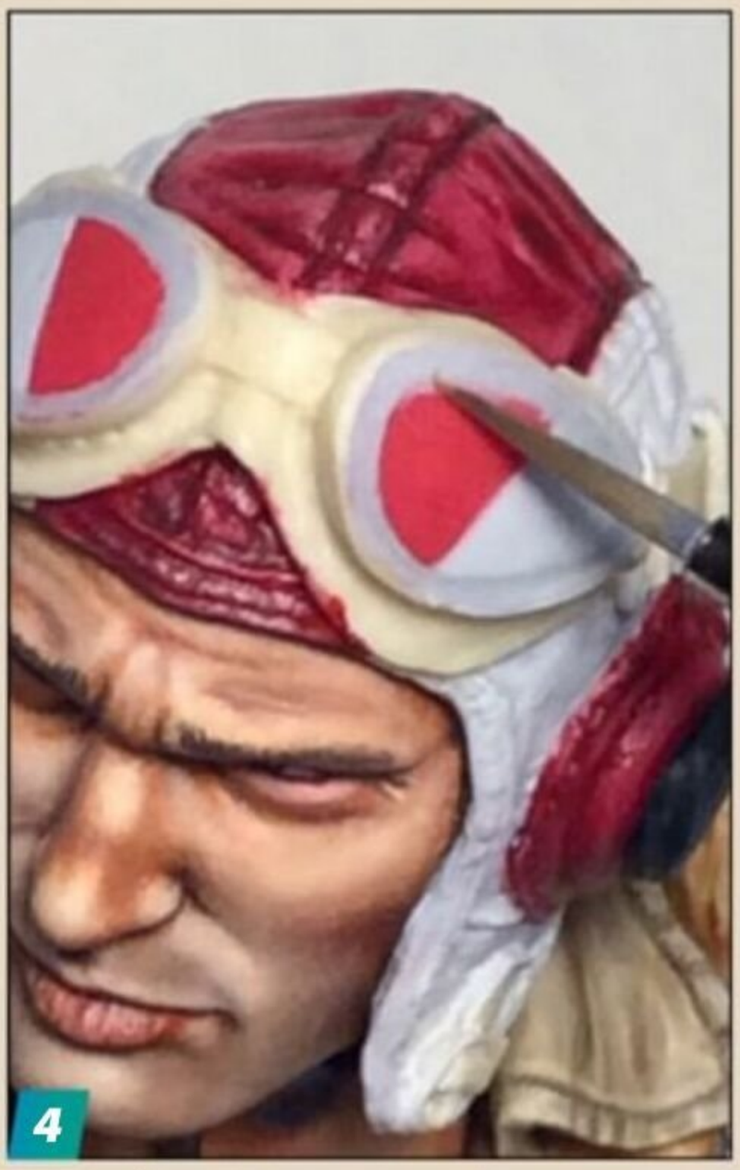
One method is to borrow a technique from the art world known as *trompe-l'oeil* — creating realistic 3D effects on a flat surface — to paint details and fool the eye into seeing detail that wasn't cast into the figure. That was the case with a Young Miniatures 1/10 scale bust of a WWII U.S. Navy aviator.

Looking at the goggles perched on the head of the 1/10 scale bust of a Navy flier, you would swear the lenses are clear. But they started as the same yellow resin as the figure.

Young Miniatures' U.S. Navy Aviator is beautifully sculpted and cast. But note the goggle lenses with their flat, opaque surfaces.

The colorful flying helmet is based on those worn by pilots of VF-16 operating from USS *Lexington* in late 1943. Notice the borders between the red and white pass under each lens, something I'll need to paint on the lens surface.

Using the same colors I brushed on the helmet, I painted the red and white areas on each lens with craft acrylics, ensuring they match the borders on the helmet. I added shadows and highlights with Winsor & Newton artist oils.



Using a 0 brush, I painted acrylic gray around the inner edge of each lens. This will simulate the rubber frames.

Other details need to be carried from the helmet to the lens as well. A pale gray replicates stitching molded on the helmet and a darker gray gives the impression of a shadow where the frame touches the helmet. I used a 00 brush for these details.

The red area of the lens receives painted-on wrinkles and seams with the same artist oils I used to shade the red of the helmet. I mimicked the surrounding molded detail to get these just right.

Using raw umber oil paint and a 00 brush, I added a darker line to the top edge of the lens to simulate the shadow cast inside the lens by the aluminum outer rim.

A very thin line of lamp black oil paint applied with the 00 brush marked the shadow that would be cast by the inner edges of the goggles contacting the helmet.

I added the aluminum outer frame with acrylic silver and shadows and highlights of black, gray, and white oil paint. From this angle, the transparent effect of the trompe-l'oeil technique is particularly clear! *Hah!*

Even completely clear lenses have a slight color cast. Once the oil paints were well cured — 3–4 days — I mixed a blue-green color from craft acrylics, thinning with about 90% water. The effect of the glaze is very subtle, but wait for a coat to dry completely before the next.

After flat coating the completed bust, I added a final touch to the lenses. Applying two coats of Liquitex Gloss Varnish produced a surface sheen that catches and reflects the light — just like glass!

FINAL THOUGHTS

FOR MY FIRST ATTEMPT using trompe-l'oeil to create the illusion of clear lenses, I'm pretty happy with the result. Although it seemed intimidating, by carefully studying the work of other more experienced painters via books and internet posts, I could break the effect down into a series of simpler, less intimidating steps that I could handle and enjoy. Nothing could be *clearer* than that! FSM

Change TACTICS *for a* SUPERIOR FINISH

Combine airbrush and hand-brushing techniques for realistic cloth, skin, and eyes

BY JOE HUDSON

When I started working on this story, I had just finished my first book, *Modeling Military Figures* (Kalmbach Media, ISBN 978-1-627-00939-3), and I thought I'd go in another direction. Something bright and colorful, like a superhero, TV or movie character, or something sci-fi. Most of my figure projects are military, so what better way to stretch my wings?

That was my thinking, but I'd also been refining my painting for more realistic results. Maybe trying to focus on that and jump genres was taking on a bit too much for one story. Maybe a bust, a character portrait would work better than going the superhero route.

Sure enough, as I was scrolling through websites, I came across a 200mm bust by 3D artist Sid Naique (www.sidnaique.com) of Joachim Phoenix as Napoleon Bonaparte for the 2023 Ridley Scott film. I thought this was perfect for some of the techniques I wanted to hone.

After receiving the 3D-printed Napoleon bust, Joe temporarily assembled the parts and noted the places that needed cleaning up before paint and assembly.

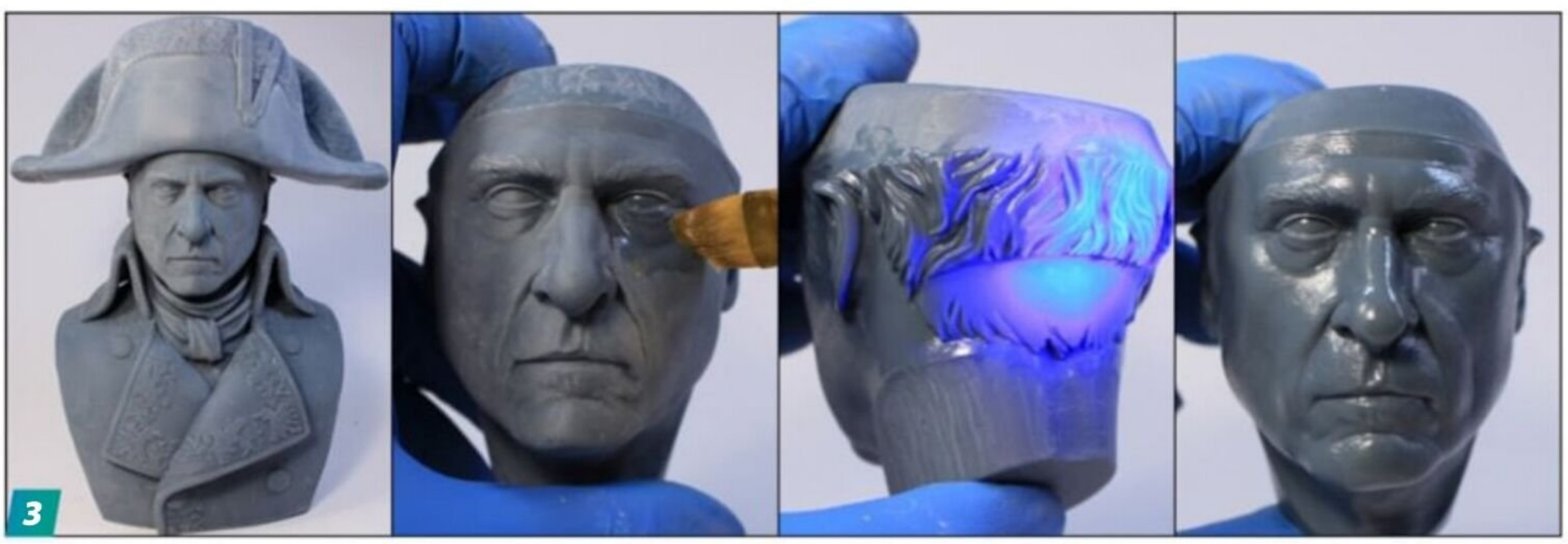
The bust's uniform represents the attire Napoleon wore at the Battle of Marengo, June 1800. I liked its simple, elegant appearance, without too many folds or creases to worry about, and plenty of space to show off the embroidery, lace, and, of course, the bust's face. Sure, it was historical and military, but it was also movie-related, so it fit with my original plans.

With the STL file purchased, I contacted Rise 3D Printing (www.rise3dprintingshop.com) to have the print made slightly bigger than it's intended scale to showcase all the fine details.

The bust came in three parts: hat, head, and torso. For full disclosure, the STL file also included a head with sculpted pupils, but I didn't need that one because I wasn't painting it to look like a marble statue. I pieced the parts together to check the print quality and note places that would need cleanup and exactly how much I'd have to do before I could begin painting. As with every figure, there was prep work.

A cordless rotary tool and a small grinding bit make removing leftover support stubs easy. Go slowly and carefully, and don't press too hard while doing this work with because you don't want to gouge or put a hole in the resin.

I applied Phrozen Light Curing Putty to smooth areas where details were broken, removed, or marred. A silicone sculpting tool is perfect to help shape the putty. When the putty has been sculpted to my liking, I shined a UV light on it for 15 seconds to cure it.



As a final step after cleanup, I brush a thin coat of 3D-printer resin on all of the parts. Working in small sections, I will brush on the resin, cure it with a UV light, and then move on to another section until all the parts have been similarly treated. Once I am done with each part, I clean it off with 90% isopropyl alcohol and let it air dry.

Prepping the battlefield

Cleaning 3D-printed resin parts has some unique challenges versus parts in traditional resin kits. With 3D kits, there are no mold lines or air bubbles to correct. However, you do have to contend with layer lines, leftover supports, and broken support stubs.

There are pros and cons to both kinds of kits — that you can make yours at home if you own a 3D-printer is cool. I have built many traditional resin and 3D-printed kits, and I find them both fun.

To clean up 3D-printed parts, I use sanding sticks and pads of various grits, and a cordless rotary tool with a sanding drum and small grinding burrs. These tools are employed to *gently* remove supports and other blemishes without damaging or breaking the often fragile printer resin, ***1***.

Inevitably, there will be areas that are chipped or worn away by removing printer supports and general cleanup. To fix these problem areas, I use Phrozen Light Curing Putty (other brands are available and apply and cure similarly). It has the consistency of waxy petroleum jelly and hardens with the application of a UV light, ***2***.

After grinding and sanding, I brush 3D-printer resin on the parts with a synthetic, flat brush. Working in small patches, I will apply the resin, then cure it with a UV light, and then repeat the process until the parts have all been covered. The layers must be very thin because you don't want to obliterate any detail. This step isn't absolutely necessary, but it is something I've found helpful in preparation for paint, ***3***.

With all the parts similarly treated and after the brushed-on resin has cured, I wash the parts in 90% isopropyl alcohol and set them aside to dry, ***4***.

Let's get painting

A large-scale bust like this required airbrushing to achieve the desired effect. I own a Gaahleri GHAD-68 and GHAC-98; the first is a pistol-grip airbrush that comes in handy for base-coating and painting larger areas with a .5mm nozzle, and the 98 helped out with detail work with a .38mm nozzle.

Of course, painting figures will always require hand-brushes, and I prefer the ZEM Brush 3200 series.

Before applying color, I airbrushed all the parts Tamiya Sky Grey (No. XF-19). I find Tamiya acrylics have good bite and won't rub off easily while being handled during the painting process.

I chose dark blue for the uniform, and the bust had almost no wrinkles or folds for highlights and shadows. Using an Andrea Miniatures Blue Paint Set (No. ACS-05),

Here are all the bust parts test-fitted together. At this point, it has been cleaned up. The coat of 3D resin has been applied and cured, and the parts have been washed with isopropyl alcohol. Now, it's time to get out the paint, brushes, and airbrushes!

There weren't many folds or wrinkles on the bust's coat, but I didn't want it to appear flat and boring. I mixed colors from an Andrea Miniatures paint set and airbrushed shadows and highlights for volume.

After painting the coat collar, I base-coated the braids, filigree, and buttons with a 1:1 mix of Monument Hobbies Pro Acryl Dark Golden Brown (No. MPA-062) and color No. 6 from an Andrea Yellow Paint Set (No. ACS-11) with a 0-size paint brush.

which contains six blue shades rated from lightest (No. 1) to darkest (No. 6). I mixed a base coat of colors No. 5 and No. 1 at 3:1 and airbrushed it onto the coat. Then I sprayed color No. 6 angled from the bottom of the torso toward the top to create shadows, careful not to obliterate the base coat. Similarly, for highlights, I airbrushed a 3:2 mix of No. 1 and No. 2 from above to add volume to the shoulders and folds on the coat front, ***5***.

The No. 5 shade from Andrea's Red Paint Set (No. ACS-04) served as the base coat for the collar, and I airbrushed Monument Hobbies Pro Acryl Pyrrole Red (No. MPA-003) highlights, ***6***.

Of the whole project, painting the embroidery was the most challenging and time-consuming part. I wanted it to look like stitched, golden thread, not metal.

I made a 2:3 mix of dark golden brown and AK Interactive Medium Sand (No. AK11034) and went over the dark yellow base coat. After adding AK Dark Sand (No. AK11033) to the mix, I added volume to the embroidery with highlights. As a final touch, I lightened the paint mixture with Light Sand (No. AK11032) and added final highlights in select locations, ***7***.

Comparatively, the buttons were a breeze. Being metal, I mixed AK Interactive Old Gold (No. AK11192) with Monument Hobbies Pro Acryl Dark Umber (No. MPA-019), 3:1, and applied a light coat to each. I outlined each button with dark umber. Lastly, a highlight of AK Interactive Gold (No. AK11191) on the raised details and top edges finished them, ***8***.

The attention to detail pays off with the uniform's subtle highlights and the softness of the embroidery as opposed to the bright buttons, ***9***.

With that, I turned my attention to the bust's hat and base-coated it with a 1:1 mix of Monument Hobbies Pro Acryl Coal Black (No. MPA-056) and AK Interactive Black (No. AK11029), ***10***. I hand-painted the lace around the edges dark golden brown, and then added a bit of life to the hat by airbrushing Com Art Opaque Burnt Umber (No. 10141) in spots to hint at a worn-leather look. Straight black created shadows, ***11***.

To finish the lace, I added a dab of Monument Hobbies Pro Acryl Olive Flesh (No. MPA-041) to dark golden brown and dry-brushed the raised portions, careful not to get any on the black areas. A glaze of Monument Hobbies Pro Acryl Bright Gold (No. MPA-031) went over all of the lace areas to tie them all together, ***12***. A glaze is not a wash. For me, it's a 2:1 paint-to-water mix applied over the color I'm

Painting the uniform's embroidery and braids took about 12 hours of work. The key for painting these kinds of fine detail is to use a quality brush, a wet palette to keep your colors workable longer, add thin layers to gradually build up color, and work in small sections so you don't rush.

The metallic buttons required less attention than the embroidery, but even then, it's about fine strokes and keeping the lines tight, especially when applying dark umber around the edges of the buttons and picking out highlights.

The finished uniform with all the braid and buttons completed. You can also see the subtle highlights of the blue uniform. It is important to not make these too stark because the real uniforms were dark and you don't want a cartoonish appearance.

adjusting, helping to blend areas but letting the underlying color still show through.

Don't overlook the importance of outlining certain details, like the cockade on the hat. I mixed a bit of brown and black together, and applied a very thin line at the point the cockade meets the lace, around each of the colors in the cockade, and along the places where lace overlapped lace. It separates the colors and adds a hint of shadow, accentuating the detail, ***13***.

Putting on a good face

When I first saw the face on this bust, I knew it would be a fun project because of all the character and expression. In the past, I would paint skin tones from dark to light. It's the way I was taught and used the technique up until just a little more than year ago. That's when a friend of mine introduced me to painting more with an airbrush and to go from light to dark for a more realistic appearance.

I start by airbrushing a pinkish-tan base coat made from 4:1 Monument Hobbies Pro Acryl Tanned Flesh (No. MPA-024) and AK Interactive Brown Rose (No. AK11063). Then I sealed it with clear matte finish, which I do after every step. It protects my previous work from damage and allows me to correct mistakes without fear of messing up early steps, ***14***.

Mixing approximately five drops of Createx Reducer (No. 4011) for every two drops of Com Art Transparent Bright Red (No. 20161), I turned my air pressure to 8-10 psi and freckled the face. It is not about full coverage, but rather an uneven misting to get tiny, random splotches on the skin.

Turning up the air pressure to 20 psi, I airbrushed the same red mix onto the tip and sides of the nose, lips, tops of the ears, lower eye bags, laugh lines and then sealed.

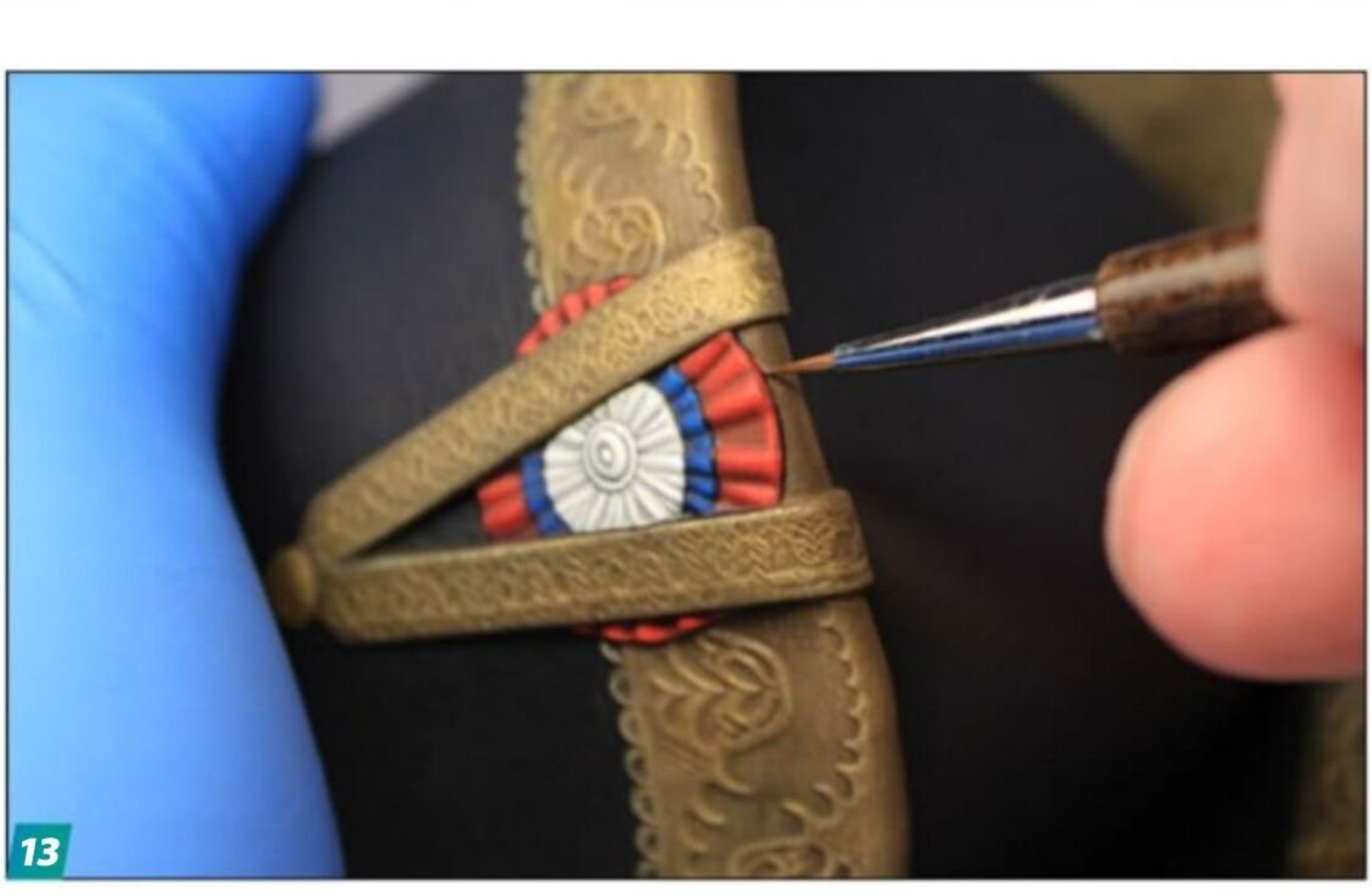
Basically using the same process as I did with the red, I switched to reducer with Createx Transparent Light Brown (No. 5127) and lightly freckled the face. Then, with the pressure turned back up to 20 psi, I sprayed the brown mix onto the sides of the nose, above the eye socket, and around the jawbone, ***15***.

Switching to a sable brush, I painted the bust's lips a mix of 75% Com Art Bright Red, 20% Ultramarine (No. 10031), and 5% Createx Transparent Dark Brown (No. 5128). A mixture of 30% Com Art Ultramarine and 70% Createx Transparent Medium Gray (No. 5129) was brushed into the corners of the nose and under the bags of the eyes. A mix of 60% Com Art Bright Red and 40% Com Art Burnt Umber (No. 10141) for a reddish-brown color was

After airbrushing a black base coat onto Napoleon's hat, I sealed it with Krylon Matte Finish (No. 1311) straight from the spray can. This protects the base coat from mistakes that I might make going forward.

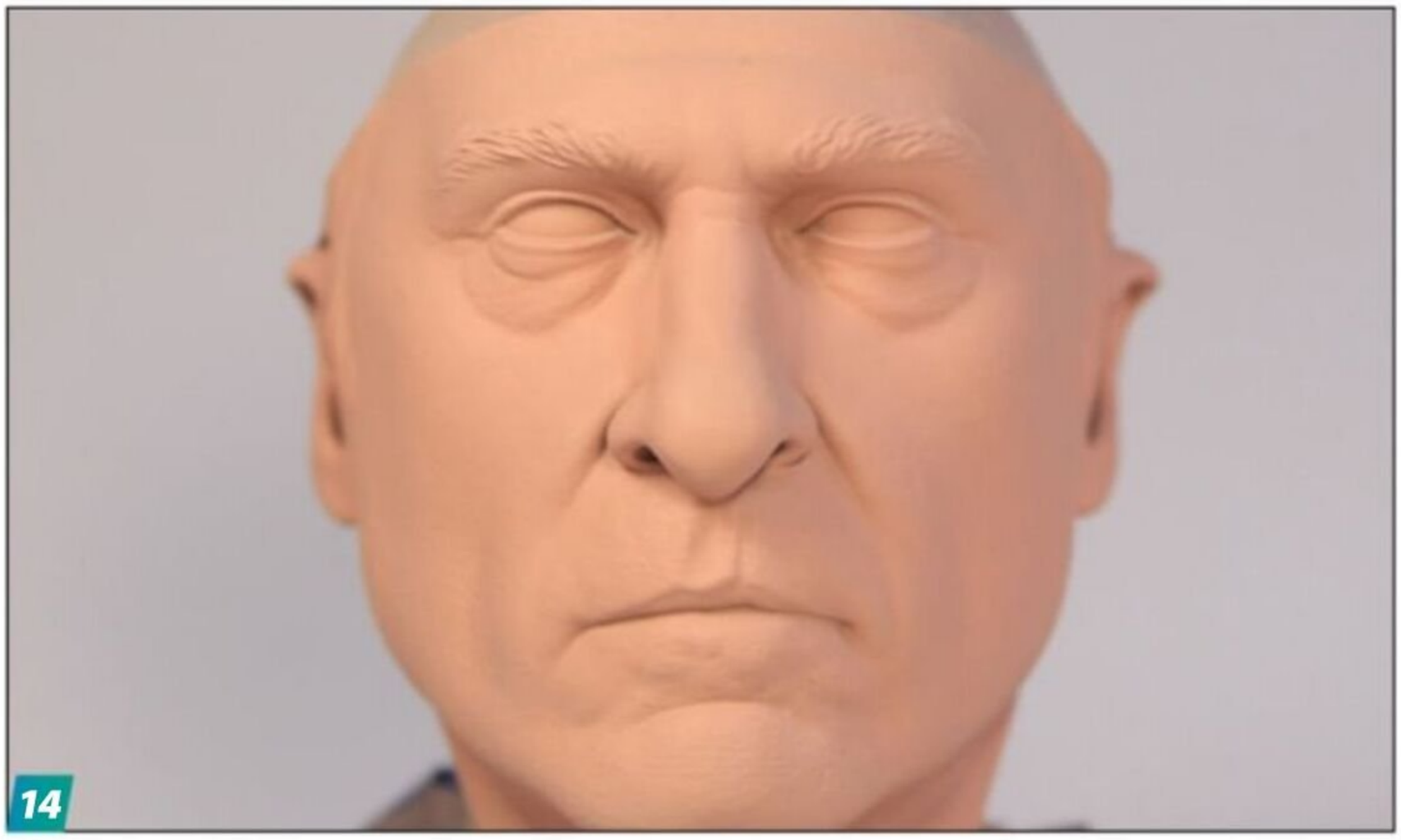
The hat could not just be left a black color, so I airbrushed burnt umber in various areas to give it some life. Afterward, I airbrushed AK Interactive Black in the shadowed areas.

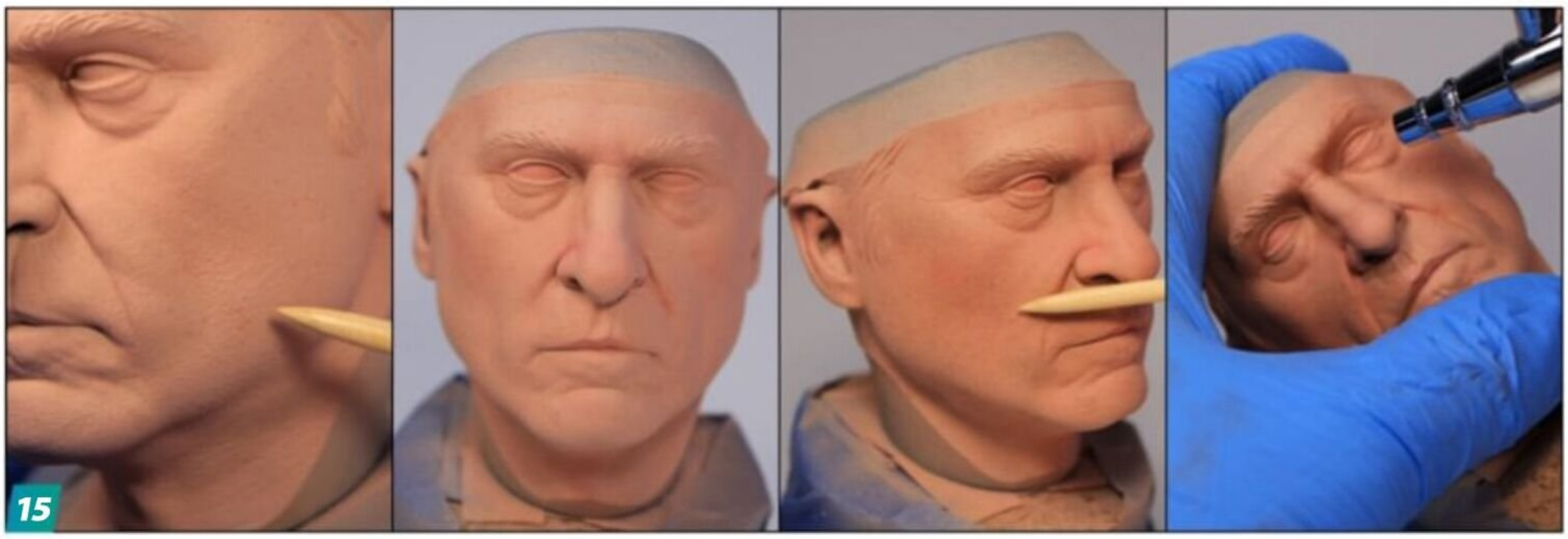
The hat's lace was finished with a combination of dry-brushing and an overall glaze applied with a paintbrush. I painted the button using the same process for the uniform buttons in Step 8.



Outlining is a small detail that is sometimes overlooked, but it is important to provide separation. Simply take a dark color, a bit of brown and black in this case, and trace around each of the colors on the cockade and lace.

I airbrushed Napoleon's face with a pinkish-tan base coat, let it dry, and then sealed it with a flat clear coat. Again, the clear coat protects the colors and work already applied from damage in case I make a mistake later on.





This process begins creating the skin imperfections, freckles, and splotches that adds to the realism of the piece. I used Com Art Bright Red the first time around and Createx Transparent Light Brown the second time, adjusting air pressure depending on whether I wanted to mist freckling or achieve a more consistent, if thin coat. After each step, I sprayed on a coat of flat clear to protect my work.

PRO TIP

DON'T REFRAIN from taking a critical look at your model and your painting so far and make any necessary adjustments. I like to snap photos with my phone and look at them because I find looking at a photo of the figure allows me to be more honest with myself about the work. Here, I asked if I needed more red on the nose or more freckling on the face. Better to make adjustments now rather than finishing and then wishing you had done something different earlier.

painted into the laugh lines and eyebrows, ***16***.

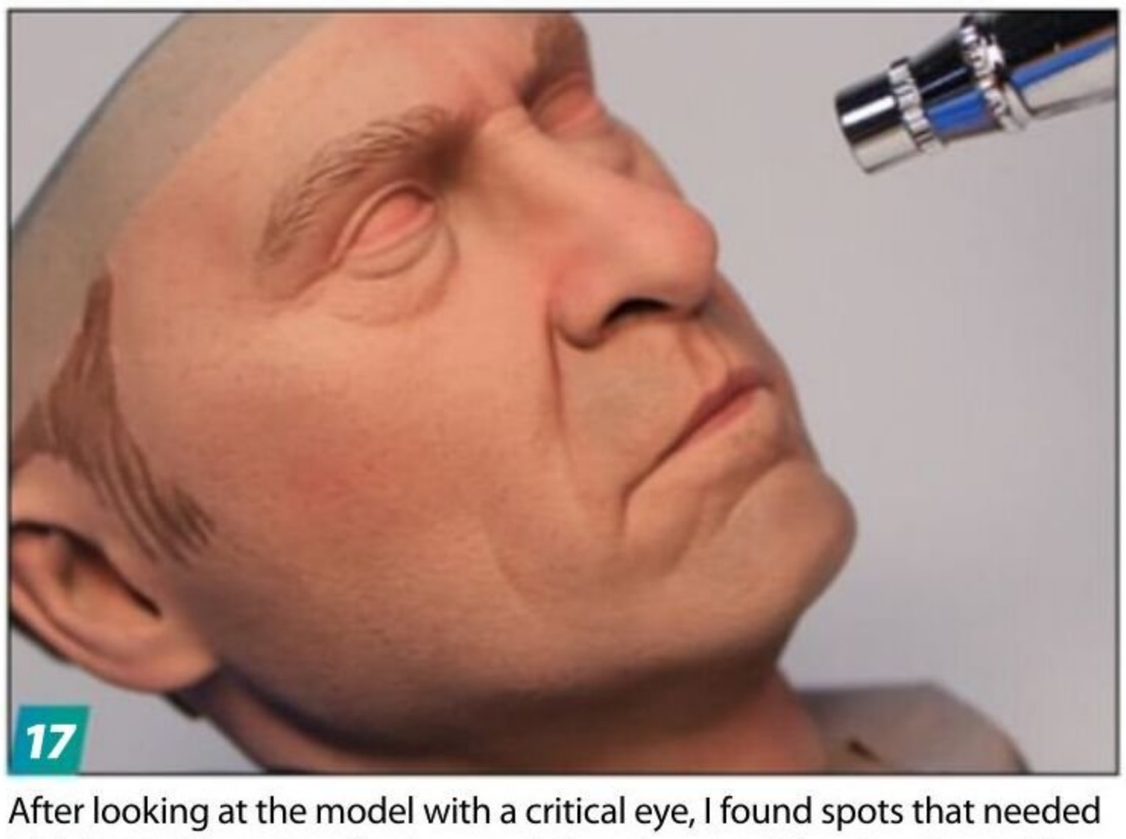
I added highlights to the nose, laugh lines, upper lip, chin, and forehead with Createx Tim Gore's Bloodline Deep Natural (No. 5027). A paintbrush can handle the smaller areas, while I prefer an airbrush for the larger spots, ***17***.

Lastly, I airbrushed the five-o'clock shadow on Napoleon's cheeks, chin, and jaw with Com Art Smoke (No. 20021). With that, the skin tones were finished, ***18***.

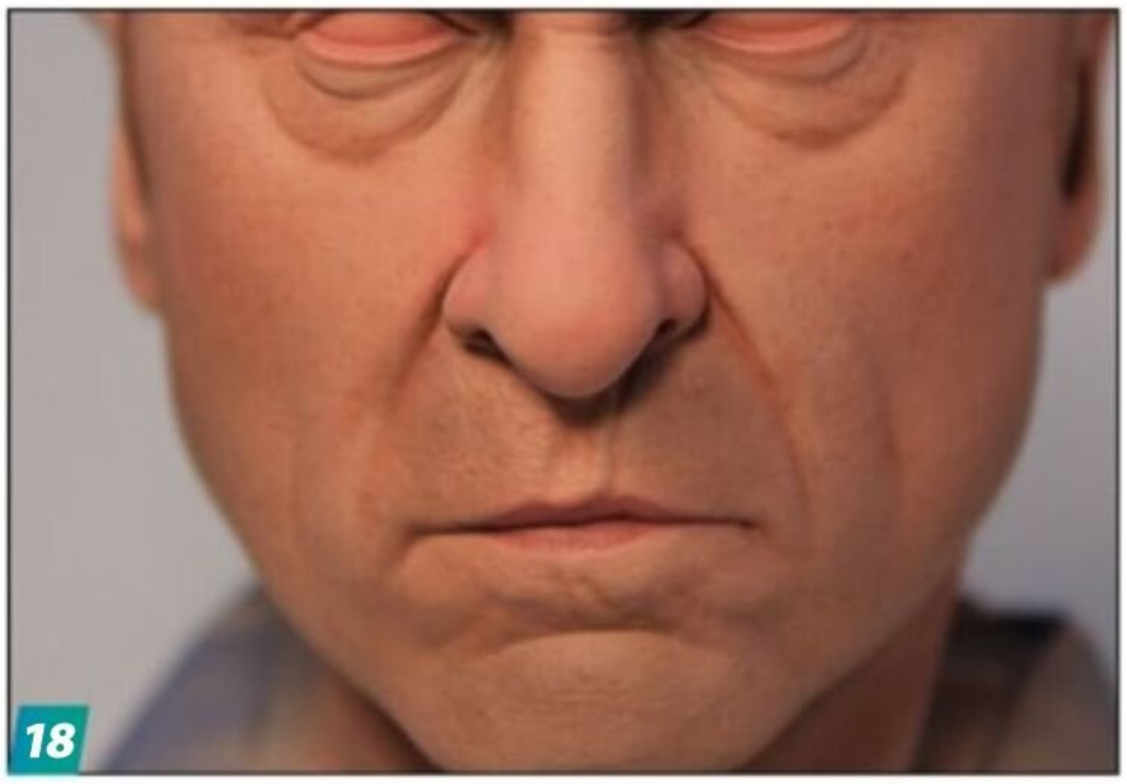
The eyes have it

In general, painting eyes gives everyone trouble, even experienced figure painters like me. So don't feel as if you're the only one! I liked how expressive this bust's eyes were and they would give me an opportunity to show more detail and improve my own techniques.

Moving to a paintbrush, it was time to deepen and accentuate the laugh lines around the eyes, shade the corners of the nose near the cheeks, and begin filling in the eyebrows. It's important that all of the color mixes were kept translucent.



After looking at the model with a critical eye, I found spots that needed highlights. No matter if using a paintbrush or an airbrush, when adding final highlights, apply thin, translucent coats of paint and slowly build up to the appearance you want.



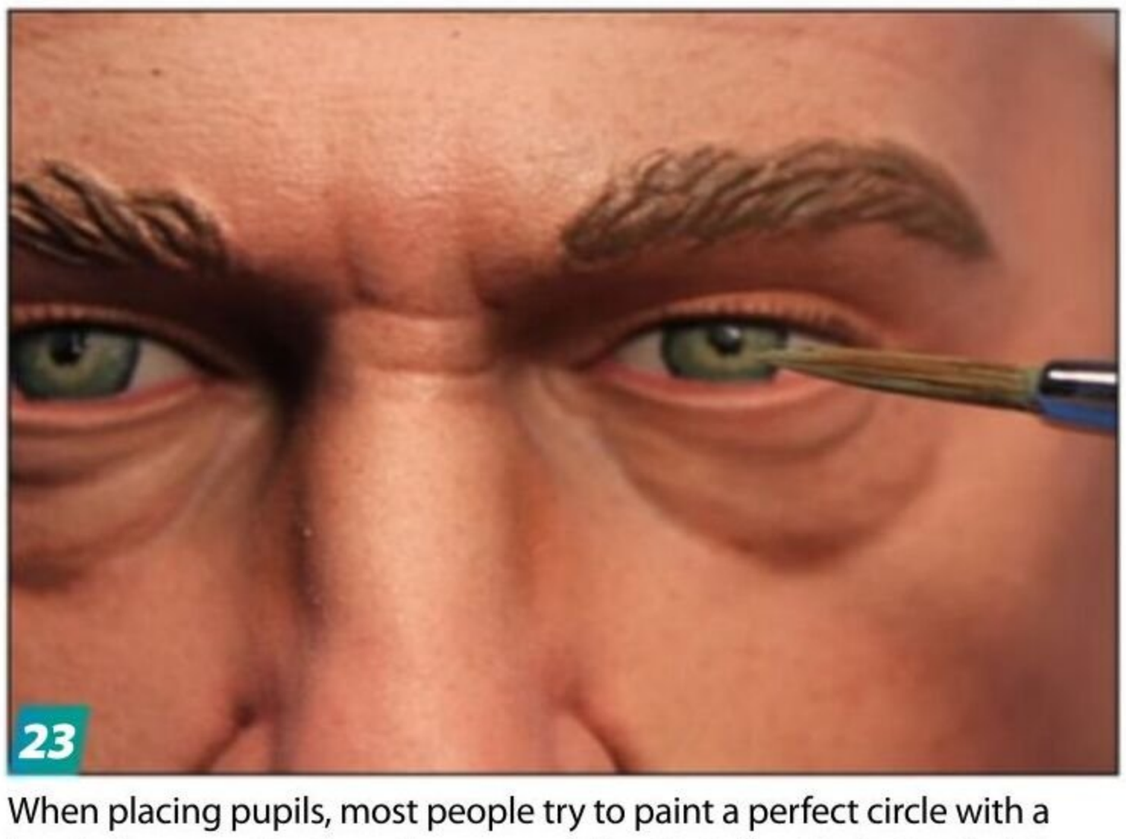
The last step was to add the stubble along cheeks, jaw, chin, and upper lip. While I airbrushed the five-o'clock shadow, you can also use black or dark brown pastel pigments to achieve the effect. Remember to seal your work under a flat clear coat.

When painting the whites of your figures eyes, please don't use white. Sclera is not white, though we refer to it that way. The discussions for what to use are many, and while I have a favorite mix, you can create your own to suit your tastes.

I painted the base coat of the iris by hand. I find that starting with the outside diameter of the irises helps me ensure they are the correct size and shape. Others like to paint dots where the pupils will be and then work outward. Experiment and find your preferred method.

I mixed a dark blue color for the border of the irises and hand-painted them over the base zinc color. For the eyebrows and sideburns, I applied a thin base of Monument Hobbies Pro Acryl Black Brown. Then I mixed in Mahogany (No. MPA-009) for highlights and individual hairs.

The bust's eyes were going to be a subtle green. For that, I chose the Base A1 color from the Andrea Miniatures Khaki Paint Set. I applied the color in thin layers until it completely covered the zinc underneath. The eyebrow highlights are pure Monument Hobbies Pro Acryl Mahogany.



When placing pupils, most people try to paint a perfect circle with a brush. I've never had much success doing that. I've tried a toothpick dipped in paint to dot the pupil, but didn't like the results. Over time, I've come to find using a black artist's pen works best for me.

I'm always trying to make my figures' eyes better. Thinking I was finished with Napoleon's eyes, they just weren't quite living up to what I envisioned, so I grabbed my paints and adjusted them with a few lighter details before sealing them again under gloss glaze.

Finally, the face is complete, with the eyebrows, lashes, eyes, and skin tones all coming together. Now, it's time to assemble the bust and see how it all turned out!

Painting the whites of a figure's eyes is a perennial topic of conversation with strong opinions all around. Some people use white (please don't!), while others opt for a light pink. I go with a mix of roughly 85% Folk Art Linen (No. 420), and 5% each Createx Transparent Medium Gray (No. 5129), Transparent Dark Brown (No. 5128), and Com Art Ultramarine for an off-white, almost gray color, ***19***.

To get the shape of the iris, I typically paint the outer diameter and then work inward. Other modelers like to dot the center of the eye and work outward. Either way, no matter the final color of the iris, I always start with DecoArt Americana Zinc (No. 1033) as the base color, ***20***.

For the irises' outer ring I took Monument Hobbies Pro Acryl Dark Blue (No. MPA-034) and mixed a tiny amount of Americana Zinc into it. Then I hand-brushed it along the edges of the base color, ***21***. It looks weird, but that will change.

Now, I laid down the base color for green eyes, starting with Andrea Miniatures Khaki Paint Set (No. ACS-014) Base A1 color. I applied it very thinly until it covered the zinc color beneath. Also, I began adding eyelashes with Createx Transparent Dark Brown using a 10/0 brush to make thin tick lines to simulate individual lashes, ***22***.

All the details start coming together. To detail the iris, I chose AK Interactive Grey-Green (No. AK11016), Waffen Brown (No. AK11417), and Vallejo Game Color Khaki (No. 72.061). Grey-green, my overall iris highlight color, was gently dabbed semi-randomly with a size 0 paintbrush. I added Waffen brown and khaki in various mixes, trying to emulate what I saw in photos of Joachim Phoenix. I then used a Pigma Micron 08 pen for the pupils, ***23***.

DecoArt Americana Triple Thick Gloss Glaze provided the eyes with the right amount of glisten and life. But after looking at them for a while, I wasn't quite happy with their coloration. So, I added a few light striations of color to each iris until I was satisfied, then resealed them under a new coat of gloss glaze, ***24*** and ***25***.

Realism in your figure painting

It doesn't take much to bring more realism to your figure painting. But it does require practice and a willingness to continually evaluate both your technique and your work while in the midst of it. Don't be afraid to try something new and out of your comfort zone, but don't feel as if you need to do it all at once. For me, I try to do something a little different with each project, always with the intention of improvement. On to the next! **FSM**

GRIMDARK
in a hurry

Painting fast doesn't mean sacrificing quality

BY DON SURATOS

Some miniature painters can take weeks or even months to achieve a beautiful, display-level model. What if I told you that you could still achieve an award-worthy finish but in a fraction of the time? The key: efficiency.

I've been delving into "grimdark" painting recently, a lot of which you can find in the Games Workshop *Warhammer 40K* universe. For this horror-filled project, I picked up a King of Ruin resin figure from Creature Caster. One of the company's larger figures, it comes in a number of parts that I superglued together.

The model itself didn't require much cleanup — a couple of mold lines and a little excess resin. Really, I just used a hobby knife and an SAB panel liner chisel to take them down — no sanding required.

To fill any gaps and to create extra skin details like pimples and small veins, I chose UV-curing resin. It's easy to work with and the details added over gaps made the filled areas look better.

Yeah, he's an ugly mutha, but that can be fun! I primed with hardware-store acrylic primer — first gray and then white. Apply the primer in thin coats to preserve details and avoid paint pooling by keeping the spray can moving. You're looking for consistent and complete coverage.

After letting the primer dry for a day, I applied a couple of thin coats of Vallejo Mecha Matte Varnish (No. 27.702) and let it dry for a couple of hours. If you're like me, I prime a lot of models at once, so I usually spend the time the new models are drying working on other projects.

The Army Painter Speedpaint

SPEEDPAINT FROM THE ARMY PAINTER was formulated as a one-coat solution for gamers who are interested in fielding good-looking painted figures for their games but don't have a lot of time to spend on painting. Plus, The Army Painter has been trying to help less-skilled figure modelers produce models they could be proud of.

Similar to inks, Speedpaints can provide subtle highlights, shadows, and even be used for base colors. However, they can also react with other inks and paints, so I recommend sealing your primer under a clear coat before using them. If you use a gloss clear, Speedpaints will act more like washes; over a flat or semigloss clear, they will apply more like typical acrylic paint.

For the base coat, I mixed the color, in this case Pale Yellowish Green (No. WP2079P), with Speedpaint Medium (No. WP2090P) in a 2:1 ratio. The medium adds transparency but does not thin the paint. Then I brushed on a quick coat that will be darker in the recesses while providing a light base color for raised, naturally highlighted areas.

A second coat went on, but this time without any medium added. I concentrated on the deep folds and creased areas to create volume. Make sure not to paint this layer over raised areas of the model and blend the edges before the Speedpaint dries.

For larger areas that will be in shadow, I needed a darker, complimentary color. For this figure, Speedpaint Blackish Green Grey (No. WP2026P) worked well. Adding more of the previous color would have added opacity, but wouldn't have created volume and depth like this does.

This hideous creature would be pretty boring if it were all green. I base-coated his mouth and some of the gorier parts undiluted Speedpaint Peachy Flesh (No. WP2037P). They'll eventually be red, but this provides a good starting point. I made sure to blend the edges into the surrounding skin.

Moving the Peachy Flesh toward red, I mixed Speedpaint Aged Hide (No. WP2036P) 2:1 with medium to promote transparency. I applied two thin coats: the first to the overall area for warmth. The second was applied primarily into recesses for depth and contrast.

The rest of the figure received two thin coats of Speedpaint Pallid Bone (No. WP2006P), again with the second coat concentrated more on recessed areas. It's important to let the paint dry before applying the following coat so you don't disturb the work beneath.

At this point, I wanted to look at my composition and make sure it was headed in the right direction, which it was. Up to now, I'd been at the bench for about four hours, and a good amount of the work had already been accomplished.

Now, the pace picks up substantially. I applied Hardened Leather (No. WP2023P) to the bracers and various belts and straps on the model. I chose this orange-brown color because it compliments the greenish skin and stands out.

Looking for an armor color that pops but plays well with the rest of the figure, I decided against more orange and instead went with Tyrian Navy (No. WP2051P). It's a desaturated blackish blue that covered well with a single coat.

Goddess Glow (No. WP2038P) mixed 1:1 with Speedpaint Medium gave a bit more reddish hue to the figure's mouth and the bracers on its forearms. I applied it like a wash to push up the contrast with adjacent colors.


13

I thinned Bony Matter (No. WP2039P) 2:1 with medium and painted two thin coats all over the parts previously painted with Pallid Bone. The second coat went predominantly on the undersides of the armor and the lower parts of the model to simulate light from overhead.


14

The Army Painter Warpaints Fanatic Dark Blue Tone (No. WP3211P) wash is subtler than Speedpaints and settles into recesses without the help of a medium or thinning. A couple of passes over the blue portions added deeper contrast with the rest of the armor.


15

The wart-blister-pimple things (shiver!) needed a bit of prominence. Warpaints Fanatic Necrotic Flesh (No. WP1108P) blends well with the overall greenish skin color and … pops the blisters at the same time. Although very opaque, two thin coats give the best finish with this color.


16

Warpaints Fanatic Afterglow (No. WP3060P) adds a pre-highlight to the bumps and gives the protrusions an appearance of bulging pressure. Blend the color with the Necrotic Flesh beneath, but don't cover it completely.


17

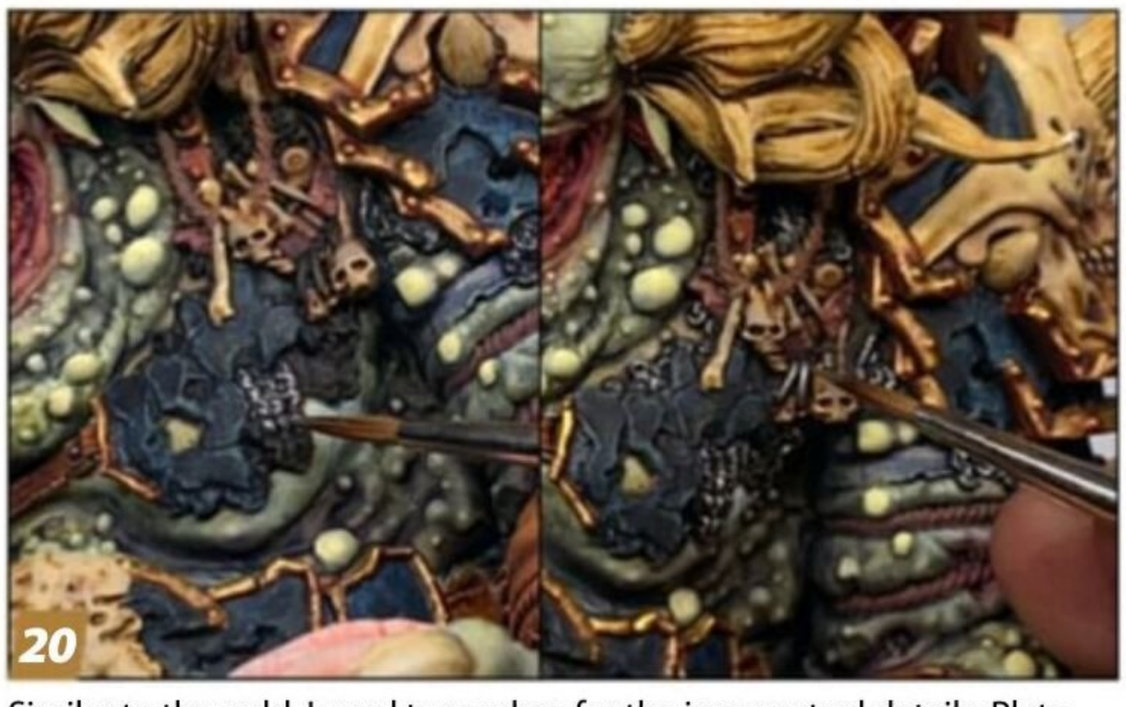
Warpaints Fanatic Wash Dark Skin Shade (No. WP3215P) went over all of the warm colors, including the horns and bone, reddish skin, and leather. This wash made all of the crevices darker and other details more prominent.


18

At first, I thought to paint the trim non-metallic metal, but with all that was going on with this fig, I decided traditional metallics were the better choice. I base-coated the parts of the armor that would be gold with Speedpaint Hardened Leather (No. WP2023P).


19

I painted Warpaints Fanatic Greedy Gold (No. WP1132P) onto the trim, careful to stay away from the armor's recesses and middle areas, letting the Hardened Leather do the work. I also sketched with the brush, creating scuffs and scratches on the trim. Then I moved to Bright Gold (No. WP1144P) and applied it to the top areas and edges of the armor.


20

Similar to the gold, I used two colors for the iron or steel details: Plate Mail Metal (No. WP1130P) and Mithril (No. WP3190P). Over a black base, I start with Plate Mail Metal, again keeping coverage loose for scuffs and scratches. Then Mithril created the highlights on the very tops with fine, small strokes. The finer the highlights, the "shinier" the metal.

To finish the metallics, I applied a Dark Skin Shade pinwash around the lower area and recesses of the armor trim. Then I brushed on a general wash around the undersides of the model for increased shadows and contrast with the lighter colors, again, adding volume.

I created some texture on the Tyrian Navy armor with lighter, blue-gray colors. Similarly, I layered some details on the horns and painted the figure's teeth with Brainmatter Beige (No. WP3011P).

What this guy needs is to be a little more grotesque, right? To that end, I made a glaze with 2 parts Warped Yellow (No. WP3094P), 1 part Retarder (No. WP3172P), and 1 part Stabilizer (No. WP3171P) and added it to the base areas around some of the blisters and pimples.

A second glaze, same as the first except made with Blood Chalice (No. WP3119P) went around the fleshy reddish areas of the model. I also made raw areas near some blisters. Make sure to blend the edges before your glazes dry for a smooth transition with the green skin.

At this point, the major work was done, and it was all about going over the figure and making small adjustments, adding minor details, or smoothing any transitions that needed them. Remember, better to fix anything you don't like now than leave it and regret it later.

Lastly, gloss clear was brushed over the mouth, gory intestine/worm parts, and the open-sore details. This provides a convincingly wet look. In fact, I added a second coat in figure's mouth for extra saliva.

FINAL THOUGHTS

THERE'S A MISCONCEPTION that speed and contrast paints are for beginners and cannot yield good results, let alone award-winning ones. Yes, they are designed for wargamers who want to get to playing, but they can also speed up your painting process, giving you good results quicker.

The secrets to beautifully painted miniatures is the color scheme and the contrast, not so much in how and what paints you use. As long as you know what you want to achieve, and you are committed to producing good results, the method, type of paints, and the speed at which you paint only matters to the extent you are comfortable using them.

That's where the practice part comes in. Painting miniatures is a hobby and, in my opinion, should be enjoyable and easy. Speed and contrast paints might help you with both of those, and don't be put off by naysayers. If using these sorts of paints helps you spend more time painting and less time procrastinating or worrying about techniques, all the better! **FSM**

GO

ALL THE WAY WITH Judy Jetson

Leave no task undone in the pursuit of an award-winning, 1/5 scale figure

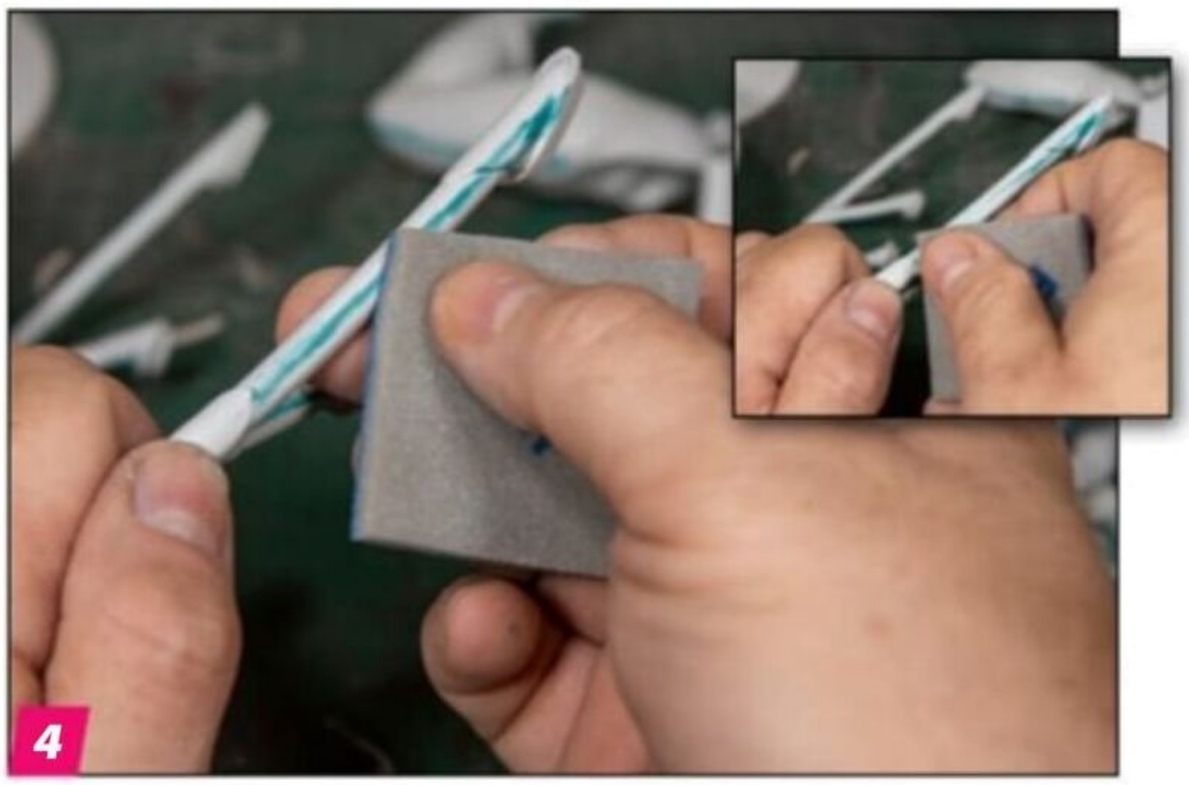
BY MATT MROZEK

As a full-time figure model builder and painter, I do a lot of the same subject matter — mostly large-scale Marvel and DC characters. While considering what to do for *Paint Award-Winning Figures*, a client requested a Filmy's Girls 1/5 scale Judy. A garage kit of Judy Jetson as an adult based on concept art by Simon Eckert and sculpted by Roberto von Behr? It was immediately obvious that this would be the figure I'd use for my story. It's different, outside my usual topics, and gorgeously rendered, so what's not to like?

Filmy's Girls supplies a high-quality resin kit in a sturdy cardboard box. No matter the kit, I always unpack everything and inspect the parts, looking for damage or missing pieces, checking the casting, and formulating a game plan for building and painting.

Though mostly negligible, I marked all the mold lines with a marker to act as a sanding guide. There were no casting errors, although I did find six pinholes that would need to be filled and sanded.

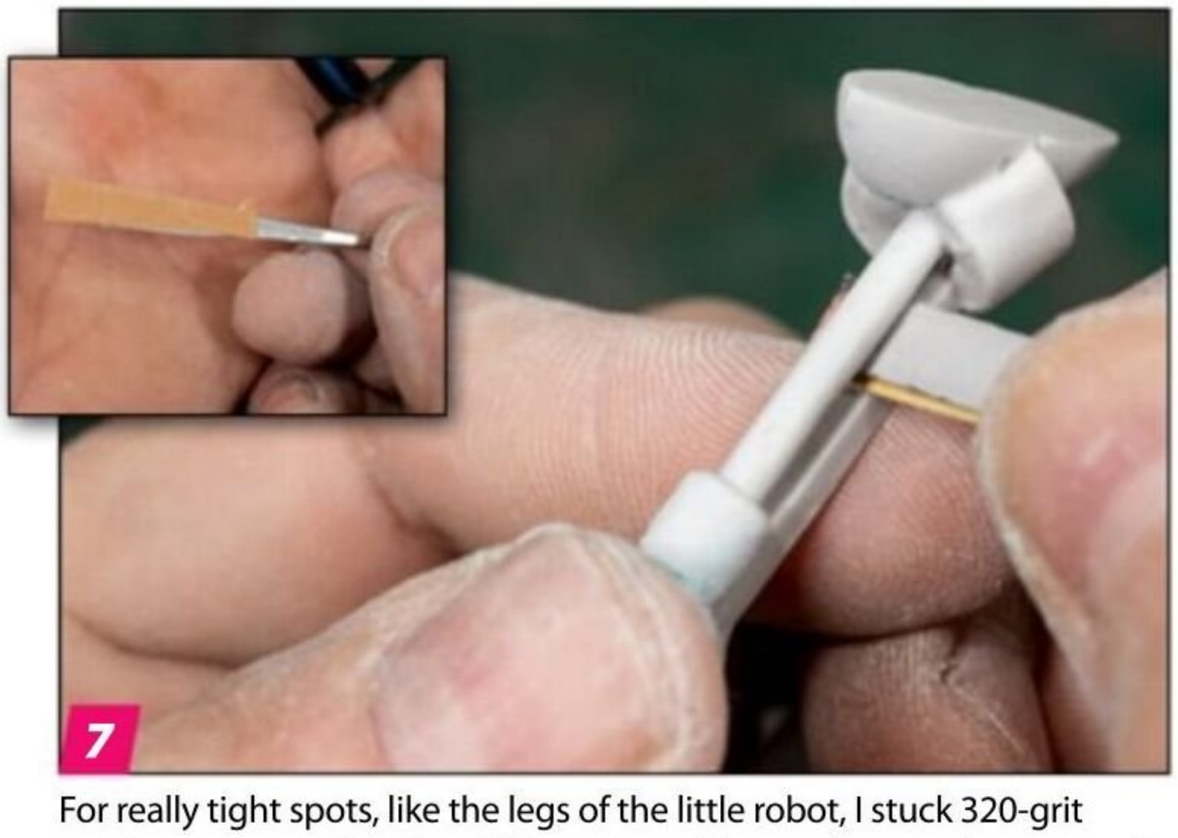
Time to break out the sanding tools! Typically, I start with a fine sanding sponge, which is equivalent to 320- to 400-grit sandpaper.



I like to start with mold lines, sanding over the marker color applied earlier. The marker ink shows areas that require attention. While sanding, I check my work to make sure all the marker ink has been removed. When the marker ink is gone, I know the mold line is too.

For tight and hard-to-reach areas, I use soft-backed sanding sticks and needle sanders. Perfect for getting into spaces the sponges can't reach, the process remains the same: sand until the marker color is gone. You can see how the ink makes the mold line stand out.

A No. 11 hobby knife works well to scrape away mold lines in those places where even a needle file won't fit or on flat surfaces. Just stay mindful of your work and take care to scrape and not gouge your part.



For really tight spots, like the legs of the little robot, I stuck 320-grit sandpaper to a paint stirrer. This area would never be seen by a normal viewer, but, for an award-winning figure, no spot is left untouched. I repeated all these steps until all the mold lines were gone.

A few detail lines could have been better defined, so I turned to my "high-tech" scribing tool — a No. 11 hobby blade with a broken tip. Using the backside of the tip, I lightly dragged it along the detail lines I wanted to re-scribe. It took only a few passes to get the look I wanted.

First, I wanted to make the base as sturdy as possible. The parts fit well with a large, positive attachment point, but I wanted to pin them together for extra security. Perhaps overkill, but I decided on a 5⁄32-inch-diameter brass rod and drilled through the bottom portion of the base.

Placing the upper portion of the base top down on my workbench, I dry-fitted the lower part and used the hole drilled in Step 9 as a guide to drill halfway through the top portion. Drilling the hole with the pieces dry-fitted ensured proper alignment.

I used a cutting wheel and a rotary tool to cut the brass rod to length and superglued it in the top half of the base. This will also provide extra stability during the build while allowing me to take the base apart for painting. When I've finished painting, I'll epoxy the base halves together.

The only place I ran into a fit issue in the entire Judy kit was the base's railing. With all the parts assembled, there was a twist in it that didn't allow all the spindles to rest in their keyed positions.

This wasn't too difficult to fix. I heated the railing with a hair dryer to make it flexible enough to bend into place without breaking. Do not use a heat gun for parts this thin; you run the risk of melting the resin.

After heating and gently bending the part a few times, I was able to get the railing close to fitting, but it would need to be pinned. I drilled a 1/16-inch hole in the bottom of an end foot with a bit chucked in a pin vise.

I kneaded poster putty until it was soft and placed it in the attachment hole corresponding to the spindle foot I'd just drilled. Then I pushed the foot into the hole and removed it, which left a small, upraised mark on the putty corresponding to the hole in the footing.

Using this mark as a guide, I drilled a hole in the attachment point, added a length of 1/16-inch brass rod, and temporarily pinned the railing to the base. This attachment would serve as an anchor point while I worked to get the rest of the spindles in place.

Again, I heated the railing with a hair dryer and worked the spindles into position, clamping them as I went. The clamps allowed me to twist the railing to the correct shape and hold a spindle while I moved to the next. With everything in place, I let the railing cool with the clamps on.

After the railing had completely cooled, I removed it and used the same process in steps 15 and 16 to mark, drill, and pin the rest of the footings for the railing.

While I was in the mood for pinning, Judy's little robot's legs were going to need similar attention. I placed the right leg into the waist and drilled a 3⁄32-inch hole through the waist and into the leg. I removed the right leg, placed the left, and drilled a hole in it, using the hole I'd just drilled in the waist as a guide. Then I inserted a 3⁄32-inch brass rod through the hole and cut it to length and superglued it in position.

Similarly, I pinned both the robot's head and radar dish using 1⁄16-inch brass rod this time. Again, I used superglue to hold the brass rod in place, applying a bit of accelerator to move things along, and test-fitted the parts. Final assembly would come later.

The hoverbike went together very easily and all the parts fit well. I pinned the foot pegs, headlight, and handlebars with 1⁄16-inch brass rod. Everything that you've learned so far about pinning, those same techniques were used for the hoverbike.

The figure wears a skirt, but the torso, hips, and one leg are a single part. Assembled, painting under the skirt would be difficult. Painting the legs separate from the upper torso would be better. To accomplish that, I was going to have to cut the figure in half at the waist. First, I marked where I wanted to cut.

Now came the nerve-wracking part: cutting Judy in half. I used a coping saw and did my best to cut along the line I'd drawn. It took a bit, but I was finally able to cut the figure apart at the waist. Not the cleanest cut in the world, it wasn't terrible and could be fixed. I pinned the legs to the torso temporarily with 1/16-inch brass rod (I'd later replace it with 5/32-inch rod for a strong join) to keep them stable for the work to come. Even though no one would probably be able to see this cut, I wanted a clean fit for final assembly.

I applied a generous amount of petroleum jelly to the upper torso side of the cut before mixing Bondo Body Filler (No. 261) and slathering enough on the leg side of the cut that it oozed out when the halves were aligned correctly and pushed together.

I held the halves together as the body filler cured and cut most of the excess off with an hobby blade while the body filler still felt a tad spongy. After letting the body filler cure a few minutes more, but still not fully, I pulled the halves apart and let the filler finish curing.

For the right leg, I followed my pinning process and using 3/32-inch brass rod. After confirming pin placement and checking alignment, I mixed a batch of 5-minute epoxy to permanently attach the leg in place.

Applying enough epoxy to the join so a bit oozes out around the seam is a good thing because it helps fill gaps. Immediately go around the join and clean up excess epoxy with a paper towel and a cotton swab wet with isopropyl alcohol and then let the epoxy cure.

28

The attachment points for the arms were sufficiently positive that pins weren't necessary. I scored the keys with the tip of a hobby knife so the epoxy would have something to bite for better hold and followed the same process as I did in Step 27 with 5-minute epoxy.

29

Temporarily tacking the skirt in place, I noticed a substantial overlap and an uneven hem. Heating the skirt with a hair dryer helped to get a better fit around Judy's waist. I folded 320-grit sandpaper and sanded inside the skirt seam so both sides for an even and smooth join.

PRO TIP

MIXING BABY POWDER with thick superglue makes a slurry that is strong and can help hold a thin join together, even if it's been previously glued. However, don't mix too much baby powder into the glue because it will kick off the curing process more quickly. You want to have time to apply and smooth the mixture before it hardens. You'll still need to work quickly and efficiently, so be ready to move.

30

After getting the joint aligned and the skirt fitting correctly, I glued it with thick superglue and gave the skirt a light rubbing with a fine sanding sponge. Then I mixed thick superglue with baby powder and applied it to the skirt join. After it cured — about 30 seconds — I sanded the excess smooth with 320-grit sandpaper.

31

I applied Bondo with a toothpick to fill any gaps between the skirt and waist. Before the body filler cured, I wiped away the excess with a cotton swab wet with lacquer thinner. Then I test-fitted the legs and upper torso. Everything looked great!

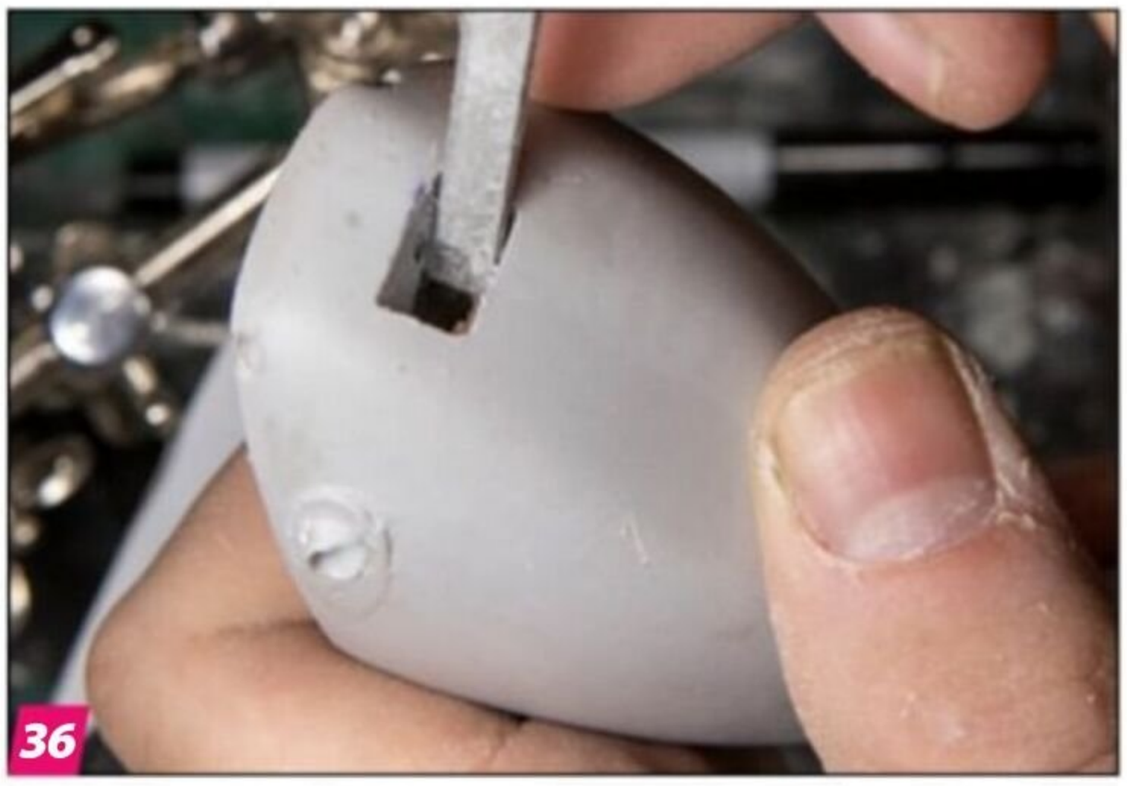
32

The collar fit well, and I filled any gaps with Bondo, just like the skirt. However, painting would have been easier if the head and neck were one piece and separate from the shoulders. But that modification wasn't an option. So the head got pinned and glued in place.

I sanded the seam between the head and neck as best I could and then filled it with EZ-Sculpt two-part epoxy putty. Silicone-tipped sculpting tools and a flat brush dipped in water helped blend the putty. Eight hours later, I sanded the seam smooth and initial assembly was done.

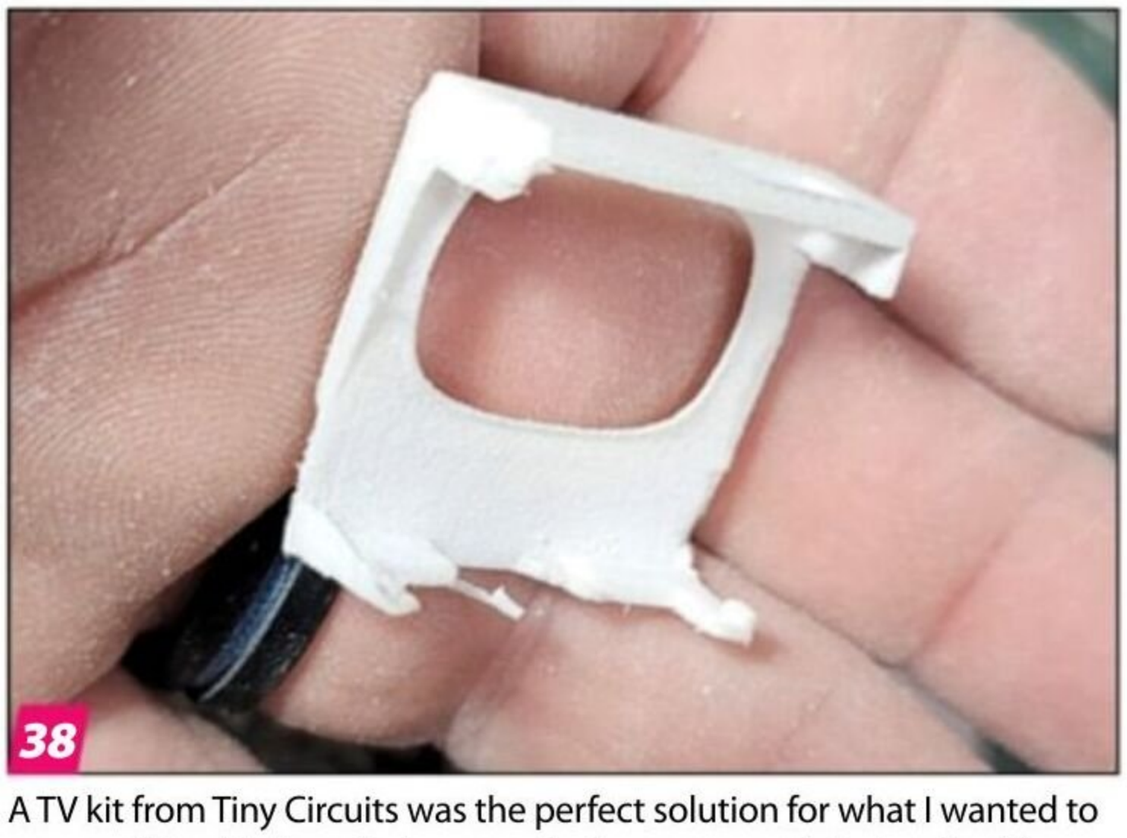
Taking this to the next level, I wanted to add working taillights on the hoverbike and a working TV screen on the robot. First, I cut the cushion off the hoverbike using the same techniques as I did when removing the legs from the waist earlier to get good-fitting, but separate, parts.

I added ½-inch round magnets to the seat cushion and bike — more than enough to hold the seat in place. After marking an area to remove to house the battery, wires, and switch, I carved it out with a cutting wheel and various grinding bits chucked in a rotary tool. I drilled holes on the side of the bike large enough to accommodate the wires leading to the battery compartment. The clear taillights were drilled out by progressively larger bits until I could fit a 5mm LED into each.



To make operating the lights easier, I opened a space for a switch at the back of the bike. Later on, I'll cover it with a custom license plate to hide the switch. The hole is the exact size and shape to house the switch.

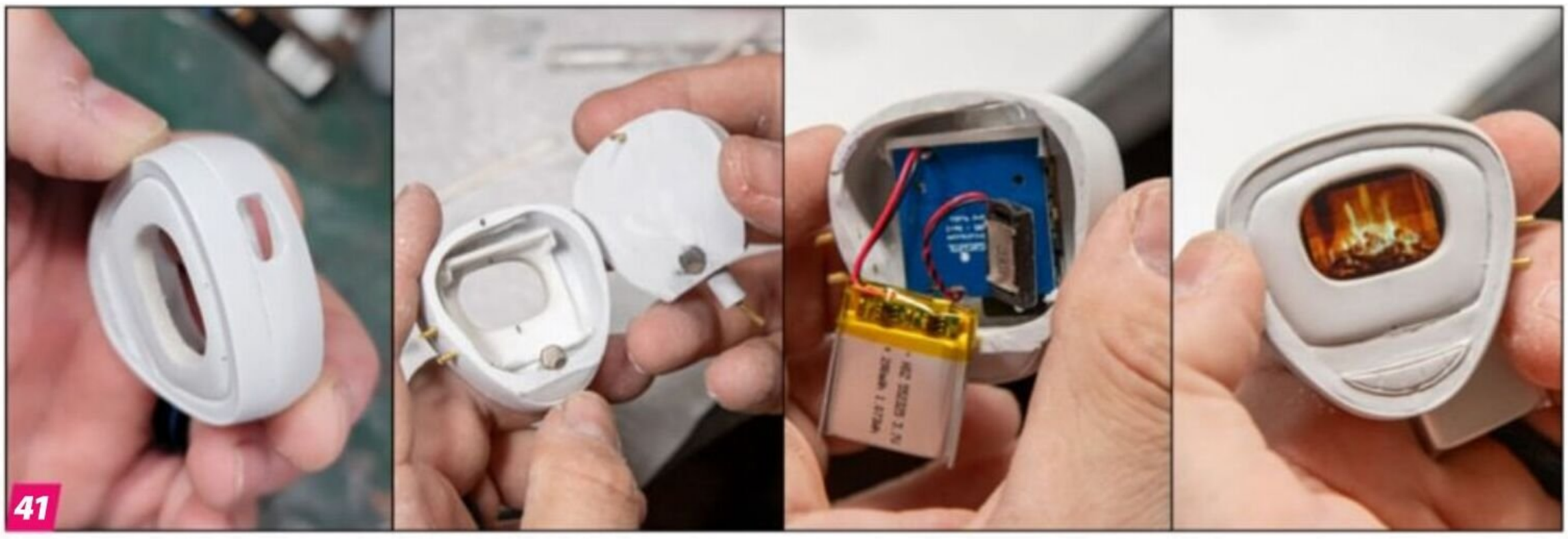
I soldered the red, 5mm LEDs, wires, switch, and power supply, covered the connections with heat shrink, and ran the lights into the taillight parts for a test to make sure it all worked before gluing the taillights to the rear end of Judy's ride.



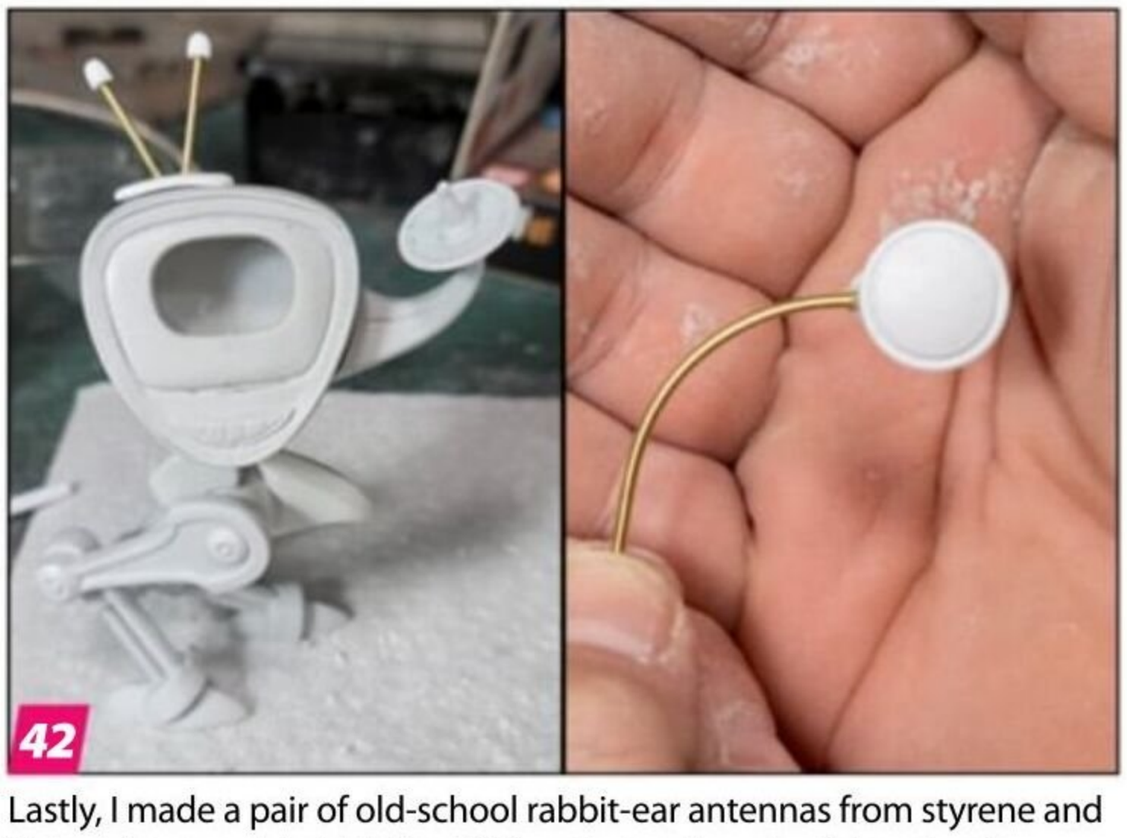
A TV kit from Tiny Circuits was the perfect solution for what I wanted to accomplish with the robot — mostly the screen and electronics. The screen mounts inside an 3D-printed, '50s-looking, TV console. I chopped that in half and sanded it smooth.

More cutting! This time, I sliced the robot's head in half with a cutting wheel and rotary tool along a panel line that ran around the part parallel to the front. You don't want to breathe resin dust, so wear a mask. Cut near the hose of a running shop vac to minimize mess.

Just like the hoverbike, I hollowed the front of the robot's head just enough to fit the screen mount. Using the TV kit as a guide, I marked the location for the screen on the front and opened it up with a rotary tool and sanding sticks. To refine the hole for the screen I installed the screen mount in the head and further refined the hole using the 3D-printed part as a guide.



The screen needs to be charged via a micro-USB cable. I cut a port in the robot head and the screen mount inside to accommodate the plug. I installed a brass rod and ¼-inch magnet to hold the robot head together and allow access to the screen, if needed. Test-fitting the screen showed that it fit and worked as I'd envisioned.



Lastly, I made a pair of old-school rabbit-ear antennas from styrene and 1/16-inch brass rod to hide the USB port atop the robot's head and replaced the hoverbike resin rearview mirror support with 1/16-inch brass rod bent to shape.

Before priming, I lightly sanded all the parts with a superfine sanding sponge (approximately 800-grit) and then bathed the parts in degreasing dish soap. After washing them thoroughly with a scrub brush, I laid them out to dry completely.

The first round of primer was automotive lacquer primer. Perfect for filling scratches and imperfections, most of it will be sanded off, so I wasn't worried about it being too thick. I mixed it according to the instructions, over-thinned by 30% to spray through my Iwata HP-TH.

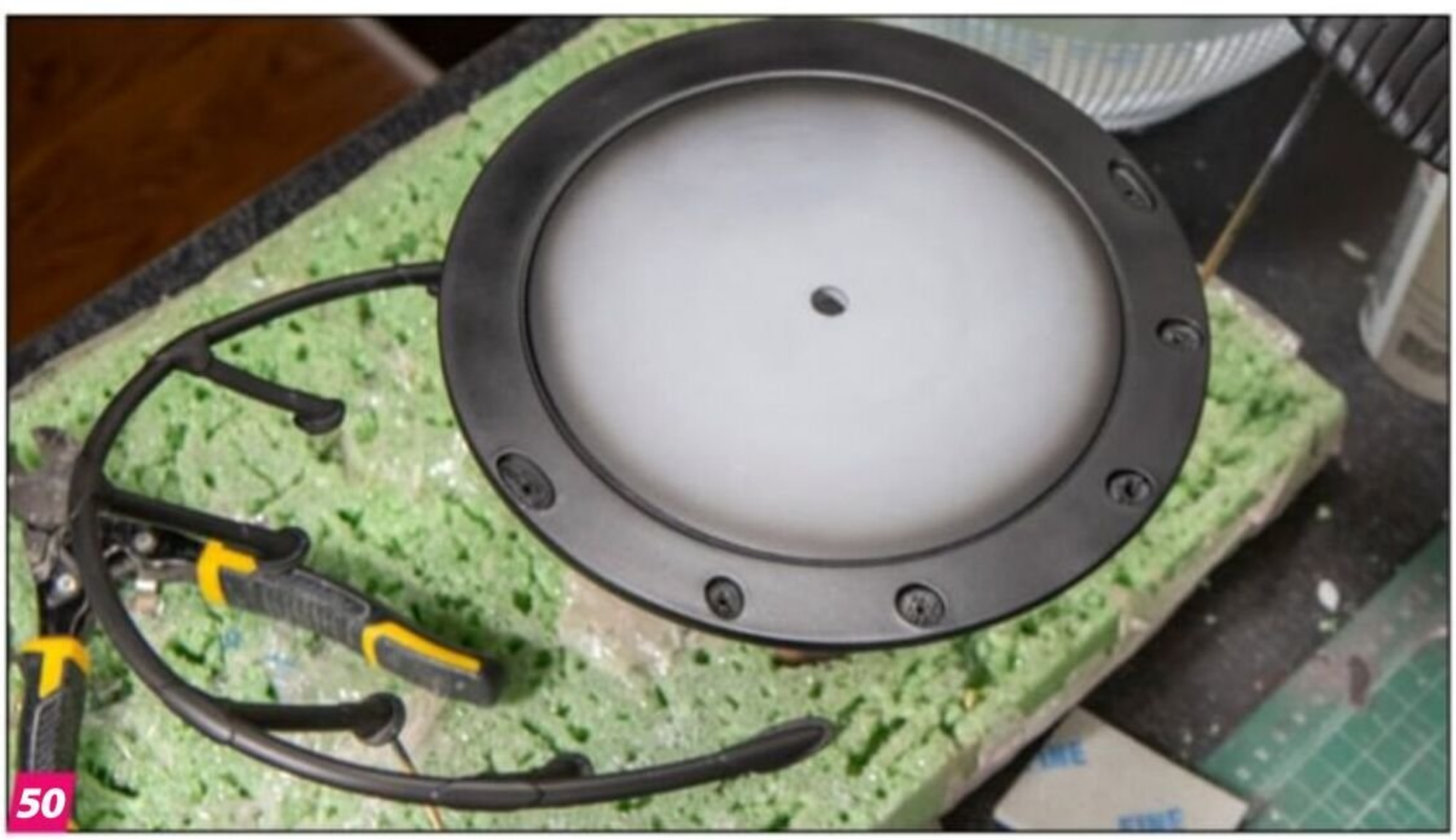
All the parts received three coats of primer with 10 minutes between coats to allow it to flash off. After the final coat, I left the primer to cure for 45 minutes and then sanded with 600-grit wet/dry sandpaper and a wet, superfine sanding sponge. Use warm water with a little dish soap.

Wet-sanding is messy, so be sure to work over a towel. Messy or no, the best paint application can be ruined by shoddy prep work. As I sanded, imperfections in the surface would pop up, so I kept working until all of them were gone, no matter how tiny they might have been.

The parts were washed and left to dry after wet-sanding and airbrushed with a few light coats of Stynylrez Gray Primer (No. SNR-162). I filled minor imperfections with Bondo Spot Putty Glaze, sanded the areas with a superfine sanding sponge, and spot-primed with Stynylrez.

While taking a moment to fit all the parts together and admire the work done so far, I realized I should have added a magnet to the base and one of the robot's feet! So I did, that, puttied, blended, and spot-primed the affected areas.

I also needed to make a license plate to cover the switch. A quick design and 3D-print later, I wrapped the back end of the hoverbike in cling wrap, applied body filler to the back of the license plate and placed it. After the filler cured, I sanded the shape for fit and added 1/16-inch pins.



After a week of work, it was time to paint! Using the box art and Annya Shetinina's artist-proof as a guide, I began by painting the railing and the perimeter of the base top with a base coat of Tamiya Flat Black (No. XF-1) thinned with Mr. Color Thinner.

While the base was drying, I airbrushed Judy's face, neck, chest, and arms Stynylrez Lite Flesh Primer (No. SNR-207). After letting the Lite Flesh dry for about 10 minutes, I started to define the sculpture with shadows. Thinning Vallejo Reddish Flesh (No. 74.003) Mr. Color Thinner, I built up the shadows in thin layers with an airbrush.

Next, I worked on the highlights. For this, I use Vallejo Highlight Skin (No. 74.008) diluted with Mr. Color Thinner. I over-thinned this color a tad and concentrated on the skin highlight areas, again, working in thin layers and allowing some of the color to go a touch into the shadows.

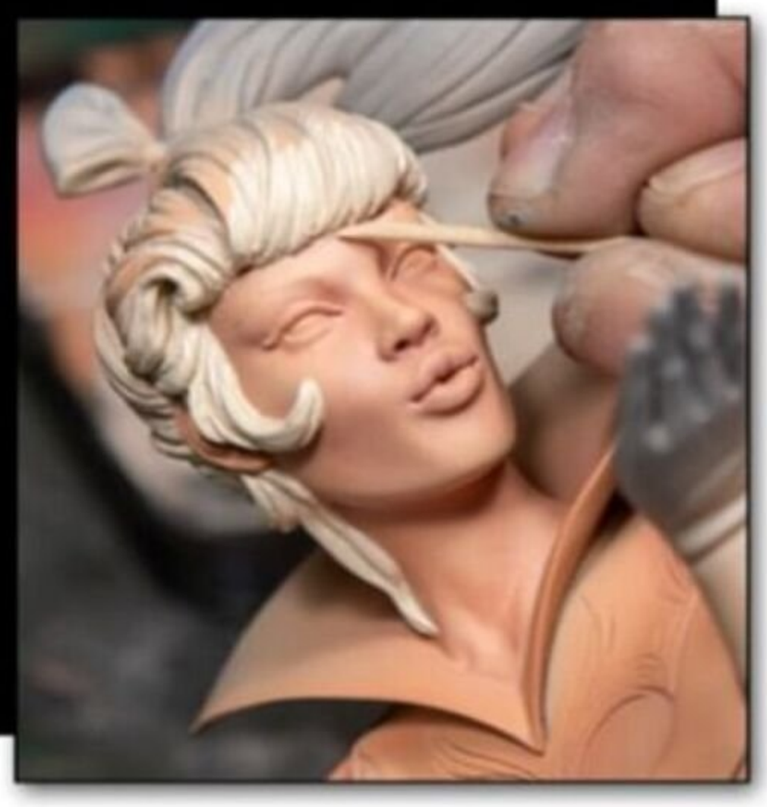
After placing all the highlights, I backed off from the model and slowly misted the Highlight Skin over everything. This helped intensify the highlights and started to blend the shadows.

I heavily thinned Vallejo Medium Flesh (No. 74.005), with Mr. Color Thinner and misted it onto the figure from a distance, blending the highlights and shadows while adding a healthy color to Judy. Then to bring back the highlights a bit, I mixed Highlight Skin into the Medium Flesh and just touched the highlights one more time. Still, Judy looked a tad pale to me, so I mixed a thin batch of Army Painter Tanned Flesh with Vallejo Airbrush Thinner and misted on a few light coats. That did the trick. Happy with my results so far, I sealed my work with Krylon Flat Clear (No. K02729007).

Judy has white hair, but I wanted some tone to it. I started by brushing on a few coats of Golden Titan Buff (No. 8548) and painted the whites of her eyes Vallejo Highlight Skin. As her hair and eyes filled in, I could see Judy's skin tone was exactly where I wanted it.

Sealing between steps

AS I WORKED ON JUDY'S HAIRLINE, I had to use a tooth pick to scrape off overpaint on got on her forehead. This is a great example why we seal our work between steps: It allows us to clean up mistakes — to a point — as we go without damaging the work underneath.



To add some dimension to Judy's hair, I dry-brushed it with white craft paint. Working slowly and in light layers, I built up the highlights on the hair to almost pure white. I also brushed in a few single white hairs into her eyebrows.

I used Archer water-slide decals for Judy's eyes. I trim them to fit place them with a clean, soft brush. Microscale Micro Sol set the decals, and, when dry, I sealed the skin, eyes, and hair under clear flat. Then I outlined the irises and added a few painted details to them.

Turning to a 000 paintbrush, I lined Judy's eyes with Vallejo Black (No. 70.950). I applied a custom light pink to the inside of the eyelids for a waterline. The deep red lip color was dry-brushed light pink for dimension, and her eye makeup mimics the kit's box art.

Back to the base, I masked the black ring around the outside and applied a few coats of Mr. Color Midnight Blue (No. 71) to the outer edge of the inner circle. After it dried, I painted a Mr. Color GX White (No. 1) highlight in the center and worked my way out for a soft transition.

After the white dried, I removed the masking tape. Paint bled under the masks in a couple of spots, so I touched those up with Vallejo Black and a paintbrush. At the same time, I painted the footings and collars on the railing Vallejo Model Air Chrome (No. 71.064).

Before painting the hoverbike, I gave all its parts a light sanding with a micro-fine sanding sponge for a super-smooth surface that metallics need to look their best. Then I sprayed all the parts Krylon Foil Metallic Green and let them dry overnight.

The next day, I masked all the portions that would remain green with Tamiya masking tape. When masking, I make sure to use a new No. 11 hobby blade to cut the masks as cleanly as possible. Then I sprayed everything Krylon Foil Metallic Blue and, once again, let it dry overnight.

I removed all the tape and started detail painting: Vallejo Black, Metal Color Pale Burnt Metal (No. 77.704) and Exhaust Manifold (No. 77.723) for the robot legs and other metallic parts; Mr. Color GX Black (No. 2) followed by Mr. Color Plate Silver Next (No. SM-08) for the rearview mirror; white on the lights and gauges with the blinkers also receiving a few coats of clear red; and Vallejo Exhaust Manifold into all the panel lines. The taillights received a few coats of clear red, too, and I set all the parts aside to dry — you guessed it — overnight.

Disaster! Well, not really. But a setback. The next day, I clear-coated the hoverbike parts with a 2K automotive gloss. They all came out fine except the clear coat reacted to the paint on the bike itself, causing the finish to wrinkle. Time to sand, prime, and repaint everything.

I basically sanded all of the paint off the entire bike and followed my process from the beginning to refinish it. However, this time, I skipped the 2K clear coat. And it didn't matter. The finish looked great, even next to the parts that had the clear coat on them. It was finally done!

Time to paint Judy's outfit. I began by masking her head and neck with Silly Putty and her arms, shoulders, and chest with Tamiya masking tape. I mixed a dark red from Mr. Color Pink (No. 63), Russet (No. 81), Purple (No. 67) and White and airbrushed it over everything in thin coats. To add dimension, I shaded everything with a custom-mixed, deep, clear red.

The next day, I masked certain areas of the red and sprayed a few coats of gray primer over the rest of the outfit. This prevented the red from bleeding through the pink to come.

I thinned Createx Pearlized Magenta (No. 5302) with Createx Thinner (No. 4011) and airbrushed several thin coats before letting it dry for 45 minutes. Then I came back with my custom, deep, clear red and added shape and dimension.

To paint Judy's gloves, I masked the rest of the body with plastic wrap and silly putty. Then I airbrushed a base coat of Garage Kits.US Cool Gray followed by a few coats of Garage Kits.US Iridescent White to give the gloves a satin look. (Garage Kits.US paints are now out of production.)

I removed all the masks and got my first look at how everything came together. But Judy still wasn't done. First, I touched up any edges that needed it with dark red.

71

Then I hand-painted her boots black. I gave the whole figure one last round of sealer and glossed Judy's eyes.

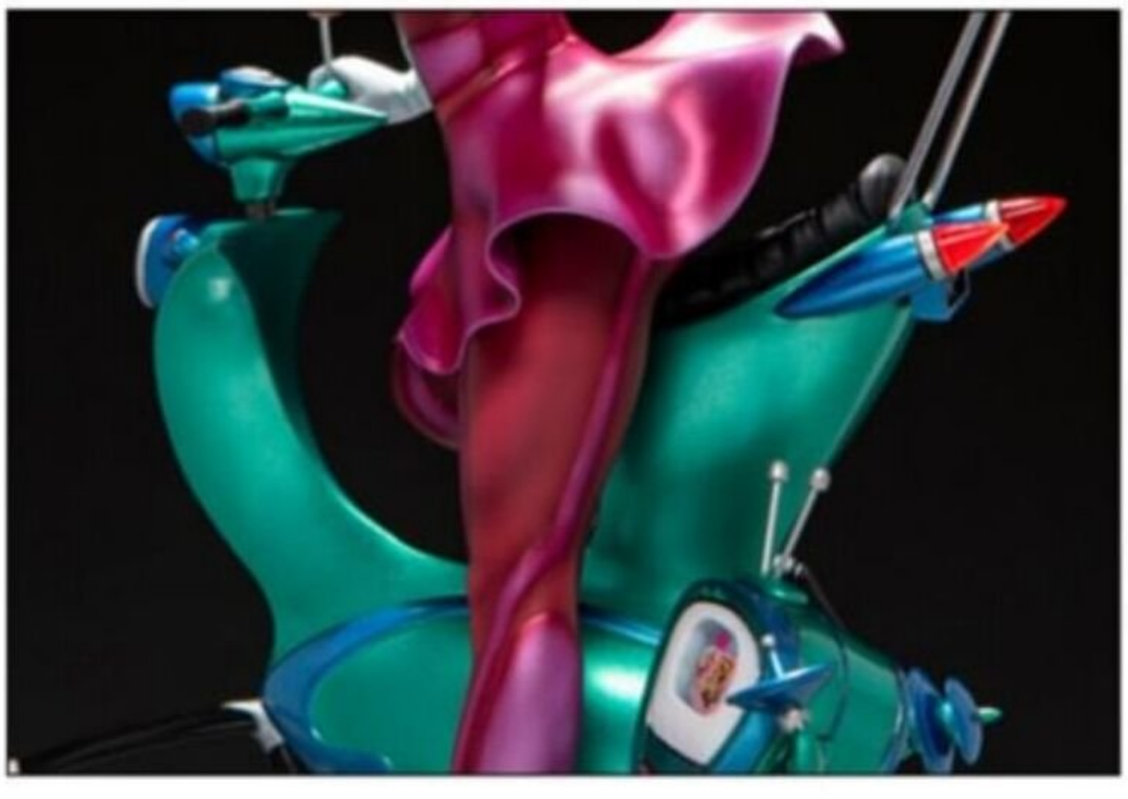
72

After consulting my client for whom I was building Judy, I finished the underside of the base an off-white and the bottom flat black.

FINAL THOUGHTS

AFTER MY CLIENT approved all the color choices, all that was left was to glue Judy, her hoverbike, and the robot together, keeping Judy removable for access to the power supply. I uploaded three hours of *The Jetsons* episodes to the TV in the robot and then took a bunch of photos of the finished piece.

Overall, this project was a blast and took me around 80 hours to complete. The Filmy's Girls kit was a joy to build, and I was able to get out of my comfort zone by lighting it. **FSM**



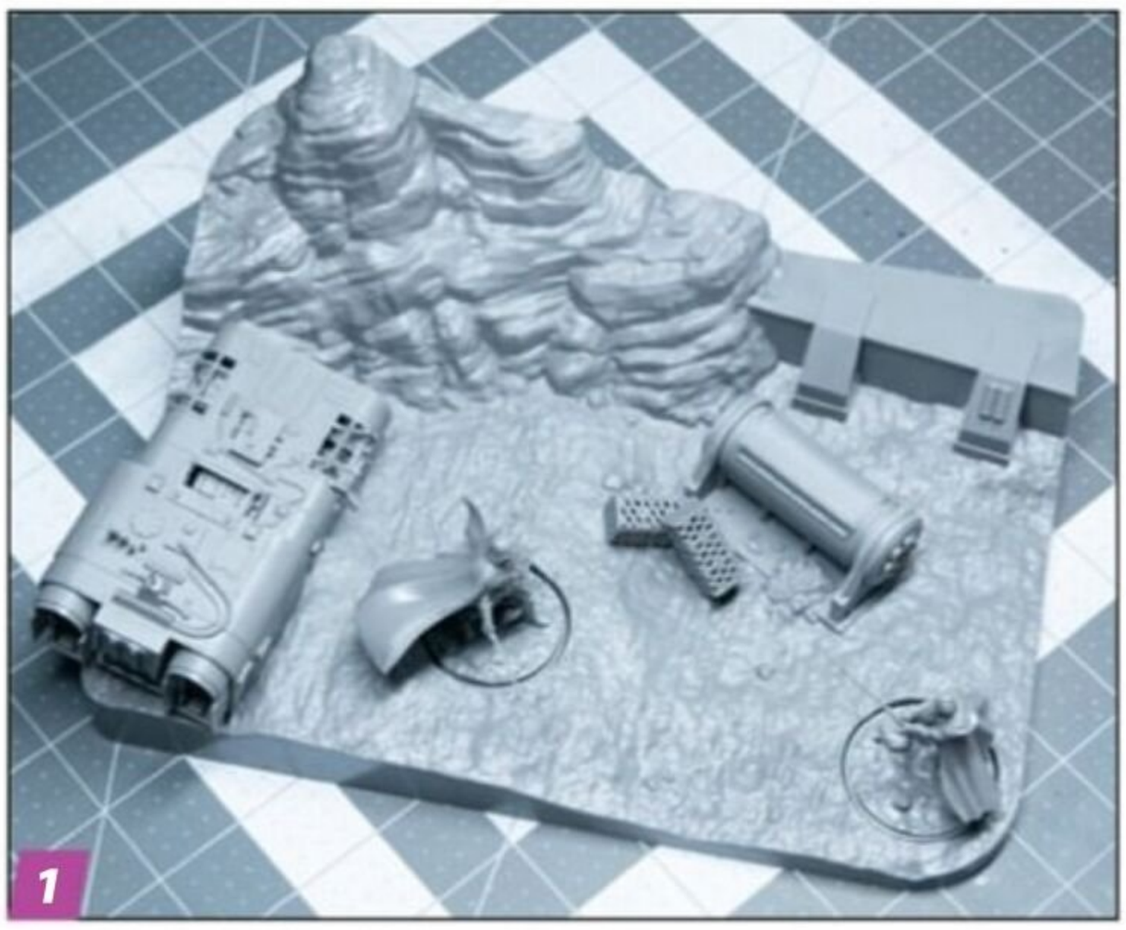
GET IN THE GAME

Painting miniatures and dressing up bases makes games more immersive

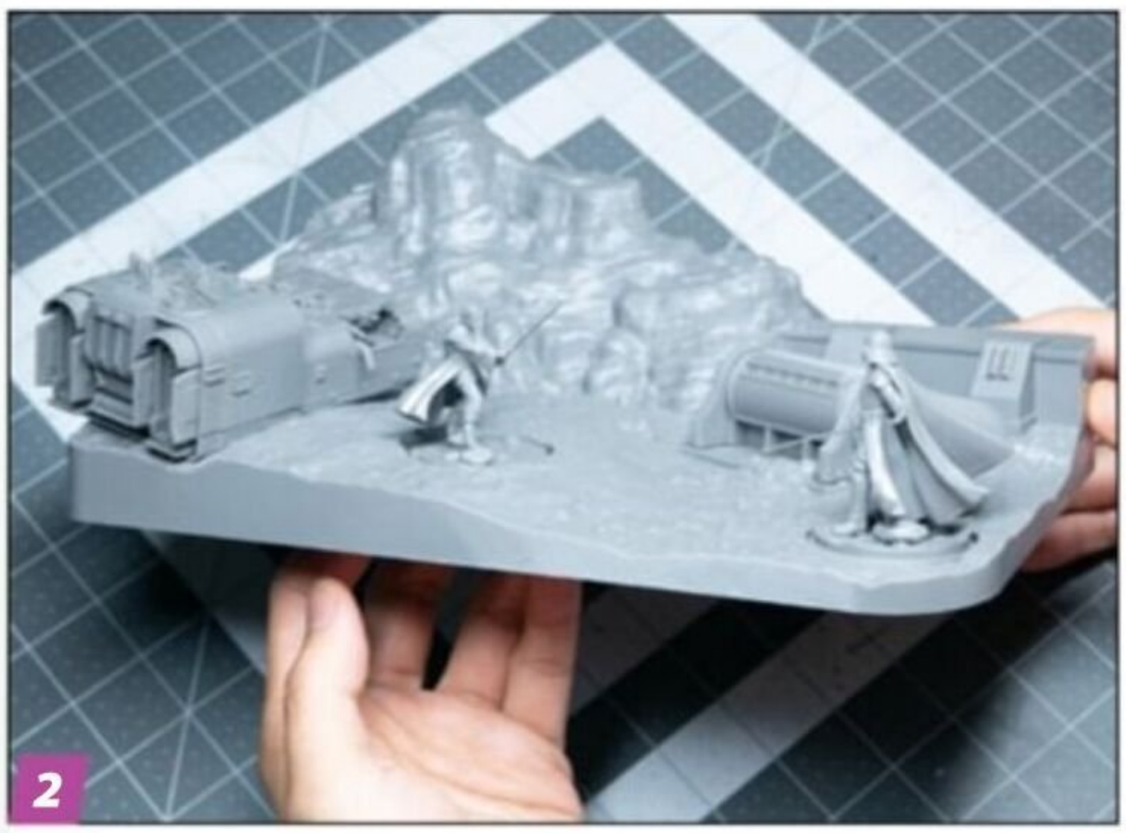
BY JOHNATHAN HO

One of the miniature tabletop games I play is *Star Wars Shatterpoint*, a tactical game where two players command various characters from the galaxy far, far away. One of the cool things about the game is that you collect and paint 40mm figures. Most are individual pieces on circular bases, but among the offerings is a set called You Cannot Run Duel Pack (No. SWP30). It features Obi-Wan Kenobi facing off with his old padawan, Darth Vader. Out of the box, the fight takes place in the deserts of Tatooine.

I wanted to build and finish this terrific scene but make a few changes to fit the theme of my other *Shatterpoint* figures. The game allows for characters in your strike team to be drawn from anywhere regardless of their side in the original stories, so it's important to me that the basing of all my *Shatterpoint* miniatures fits together consistently. In that vein, I changed the environment from desert to an overgrown jungle. The pieces' playability meant that I also considered how lighting would work so they fit the display as well as when they standalone on the tabletop battlefield. Unless otherwise stated, I used AK Interactive 3G acrylics or enamel weathering supplies throughout.



The stock kit has Darth Vader on the left, pretty much cornered by the crashed speeder and terrain features behind. With Obi-Wan on the right, it felt like Vader was the one being hunted and trapped.



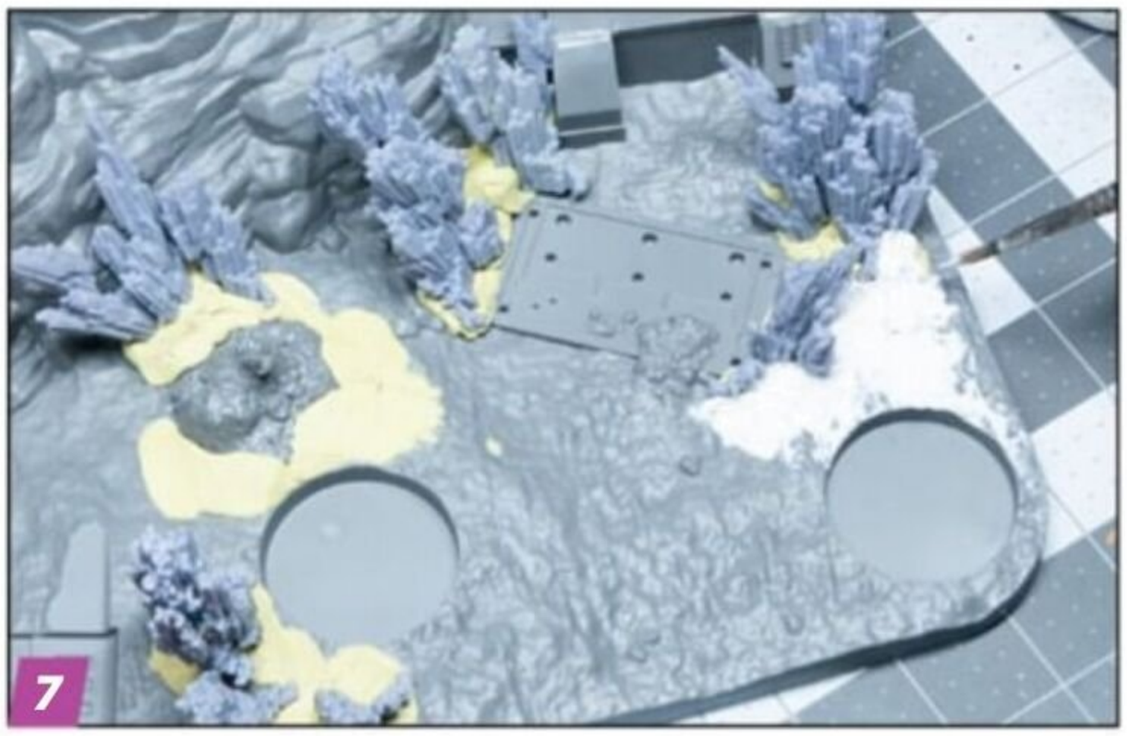
By swapping the adversaries' positions, I could reverse the narrative. I wanted to convey the impression that Darth Vader is the hunter who has his old master, Obi-Wan, literally between a rock and a hard place.

I filled minor gaps with Vallejo Plastic Putty. The fine applicator on the tube makes it easy to get it where you want it, can be smoothed with an old brush while wet, and lightly sanded.

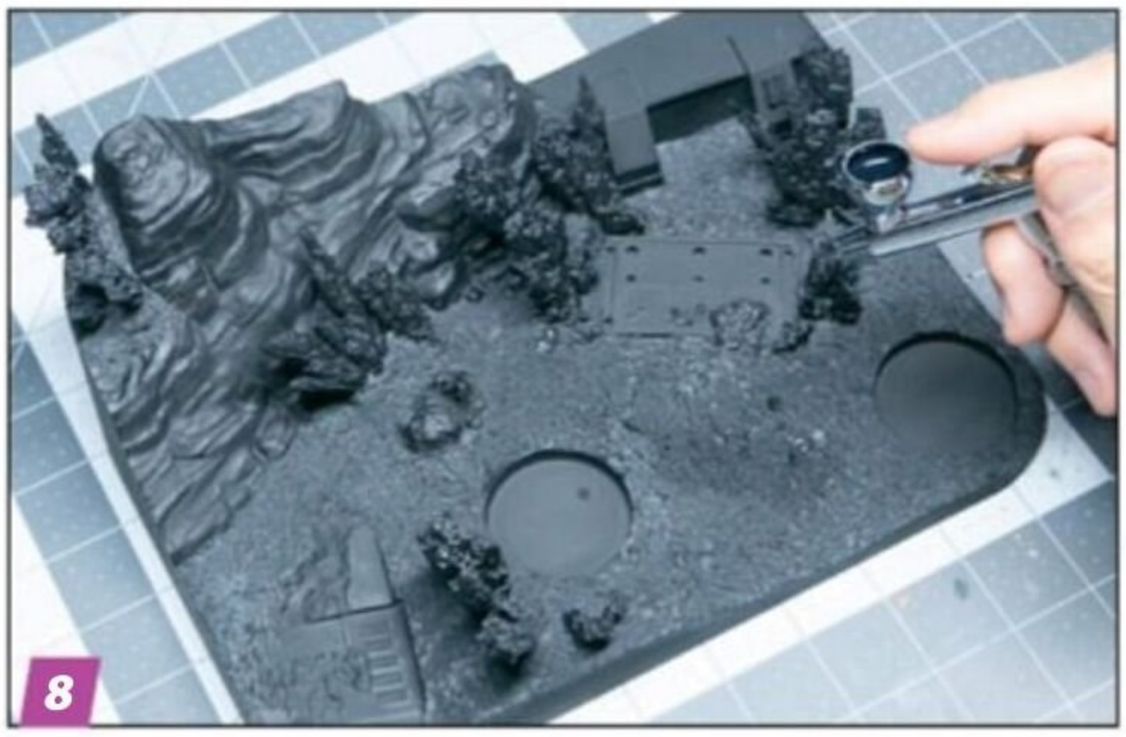
To build up terrain on the figures' bases so I could insert Epic Basing 3D-printed crystals, I pressed on Milliput two-part epoxy putty to thinly cover the plastic.

I placed the figures on the bases temporarily to help with positioning and sculpting the putty. They were then removed and attached to blank bases for painting.

To check the poses and overall appearance after placing the 3D-printed crystals into Milliput deposits, I temporarily positioned the scene elements without glue, including the speeder, crates, the drum/reservoir, and the figures.



For ground texture, I used Vallejo Diorama FX Rough White Pumice (No. 26.212), an acrylic paste that can be thinned with water and applied with a brush, similar to acrylic paint. Building this up around the crystals helps secure them to the base.



I started painting by airbrushing all the elements with Vallejo Surface Primer Black (No. 74.602), adding a few drops of Vallejo Airbrush Flow Improver (No. 71.562) to minimize tip clogging. I prefer straight black primer and avoid zenithal priming with gray or white because I like starting with the deepest shadows and progressing to highlights.

Next, I airbrushed the rocks, crystals, and elements that will be green with Tenebrous Grey (No. AK11026) before spraying directly down over the rocks with Anthracite Grey (No. AK11167) to produce a broad, zenithal lighting effect.

To highlight the texture of the rocks, I dry-brushed them with progressively lighter shades of anthracite grey mixed with increasing amounts of Green Sky (No. AK11134). Using a large, soft brush in a circular motion as well as applying several shades minimizes brush strokes.

I flowed a controlled wash into the recesses to deepen shadows with Brown Blue Wash for Panzer Grey enamel (No. AK070).

Using AK weathering enamels

THESE COLORS ARE KIND OF LIKE OILS, so use a synthetic brush and have mineral spirits on hand for thinning and cleaning. Much like oils, they're also workable for a couple of hours after they've dried by adding mineral spirits on a brush. That makes them forgiving and great as a step for adding dirt, grime, and other details to a surface. Unlike oils, however, enamels set after a few hours, so you don't end up having to wait for days or weeks in between layers like can happen with oil paints.

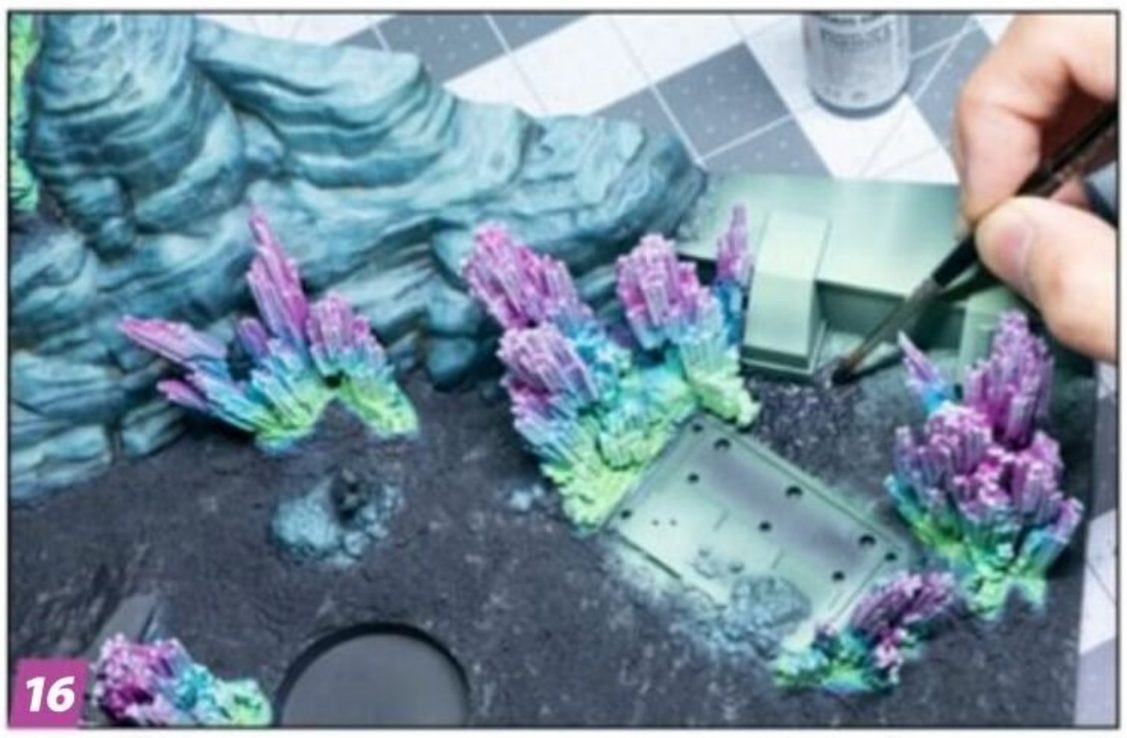
More texture followed with Decay Deposits for Abandoned Vehicle (No. AK675) enamel wash, first flicking it from a paintbrush for a spatter effect and then painting more deliberate streaks.

I applied additional color and contrast by brushing on Rust Streaks (No. AK013) in a few, select locations.

For the mechanical structure, I started with a base of Gunship Green (No. AK11150) followed by a highlight shade with green sky added to the mix. I'll be using chip-weathering and enamels/oils to add the extra grit and texturing to the mechanical elements of this piece, so I use simple highlighting and high contrast to provide a good foundation.


15

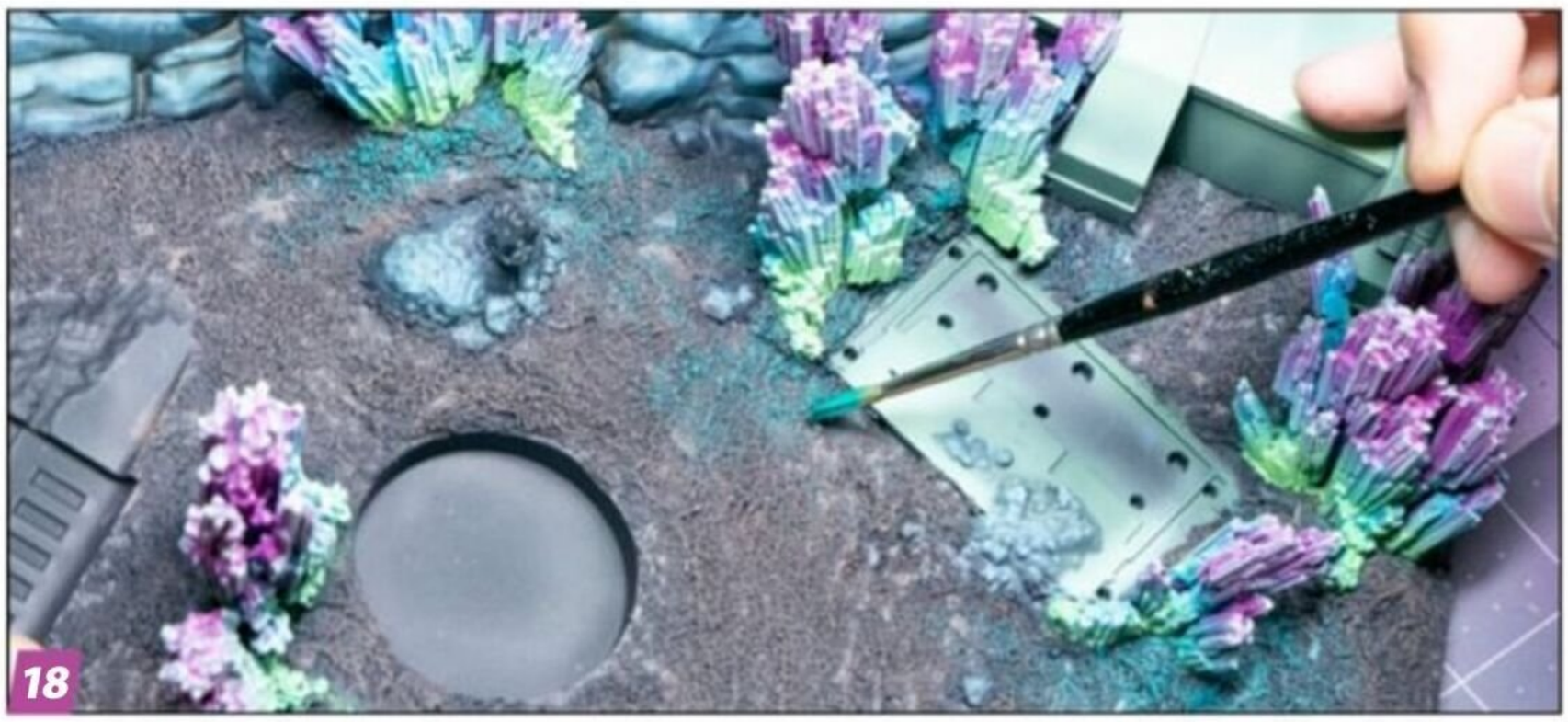
I airbrushed a simple three color blend on the crystals, starting with Magenta (No, AK11067) at the top, Blue-Green (No. AK11169) in the middle, and Scale 75 Scalecolor Spring Green (No. SC-47) for a bit of glow at the base. Dry-brushed Pale Blue (No. AK11161) finished the features.


16

I hand-brushed tenebrous gray to clean up overspray on the ground from the previous painting sessions.


17

With the ground restored, I dry-brushed it with Leather Brown (No. AK11110) to bring out the texture.


18

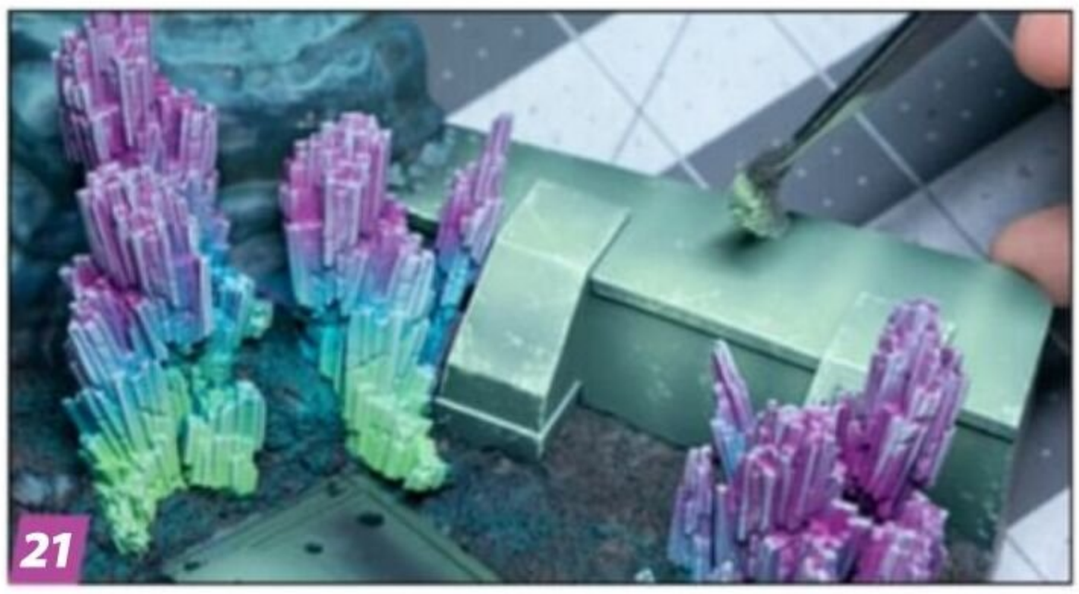
To give a sense of the crystals glowing, I dry-brushed the ground around them with Emerald (No. AK11144). I used this step to begin to map areas where I'd apply tufts of grass and other foliage later.

I painted the astromech — or at least its head — as a callback to R4-P17, Obi-Wan's droid first seen in *Attack of the Clones*, with a base of Reddish Black (No. AK11406) and highlights of Burnt Red (No. AK11097) and Brick Red (No. AK11093). After picking out the gray panels with AK Ash Grey (No. AK11024), I highlighted them with layers of Dark Sea Grey (No. AK11015), Medium Sea Grey (No. AK11014), and Medium Grey (No. AK11010).

The loth cat on top of the droid is a nice touch. I base-coated it with Dark Shadow Flesh (No. AK11405) and added progressively finer highlights with Medium Rust (No. AK11103), Orange Brown (No. 11101), and Sunny Skintone (No. AK11055). The teeth were painted with IDF Modern Grey (No. AK11352), Warm Grey (No. AK11009), and Cremeweiss (No. AK11333).

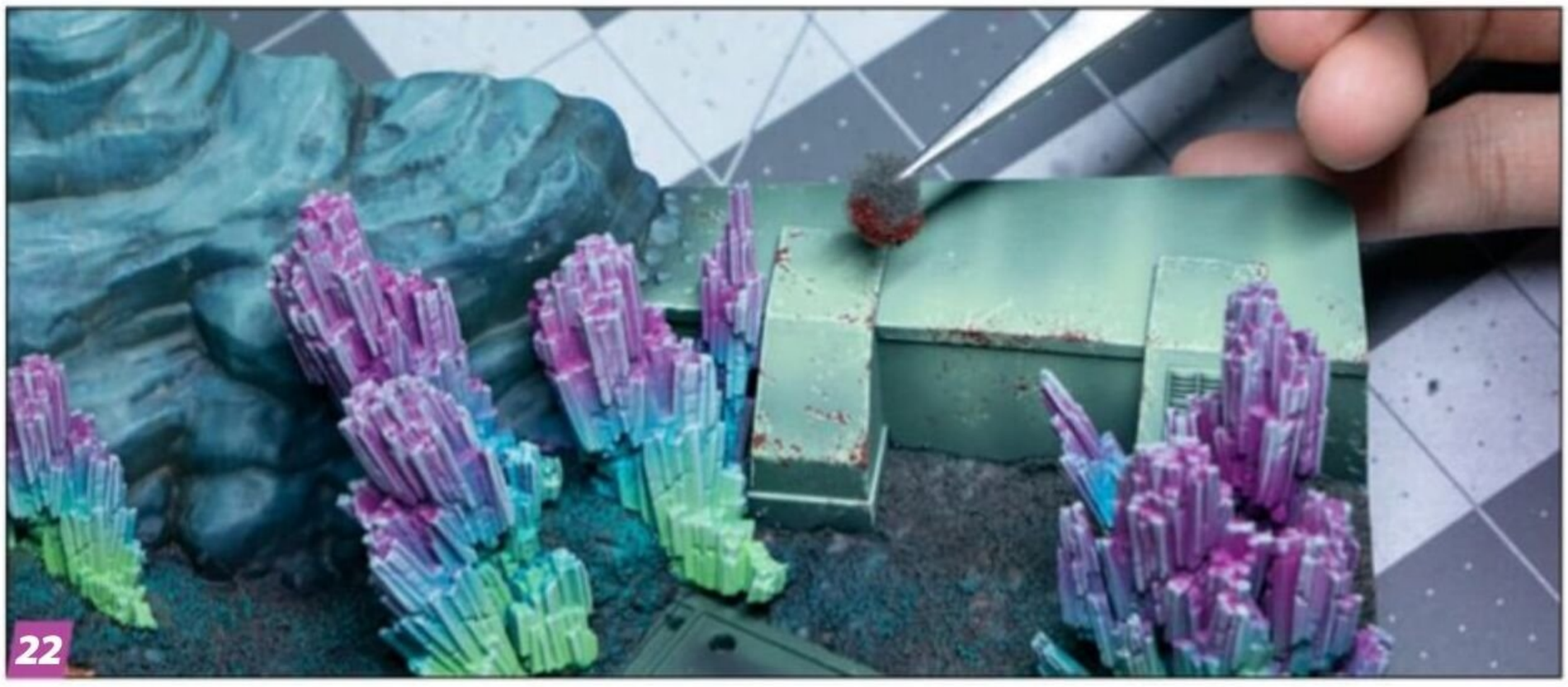
Keeping things similar

YOU'LL NOTE THAT I REUSE the loth cat colors on Obi-Wan's hair and tunic and the black detailing elsewhere on the display base shares color steps with Vader's black suit and armor. I find that having similar color recipes throughout a piece helps tie the elements together. You can separate these elements by varying the ratio of colors and values.



To make the machinery look worn, I applied Greenish White (No. AK11005) with a chunk of sponge held in tweezers. After dipping it in paint and wicking off excess on a paper towel, I dabbed it along edges and inner surfaces leaving a random pattern of dots and lines.

I repeated the process with dark shadow flesh, keeping the effect mostly restricted to the areas of greenish white. The idea is to give the scratches the impression of dimension. To be sure it looks right, I will often fine-tune the chips with a paintbrush.

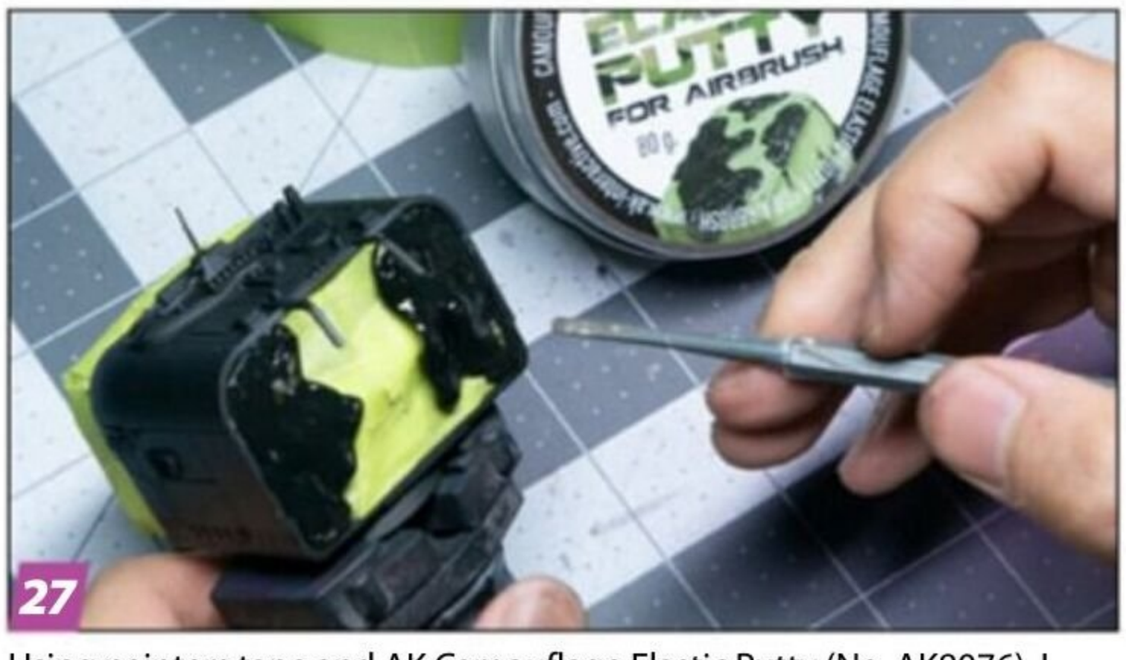


I finished off the green equipment with streaks of Engine Grime (No. AK082) and brown-blue wash enamels and used light oxide red oil paint to saturate some of the larger chips and create a few pronounced rust streaks. I set the base aside for a week to ensure the oil paints fully cured. Otherwise, there'd be a risk that handling could remove or smudge the paint.

I sprayed the cylindrical object (drum) that sits on the green plate with an overall coat of Black Intense (No. AK11029). Highlights of Rubber Black (No. AK11027), ash gray, and dark sea gray were airbrushed on top and in streaks down the sides.

Using the sponge technique, I applied chips to the drum with medium sea gray, but I didn't follow with the red layer as I had done on the green. I wanted black to be the natural color so the damage would be limited to surface dents. A light layer of black airbrushed from below reinforced the shadows and provided volume.

I painted the mechanical element of the speeder black-gray using the same shades and steps I used on the drum, although I hand-painted medium sea grey on edges to give them extra dimension.

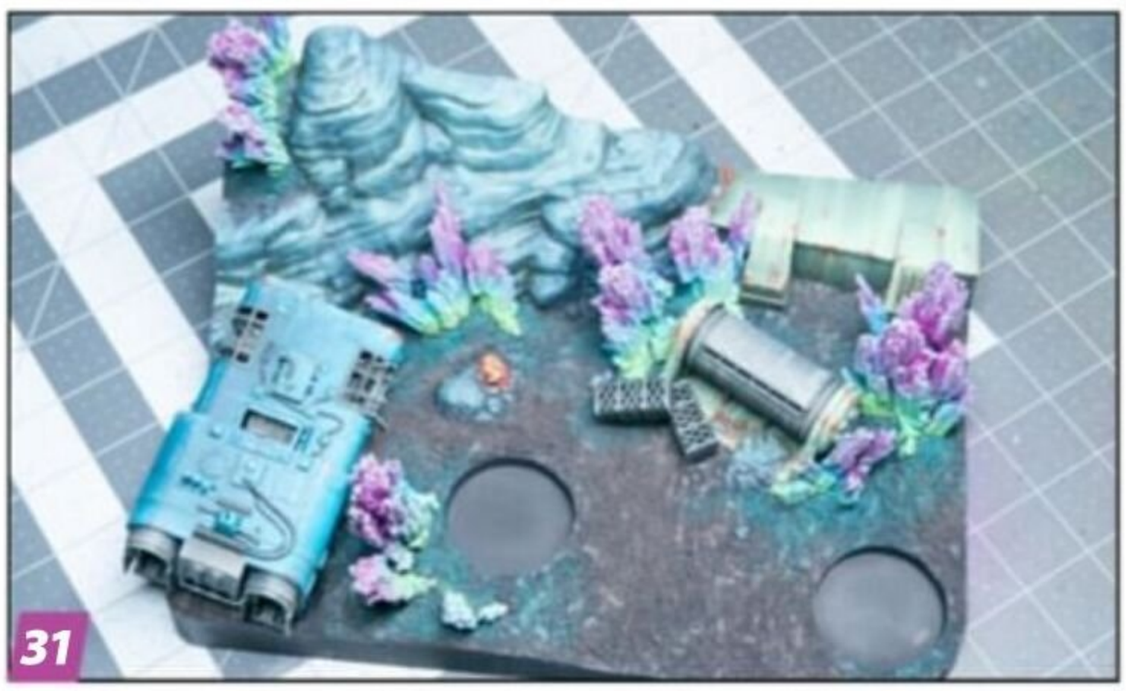


Using painters tape and AK Camouflage Elastic Putty (No. AK8076), I masked the black-gray mechanicals. A soft sculpting tool is perfect for pushing the putty, similar to silly putty, into corners and recesses.

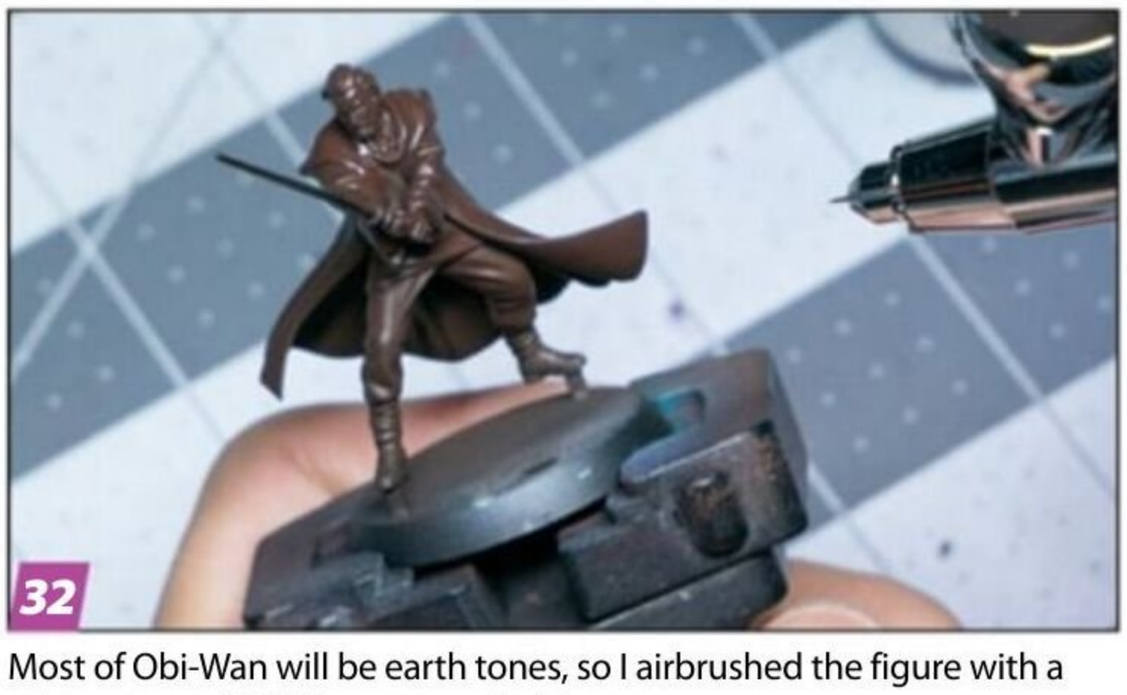
For a base coat on the speeder, I airbrushed Russian Blue Base (No. AK11432). As with the other machinery, I followed with two layers of highlights using Ocean Blue (No. AK11173) and Aquatic Turquoise (No. AK11170).

I added chipping with a sponge, applying Pastel Green (No. AK11131) followed by dark shadow flesh. Using the same colors applied to the black-gray mechanical areas, I picked out the cables and other equipment. To mimic ribbing and add visual interest, I hand-painted lighter lines on the smoothly molded cables. I finished the weathering with streaks of engine grime, brown-blue wash, and decay deposits, and saturated the rust with light oxide red oil paint.

The seat is sandwiched between the two parts of the speeder, so I kept it simple with a base coat of SCC No.1a Very Dark Brown (No. AK11384) and highlights of leather brown.

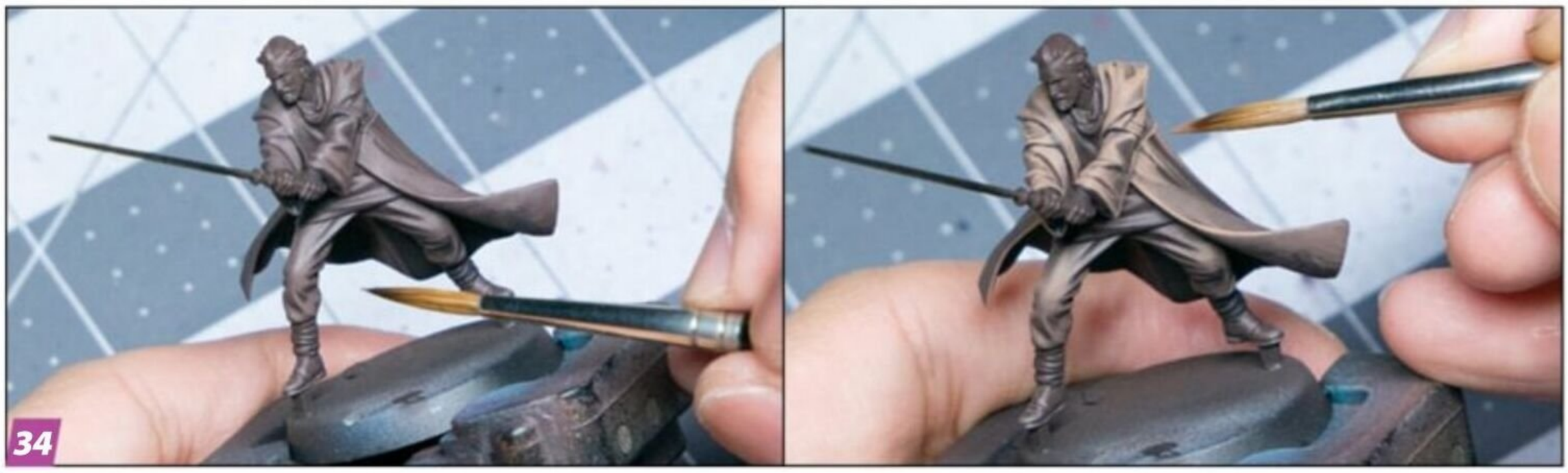


I let the components sit for a week to ensure the artist oils I'd used were dry before attaching the various subassemblies with small amounts of superglue. The arena is ready for the adversaries.



Most of Obi-Wan will be earth tones, so I airbrushed the figure with a primer coat of SCC No. 1a very dark brown.

I followed this by airbrushing a mix of very dark brown and tenebrous gray from underneath to begin the shadows. Another light spray of very dark brown from above refined the shadows.



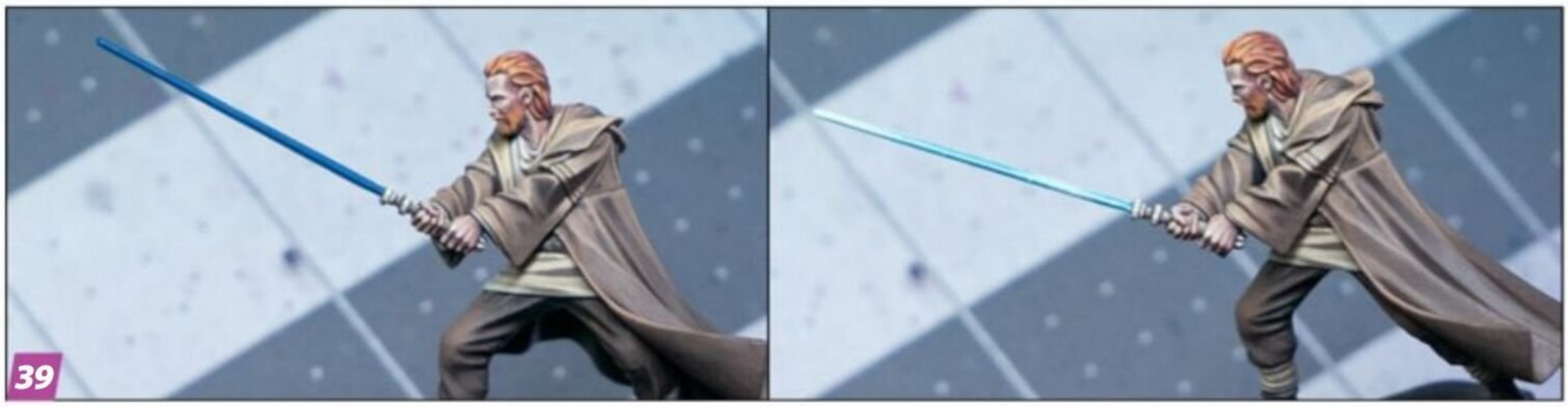
To start highlighting the pants and cloak that would remain brown, started with leather brown, followed by IDF modern gray, RAL7028 Dunkelgelb Ausgabe 1944 (No. AK11319), warm gray, and Pale Sand (No. AK11032). I tweaked the cloak after I painted the tunic to brighten up the values by mixing Beige (No. AK11030) into tan earth and focusing on the shoulders and arms.

The base for the tunic was painted IDF modern grey and highlighted with progressively lighter shades from Light Earth (No. AK11115), Grimy Grey (No. AK11008), and cremeweiss. No colors were mixed, but I diluted them and built up a couple of layers of each to soften the transitions.

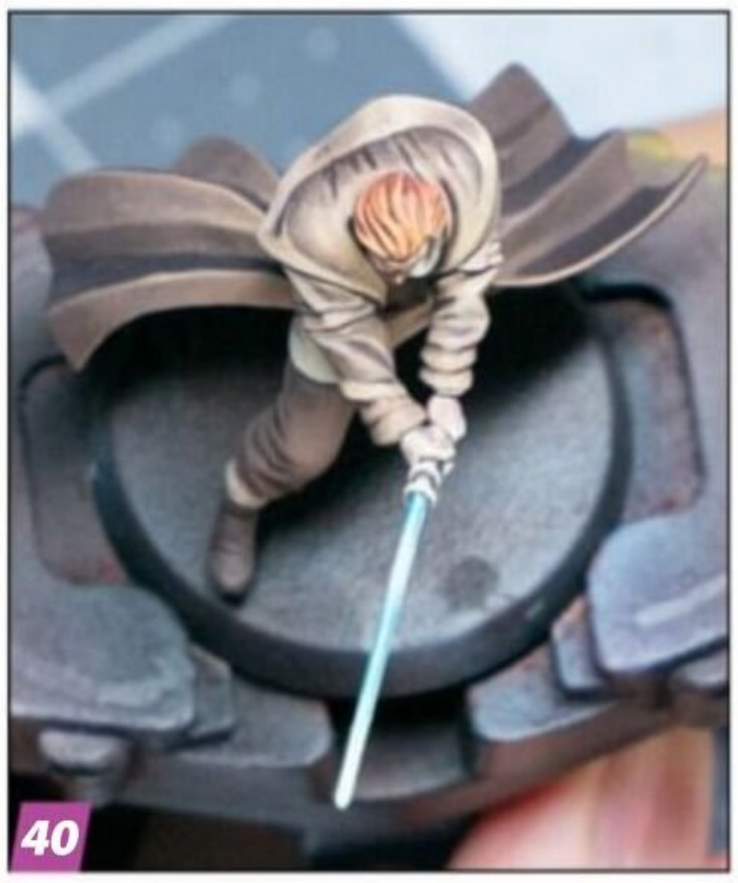
Moving to Obi-Wan's face and hands, I started with reddish black and progressed through the highlight shades from Base Flesh (No. AK11401), Beige Red (No. AK11064), and Highlight Flesh (No. AK11403). I used Pastel Yellow (No. AK11037) for the most pronounced highlights like the nose, cheekbones, forehead, and chin. Glazes of Violet Red (No. AK11075) — I thin the acrylic paint to the consistency of watercolors — brushed over the mid and shadow tones smoothed transitions.

The hair uses the same recipe as the loth cat, with a base of dark shadow flesh followed by highlights of medium rust and orange brown. This deviates a little from the dirty blonde-brown hair that Obi-Wan has in the films, but I wanted a bit of extra color and pop to contrast with the brown-tone of his robes.

For the eyes, I started by painting the overall shape with tenebrous gray, an off-black; I find pure black looks cartoony. Next, I brushed on White Intense (No. AK11001), leaving a bit of the black showing for definition. Finally, I switched to the brush I use for fine detail, a Raphael No. 000, to dot on the iris with tenebrous gray.



Painting a convincing lightsaber is less about the blade itself and more about reflected light around it that gives the illusion the blade is emanating an intense glow. I started by painting the blade with Light Prussian Blue (No. AK11186) and then quickly blended aquatic turquoise and pastel green, focusing the brightest shades near the tip. I added a second highlight two-thirds of the way down the blade for a surge of energy.



Using white, I painted a highlight at the tip of the blade as well as four extremely thin lines from tip to hilt. Imagine the blade as a long, thin rectangle rather than a cylinder. I'm effectively creating corners, so when the blade is viewed from certain angles, it gives the illusion of a sharp highlight running down the center like a white core reminiscent of lightsabers from the films.

Object source lighting

NOT A NEW OR NOVEL IDEA, object source lighting (OSL) is effectively the introduction of an additional light source, often a different color, on a model. The source may or may not be on the figure itself. With this second light source, you need to establish and create highlights and shadows from this new direction, and those will impact the values of everything adjacent to it.

The keys to good OSL are remembering that light travels in straight lines, that reflected light is never brighter than the source, and that the light falloff, or the diminished intensity of light as you get further from the source, is not linear. Rather, it's subject to the inverse square law, and from a practical perspective, means that the closer the object is to the light source, the faster the light hitting the object will fall off from highlights to shadows, leading to some high-contrast lights and shadows.

Here, because I imagined the scene during slightly overcast daylight, I wanted to be sure the light cast by the lightsabers won't dramatically overpower the values around them. So, the OSL applied to both Obi-Wan and Darth Vader is rather subdued and mostly limited to the hands and limbs immediately adjacent the blade.

To create the blue glow from Obi-Wan's saber, I used the same colors used to paint the blade, first mapping out the area that would be affected by the blue light with light Prussian blue. The highlights were slowly built up with aquatic turquoise and pastel green. The final step was some sharp highlights of greenish white on the edges of the lightsaber and the fingers on his right hand. I used greenish white for the final highlight in the OSL because it's a step down in value from pure white, the brightest highlight on the blade.

Darth Vader will be either black or dark gray, so I started by airbrushing the entire figure with rubber black. Then I airbrushed ash grey, mostly from above to provide the basis of soft highlights, and sprayed black from underneath to provide shadows.

Turning to hand-painting, I brushed on the first highlight layer with ash gray, then brightened them with dark sea gray, focusing on the upper half, especially the chest and arms. I applied an edge highlight around all the armor panels with pure dark sea gray. A lot of the figure's back will be hidden by the cape so I concentrated on the front.

I continued pushing the highlight values on the armor with medium sea gray, adding progressively paler gray for even brighter highlights. Pure pale gray was applied as edge highlights on upper raised surfaces.

Glazes of black softened the contrast at transitions between colors and black paint was brushed into the seams between the armor components, especially on his pants and sleeves. I also used pure white to add specular highlights to all the corners for a little extra pop.

I used the same colors and method to paint Darth Vader's cape and helmet, which I left off for ease of painting. The folds of the cape overlap parts of the tabard and arms, which would have made painting these areas unnecessarily difficult if it had been attached. Both the helmet and cape are very visible on the finished figure, so I wanted to be able to add highlights and shadows.

To paint Vader's red lightsaber, I base-coated the blade with burnt red, then blended highlights of Blood Red (No. AK11089) with sunny skintone at the tip. This shade will quickly turn into a peachy pink, so I reserved it for the tip and lightly mapped out the four edge highlights down the blade as I had done on Obi-Wan's saber.

I started mapping the saber's OSL on Vader by airbrushing Vallejo Game Color Evil Red (No. 72.112). I find using the airbrush on a darker color a lot more forgiving because light overspray is largely invisible.

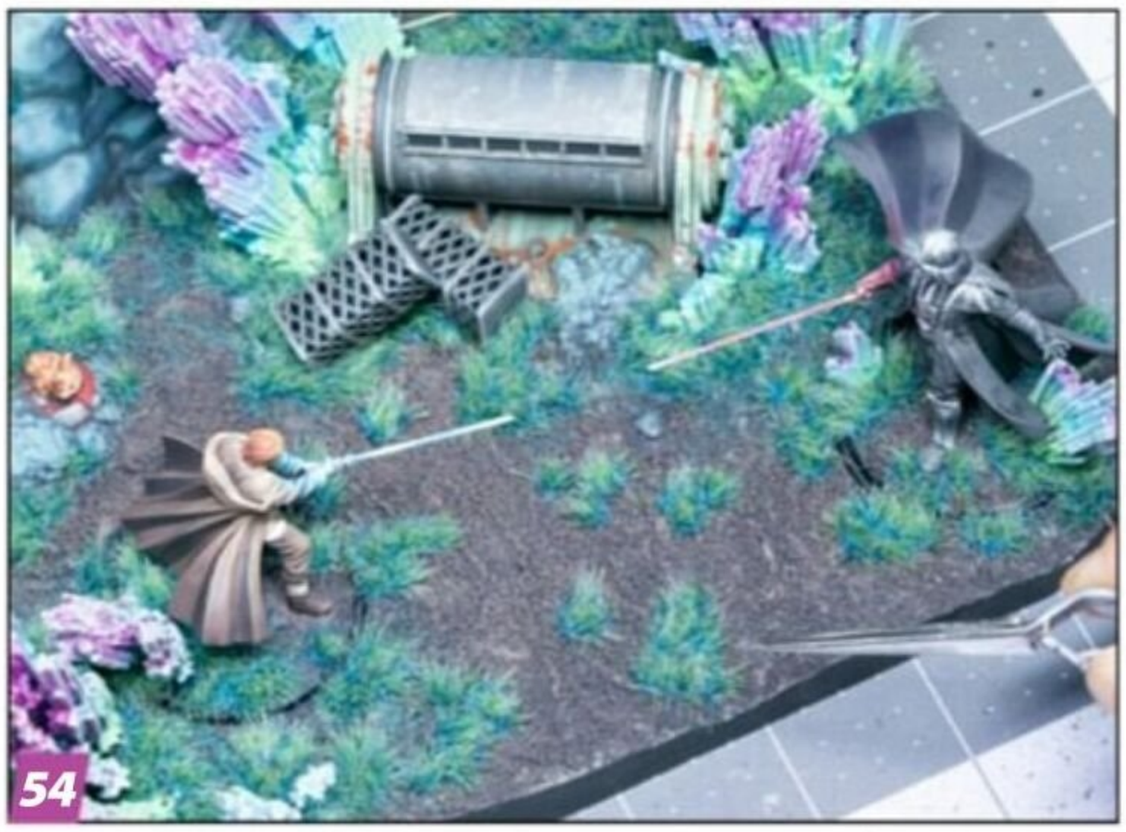
From there, it's just highlighting with the same colors that I painted the lightsaber, working my way through burnt red, blood red, and sunny skintone, and finishing with glazes of evil red in the shadows. I made sure to pick out deep recesses in the seams and folds on the right arm and pants, as well as the right folds of his chest fabric.

With the OSL done, I hand-painted final highlights on the saber blade with white. I saved this step for last to prevent the airbrushed OSL base coat from shifting the white's color value toward pink.

To capture the red of the helmet's lenses I had base-coated with tenebrous gray, I brushed soft glazes of burnt red over the lower curve. A mix of tenebrous gray, burnt red, and white added to the lower arc increased the red tint; angling it slightly to the right mimicked a reflection of the lightsaber. I finished with a dot of pure white in the opposite upper lens corner for a catchlight.

Using an airbrush, I sprayed Citadel Druchii Violet (No. 53004) around the edges of the OSL to push the highlights and increase the saturation of the shadows.

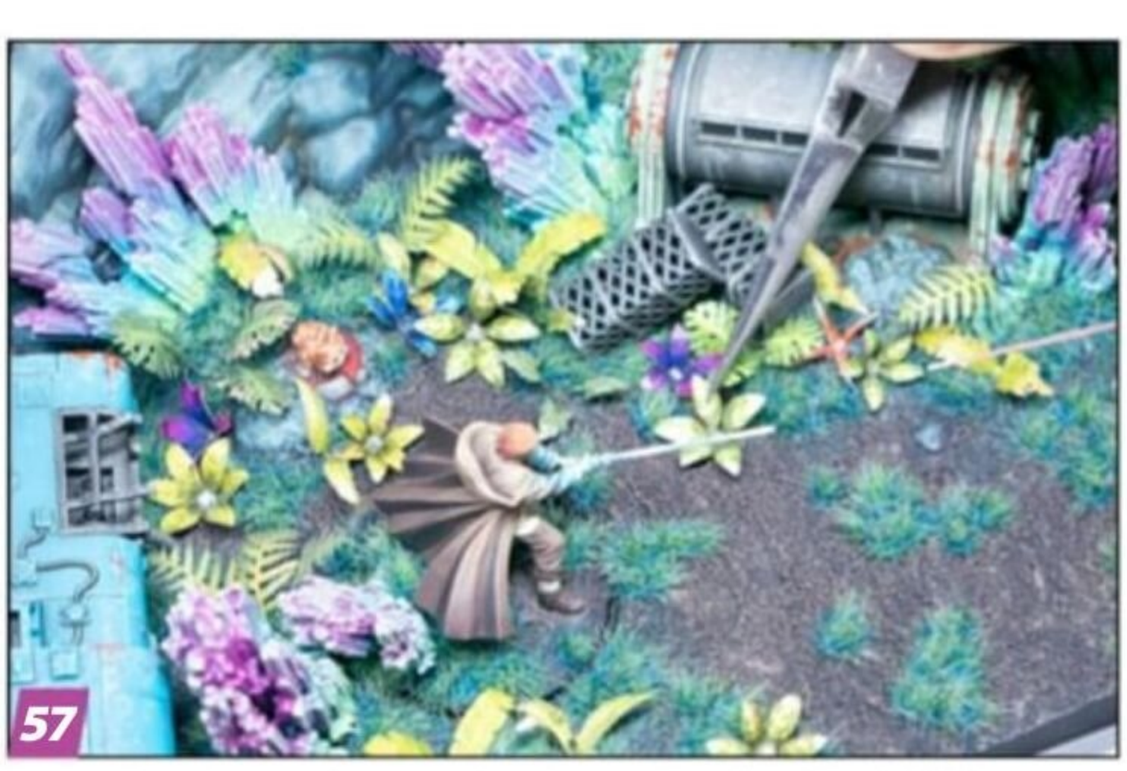
My preference is to trim the edges of the base and the opening for the figures with black and I recommend doing this before applying any vegetation. I diluted black and applied several layers with a large brush to minimize brush strokes.



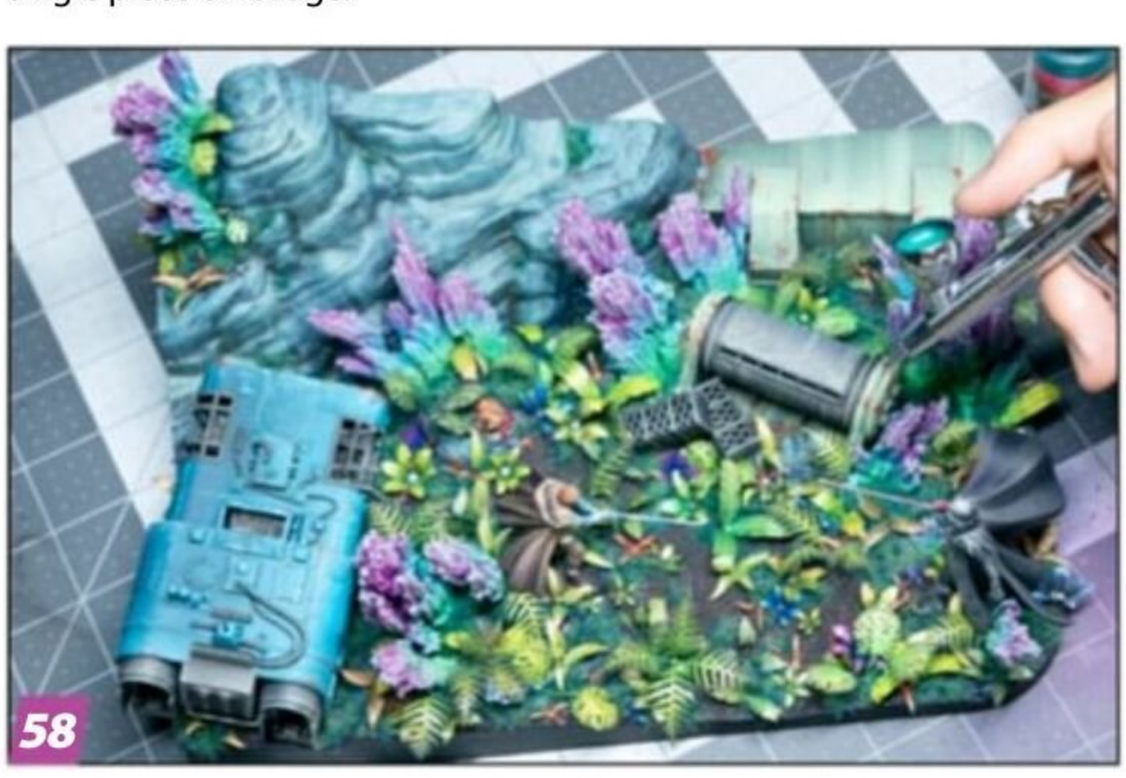
With the figures in place, I started planting a generous dispersion of Gamers Grass 6mm Alien Turquoise tufts (No. GGA-TG). Using tweezers, I placed each on a dab of superglue on the display and figure bases creating areas of dense coverage and areas where it's sparser.

Gamers Grass also supplied the foliage in the form of pre-painted, laser-cut, paper products. All you have to do is remove them from the sheet, curl them into shape, and superglue each into position.

I used a pair of tweezers and hobby pliers to twist and curl the paper. It holds its shape well, so this process isn't difficult. It's just time consuming as you end up curling a lot of individual leaves on every single piece of foliage.



I started with larger pieces such as Banana Tree (No. GGLP-BT), Monstera (No. GGLP-MT), and Bracken (No. GGLP-GB), followed by midsized Deer Fern (No. GGLP-DF), Lords-And-Ladies (No. GGLP-LAL), and Dumb Cane (No. GGLP-DC). After adding splashes of color with Alien Rosette (No. GGLP-AR) and Red Aloe (No. GGLP-RA), I finished up with a few more pieces of monstera and bracken to create a denser overlap of pieces to really sell the environment.



Wanting to tie everything together, I airbrushed the foliage and greenery with Scale 75 Inktensity Green (No. SC85) thinned to the consistency of watercolor. Err on the side of caution with these inks because the color is extremely saturated and a little goes a long way.

FINAL THOUGHTS

OBI-WAN AND DARTH VADER will be gaming pieces for my *Shatterpoint* collection, so I sealed them and the base with Mr. Hobby Super Clear Matte (No. B514). If this was going to be purely a display piece, I would have forgone this step because clear flat finishes tend to dull and mute the bright colors. **FSM**

SE
A

TechNoir

The T-800

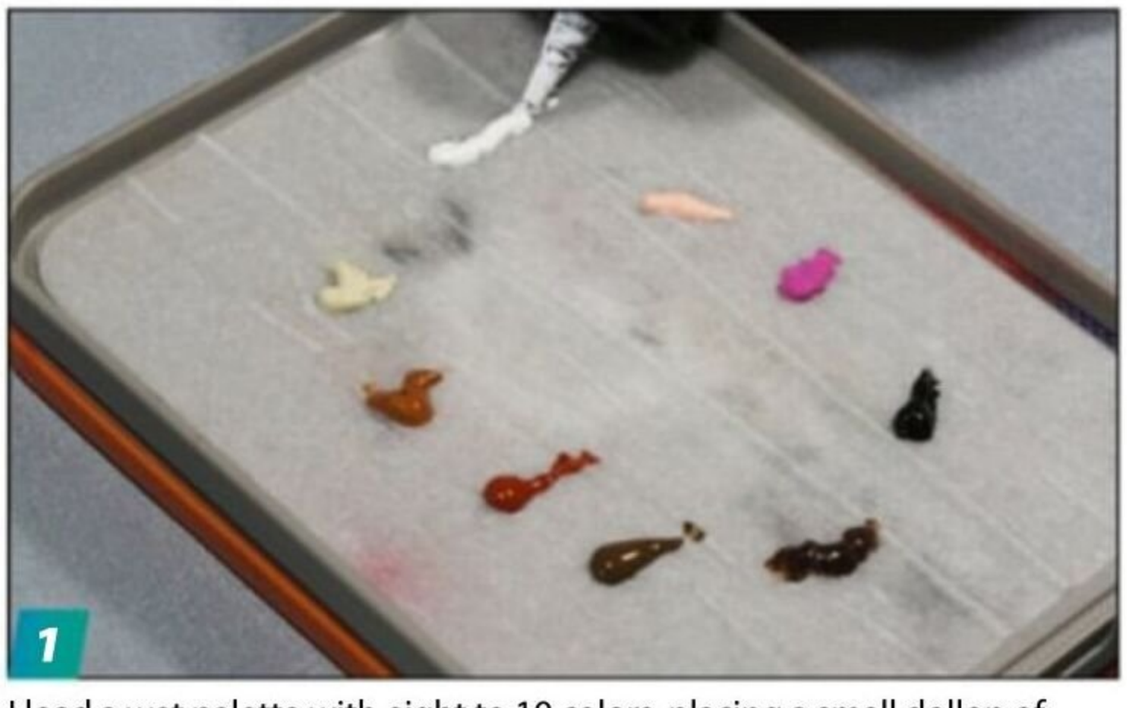
Use object source lighting to put a figure in its place

BY JEFF CAMP

Applying paint for a sense of directional or object source lighting (OSL) is an effective way to give a figure drama and a feeling of its environment. Painting with OSL can be challenging, but adding an additional light source draws the viewer's eye to the focal point and introduces interesting shadows and color blends.

Adding drama was exactly what I wanted when I finished a 1/4 scale bust of the T-800 from *The Terminator* produced by Goodfellas Resin and sculpted by Jeff Yagher. It is called TechNoir, the name of the nightclub where the T-800 finds Sarah Connor and Kyle Reese comes to the rescue. I wanted to incorporate the club's lighting into the finish using OSL. To set the scene, I will apply a source of red light coming from the bust's left side across its face, jacket, arm, and gun. The opposite side will show ambient light, so the colors will be less affected by the red light. Ambient light creates a uniform light level throughout a space.

After checking the fit of the parts and removing visible seam lines, I washed the parts with water and a little dish detergent to remove any casting residue to help paint adhere properly to the surface.



I load a wet palette with eight to 10 colors, placing a small dollop of each and leaving space between them for mixing and to give them room to spread.

To base coat the lighter side of the face, I mixed a medium flesh color using light portrait pink, red oxide, raw umber, and burnt umber. Then I added a little more red oxide to that mix and base-coated the left side of his face.

For the right side of the jacket, I mixed four values of a warm gray using neutral gray 7, raw sienna, and ivory black. I added a little more ivory black to each of the four grays to get a slightly darker shade than the previous hue. I started with the darkest gray and built up the color with the shades of lighter gray.

Using the same shades and technique, I continued the warm grays down the sleeve on the right side of the bust's arm.

I mixed cadmium-free red medium and titanium white to create a blush color for the left side of the jacket. Applying this in light glazes, I built up the density in multiple coats over the areas that would be most affected by the red light.

To add shadows on the darker side of the face, I added a little more burnt umber to the color I used to base coat on that side. I painted the shadows around the eye first, then moved to the figure's cheek, around his nose and mouth, and under the chin and down its neck.

Brushing a glaze of straight red oxide on the figure's lips deepened that feature and set it slightly apart from the rest of the flesh.

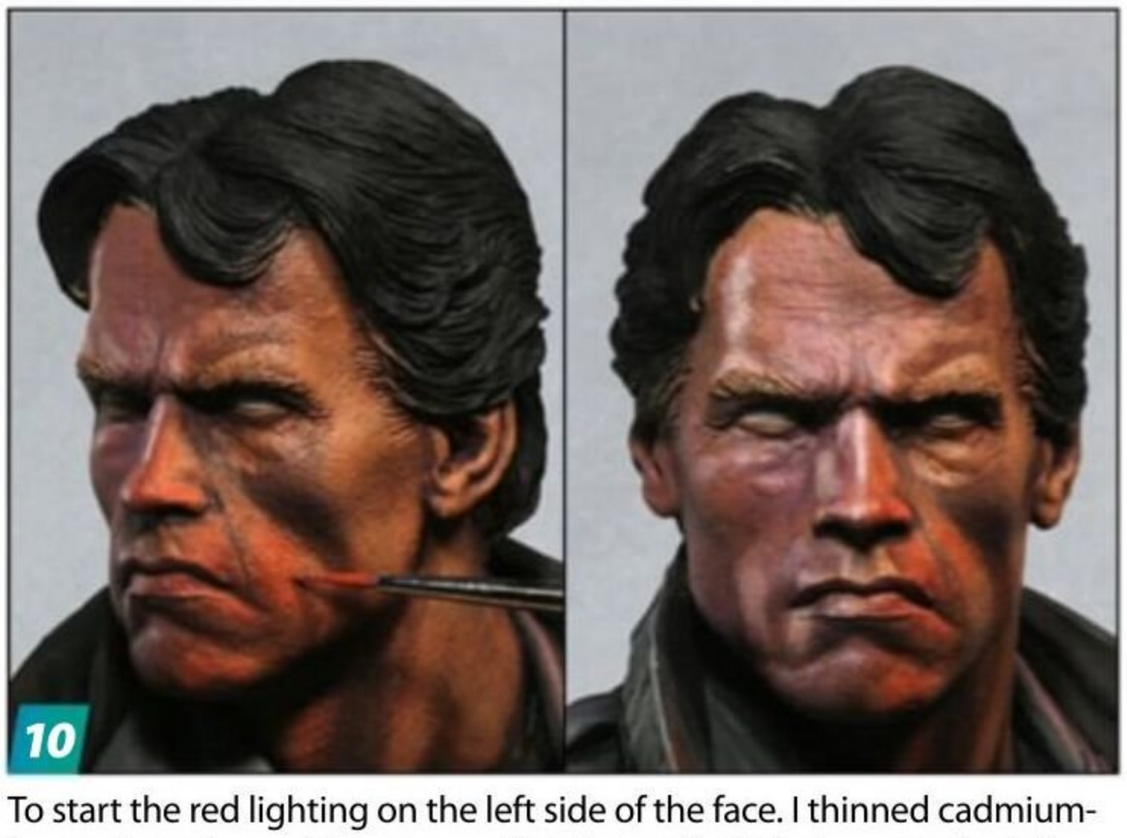
Starting with the base color used on the lighter, right side of the face, I added a little more red oxide and a touch of raw sienna. I applied this color to his nose, forehead, cheeks, and chin.

To begin highlights on the right side of the face, I added a little more light portrait pink to the original base color. This was brushed onto the nose, forehead, cheeks, chin, and above the upper lip.

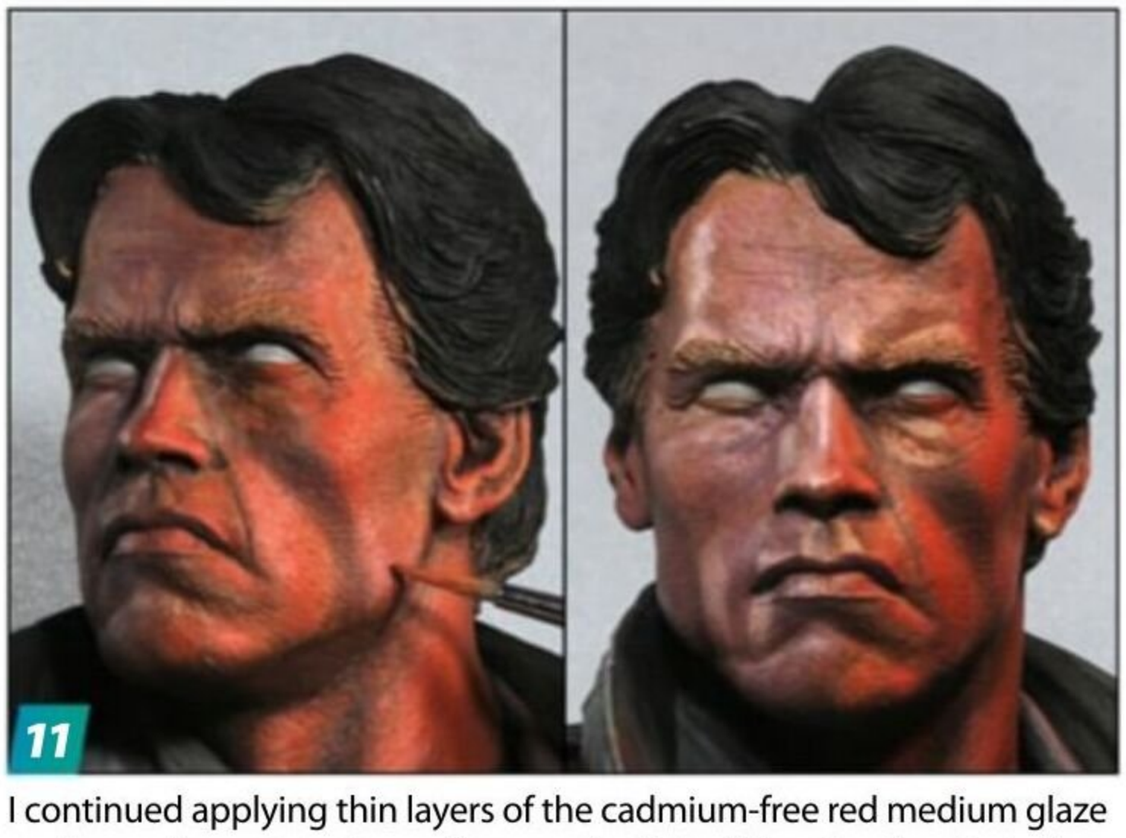
Paint used

AFTER AIRBRUSHING THE FIGURE with Badger Stynylrez Primer, I used Liquitex Acrylic Gouache throughout. These paints are permanent when dry and have a flat finish. The ultra-pigmented colors don't show brush strokes, crack, or need to be thinned for hand-brushing. You can also dilute them with water to create glazes and washes. I have even sprayed them through my airbrush after thinning them with water and airbrush medium. Here's a list of the colors I used:

- Red Oxide (No. 335)
- Raw Sienna (No. 330)
- Unbleached Titanium (No. 434)
- Light Portrait Pink (No. 810)
- Raw Umber (No. 331)
- Burnt Umber (No. 128)
- Medium Magenta (No. 500)
- Ivory Black (No. 244)
- Titanium White (No. 432)
- Neutral Gray 7 (No. 600)
- Light Blue Permanent (No. 770)
- Cadmium-Free Red Medium (No. 894)
- Cadmium-Free Yellow Deep (No. 891)
- Cerulean Blue Hue (No. 470)
- Dioxazine Purple (No. 186)

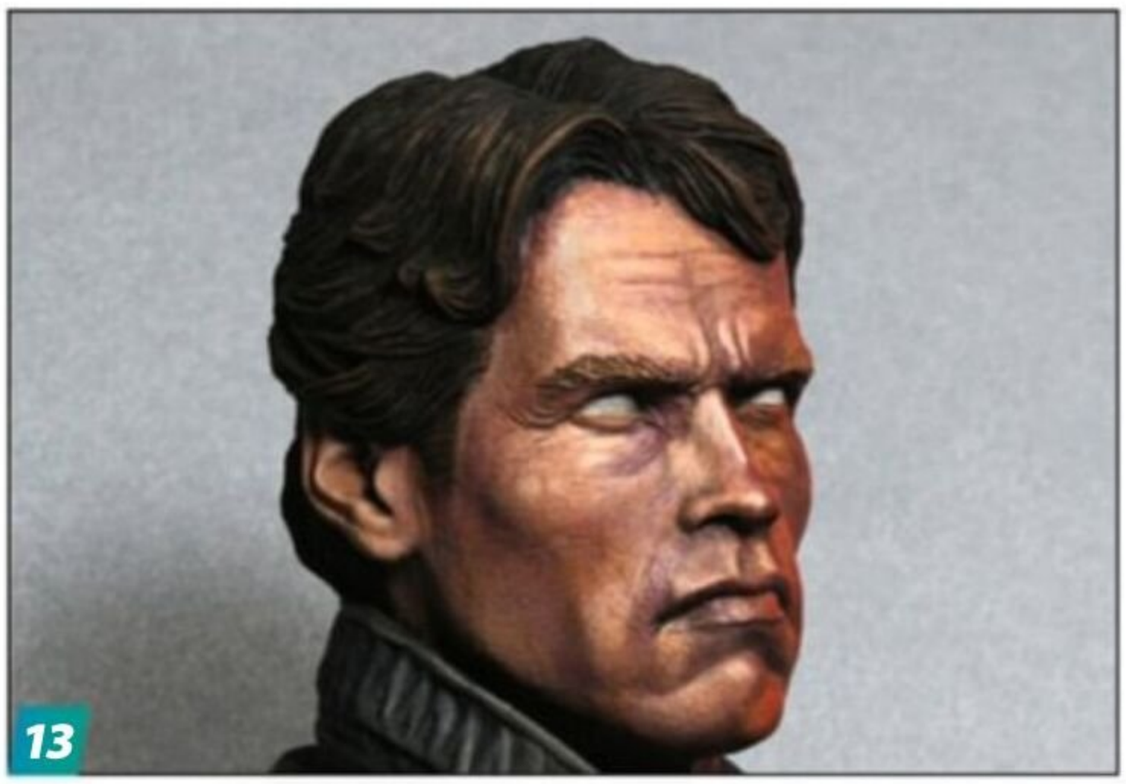


To start the red lighting on the left side of the face. I thinned cadmium-free red medium with water and lightly applied it in layers to the left side of the nose, chin, and cheek. I also base-coated the eyes with neutral gray 7.



I continued applying thin layers of the cadmium-free red medium glaze on the neck, ear, temple, and jaw, gradually building the density to the desired hue.

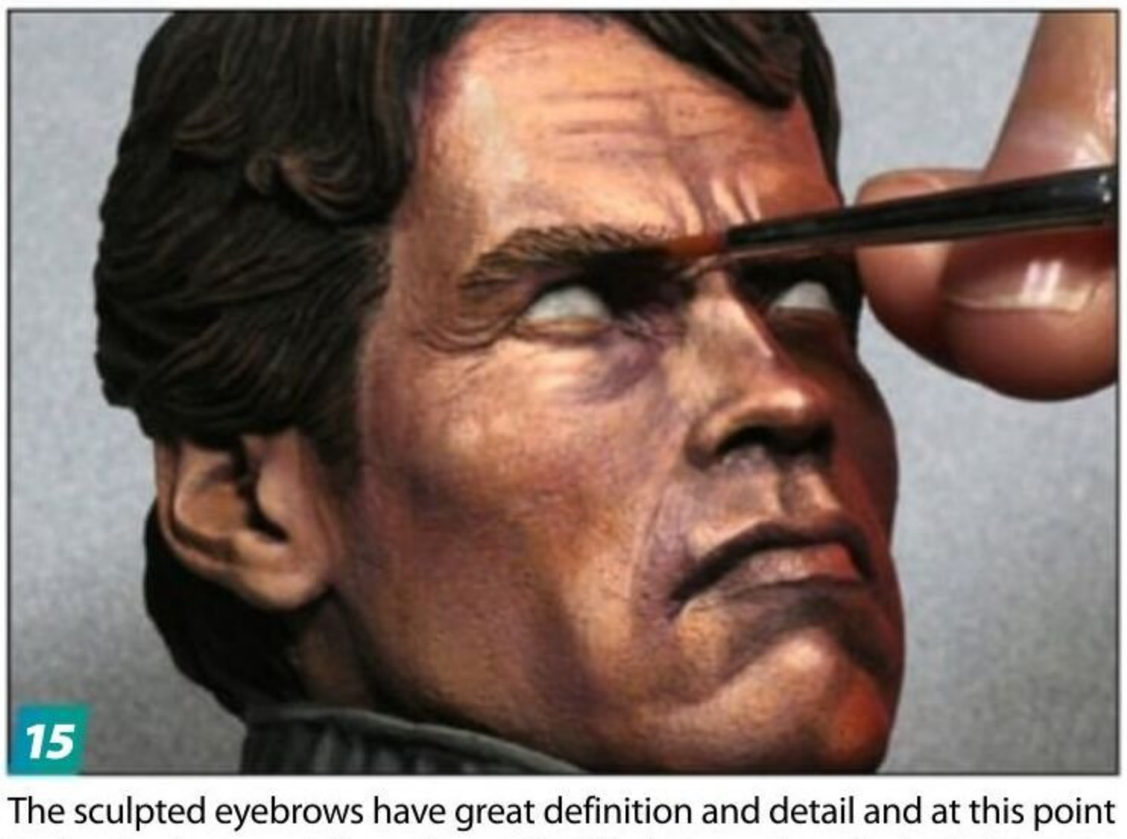
To mitigate the harshness of the highlights on the right side, I stippled the base color (light portrait pink, red oxide, raw umber, and burnt umber) over the highlights and surrounding areas. The flesh is starting to look the way I want, and the directional lighting is effective.



In the movie, the T-800's hair was dark brown, so the black primer will work great as a base color. For highlights, I created a dark brown by mixing red oxide and raw umber and applied it to raised areas that would catch the ambient light in the club.

For the highlights on the left side, I brushed on a redder mix of red oxide and raw umber to the areas of hair that would catch the red lighting.

Stippling allows some of the colors underneath to show through and adds depth to the flesh.



The sculpted eyebrows have great definition and detail and at this point had a nice base coat from the applied flesh tones. I applied a light wash of burnt umber and ivory black over them to deepen the recesses while keeping the raised areas lighter.

I used ivory black watercolor paint to establish the eye position, because it allows me to easily adjust the position by wiping it away with a damp brush and trying again. When I am happy with the position, I spray a light coat of clear to lock it in.

I base-coated the irises with a medium green mix using cerulean blue hue and cadmium-free yellow deep.

After lightening the medium green mix with a little titanium white, I applied it just inside the edges of the iris, so the darker shade shows around outer edge.

The final step is the pupils which I added with ivory black.

Color chips to show basic mix differences

THESE COLOR CHIPS ARE PROVIDED to illustrate the value of the various shades used on the T-800. Printing and paper will alter the appearance of the actual colors, but these show how some of the colors mixed from the same base shades will differ depending on the ratios used.

Base flesh left side

Base flesh right side

Jacket right side grays

Jacket left side

Flesh left side shadows

Flesh right side shading

Flesh right side highlight 1

Flesh right side highlight 2

Hair highlight

Hair left side highlight 1

Eyebrows

Iris base

Iris highlight

Shirt red light 1

Shirt red light 2

Base shirt graphics gray

Flesh right side stipple

Flesh right side highlight stipple

Jacket left side brighten 1

Gun red 1

Gun gray 1

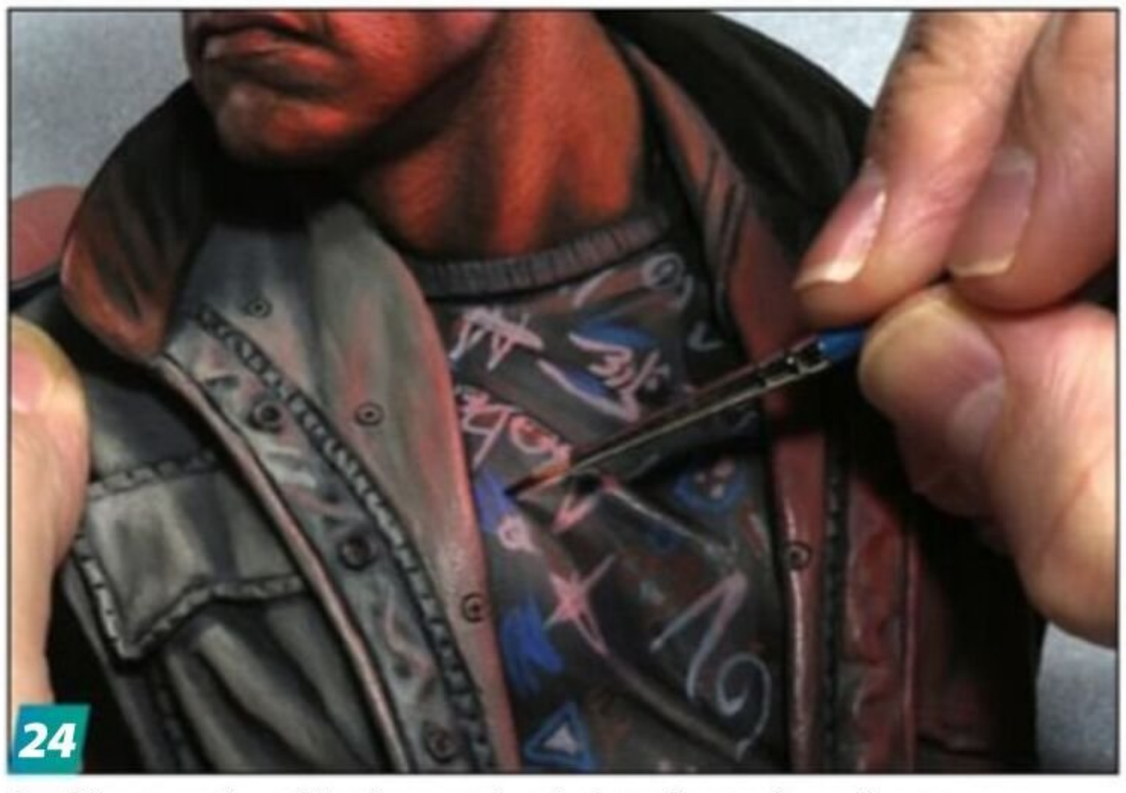
Nameplate

Even though his shirt is black, the folds will catch some of the red light. I mixed a dark purplish red color using dioxazine purple, cadmium-free red medium, and ivory black and applied it to the folds.

For the folds that would catch more of the red light, I added a little more cadmium-free red medium to the previous shade and brushed it onto the highest areas.

To replicate the design on his shirt, I lightly sketched in the graphics with a light gray pencil. Using a colored pencil allows me to make revisions by removing unwanted marks with a kneaded eraser.

Once I was satisfied with the shirt graphics, I painted over them with a mix of neutral gray 7 and ivory black.



Brushing cerulean blue hue and cadmium-free red medium over some of the gray graphics added color to the shirt.

To blend the areas between shadows and highlights on the right side of the face, I stippled on a medium flesh mix using light portrait pink, red oxide, raw umber, and burnt umber. Stippling allows some of the colors underneath to show through and adds depth to the flesh.

I lightened the medium flesh with a little unbleached titanium and light portrait pink and stippled over the highlights to brighten the right side.

To brighten the highlights where the red light catches the jacket, I brushed them with a light glaze mixed from cadmium-free red medium, neutral gray 7, and dioxazine purple.

I started the hand by base-coating the fingers and wrist with the flesh colors used on the face. Then I applied a base coat to the side of the gun facing the red light. I started with a darker shade, mixing a plum color with cadmium-free red medium, neutral gray 7, and ivory black.

After establishing the base coats on the gun, fingers, and glove, I applied light glazes of cadmium-free red medium. This shifted the colors to appear as if the red light is reflecting off them. To connect the laser sight to the gun, I drilled a small hole in the side of the gun to add a small magnet. Then I mounted a second magnet on the sight.

I mixed a light pink color with cadmium-free red medium and titanium white and applied it to highlight areas on the gun and laser sight.

I felt that the red lighting was looking a little too pink, so I applied light washes with cadmium-free red medium to the gun, glove, and fingers. I built up the color slowly with many layers until I was happy with the intensity of the red highlights.

For the base coat on the other side of the gun, I mixed neutral gray 7 and ivory black to create a medium gray. This would be the darkest color on this side of the gun, and I built up the areas that catch more of the light, with lighter shades of gray to make the surface look silver metallic.

To add highlights to the black glove, I mixed neutral gray 7 and ivory black to create a gray that I applied to areas on the glove that would catch ambient light.

I decided to keep the base simple so as not to distract from the face. After Badger Stynylrez primer, I masked the top and airbrushed the left side with medium gray at an angle to mimic the ambient light on the figure.

I sprayed medium gray on the right side, but not as brightly as the left, to serve as a base for the red lighting to come. I added that by airbrushing the area with cadmium-free red medium at an angle to hit raised details.

I airbrushed the nameplate a mix of cadmium-free red medium, ivory black, and dioxazine purple and then painted the lettering with red medium. For a little neon glow around the letters, I painted red thinned with water. **FSM**

Have fun making a fantasy figure

ONE OF A KIND

Parts prep and painting are one thing, but modifications and a custom base make this dwarf unique

BY SIMON LAM


1

I cleaned the parts with an ultrasonic cleaner and a small amount of dish detergent; if you don't have an ultrasonic cleaner, an old toothbrush and detergent will work just fine.

Before beginning any modeling project, I think it's important to pick a subject that appeals to you. For me, Assessor Redforge from the Big Child Creatives Traders of Kobberland range was just the ticket. The 75mm kit features a dwarf smoking a pipe and closely examining a scroll with something obviously important on it.

Working with figures often means working with resin, and that was the case with our dwarven friend. Before diving into assembly and painting, resin requires a few procedures for a smooth and pleasant experience. There are no shortcuts when building award-winning figures.

Part prep

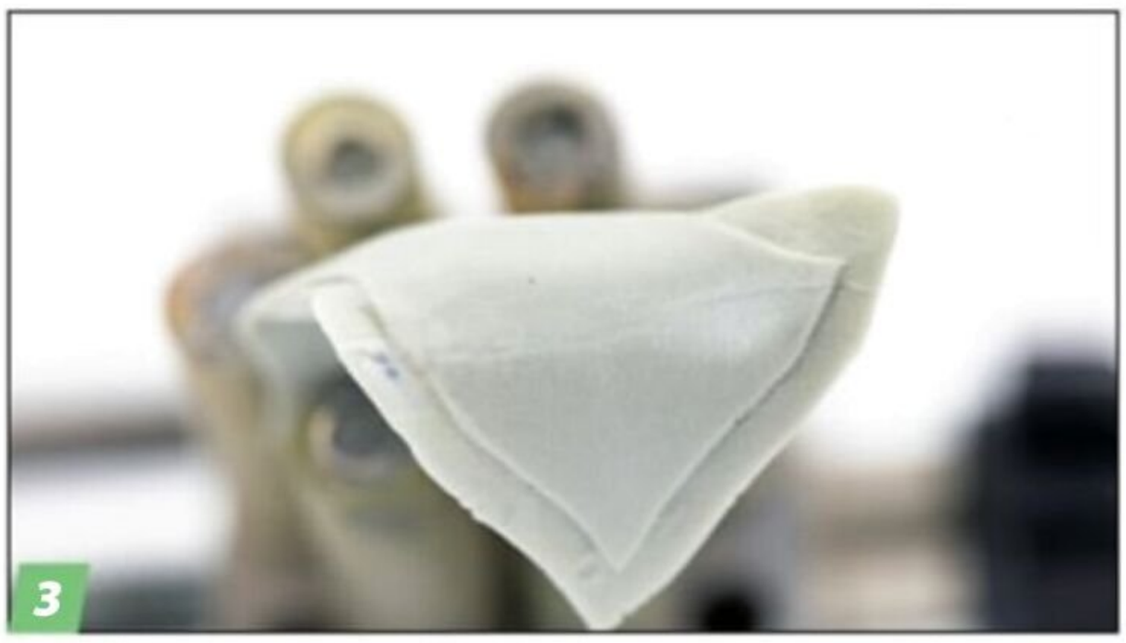
Typically, I check the kit to be sure all the parts are present before removing them from the pour plugs. It is important to wash resin parts before progressing too far to remove any mold-release agent that may be on the parts, ***1***. Designed to make parts easier to remove from the rubber molds, this stuff can prevent paint adhesion, a serious headache when you start finishing a figure.

Next, inspect each piece carefully looking for manufacturing defects. Resin kits are often cast in two-part molds, and sometimes the halves may be misaligned and resin can make its way into the separation producing a noticeable mold line, ***2***. In addition, during molding, liquid resin may not reach every nook and cranny and air bubbles can get trapped in the mold. Both can produce thin spots or defects that need to be filled before painting, ***3***.

When the issues are corrected, I preassemble the figure using poster putty to tack the parts together, ***4***. This important step helps


2

If the line is just a mold seam, you can file and sand it away. If the molds were misaligned, you may need to use putty to add material on the lower side of the step and sand it flush with the high side.


3

To reinforce thin spots and fill air bubbles (sometimes called pinholes) in resin parts, I use UV-curing resin, like the stuff used for 3D-printing. Brush it on, use a UV penlight to set it, and sand it smooth.


4

With the parts tacked in place, I can figure out what areas I'll need to paint before assembly because they will be difficult or impossible to reach once they are permanently glued.

I primed the model with black because I prefer to work from the darkest to the lightest shades. Most primers produce a flat finish and provide a slightly rough surface that subsequent paint can grab.

Taking advantage of the transparent nature of acrylic paint, I build color saturation by brushing on layer after layer and gradually increase the color. This method is controllable and user friendly.

By forcing the contrast between highlights and shadows or reflections using paint you give the impression that the surface is glossy. The smoother the transition between bright and dark reflections, the less reflective or dull the surface appears.

Working the hair like metal, I started with a dark base coat, then added highlights and shadows to mimic how light works on the varied surfaces.

brush strokes. I recommend using a wet palette to keep acrylics adequately moist and extend the paint's workable window. However, water-based acrylics have a notable weakness when it comes to adhering to plastic or resin. Unlike solvent-based enamels and lacquers, acrylics don't chemically bond with the surface. So, it's important to prime any figure you plan to hand-paint with acrylics, ***5***.

Skin tones

For the arms and face, I primarily used Scale 75 acrylics that dry with a flat sheen. It's worth mentioning that a flat or matte finish is preferred for miniatures. Generally, miniature painters try to control the way light works on a figure indicating a light source by painting reflections and shadows. Depending on the direction and type of light, the result could be the afternoon sun or a fire pit. A flat sheen on the figure will diffuse real world light and reduce or eliminate reflections that could conflict with the painted light source.

Using Sunset Purple (No. SC-33) as the shading color, I slowly built up the skin color using multiple, thin layers of color and working from darkest to lightest — Pink Flesh (No. SC-21), Basic Flesh (No. SC-20), Light Skin (No. SC-18), and Pale Skin (No. SC-17), ***6***. I finished with a little blush on the cheek and the tip of the nose using thin Vallejo Game Color Warlord Purple (No. 72.014).

Non-metallic metal

Miniature painters put a lot of effort into the difference between texture and reflection on all sorts of materials. Shiny metal is a popular one and also a fun one to paint. So much fun that we have a name for it: non-metallic metal (NMM). Why not use actual metallic paint? It's just a matter of preference. For me, NMM offers more drama to a figure.

After applying the base coat, the basic idea is to manually place hard, intense highlights and dark reflections to suggest the surface is shiny and reflecting a light source, ***7***.

Hair and textiles

To paint hair, like the dwarf's prominent eyebrows and beard, I use essentially the same NMM technique. However, hair is generally treated like a semigloss object, so the highlights will be softer, ***8***.

What is more interesting, a plain red hat or a knitted red cap? Texture is the name of the game here, so reach for a fine brush. The dwarf's hat is molded smooth. To make it look knitted, I apply short stripes of color lighter than the base, ***9***.

me plan how I will paint the figure, particularly by identifying areas I won't be able to reach easily or at all with an airbrush after assembly.

Priming

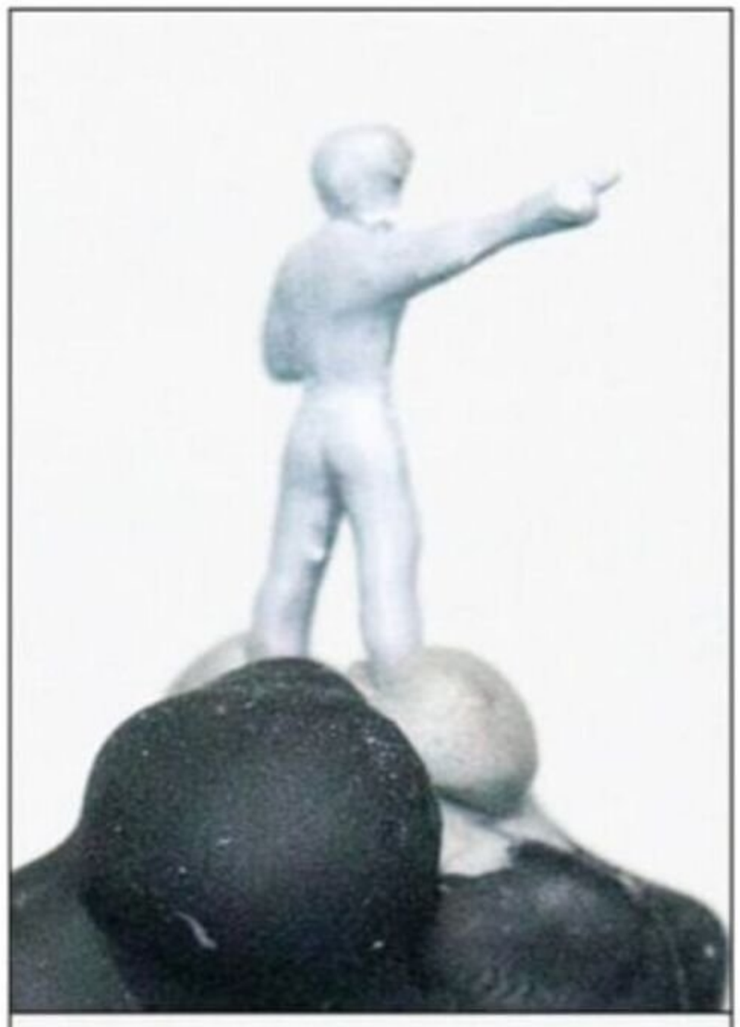
After formulating a plan and assembling the parts into subassemblies, it is time for paint. For most miniature projects, I apply colors with a paintbrush as opposed to an airbrush. Modern acrylics have been formulated for brush application with water as a medium to level and minimize visible

9

Varying the shade of the color used for the knitting texture makes the yarn look more natural and can account for highlights and shadows. This effect can set your figure apart from others.

10

Hand-painting texture like this is time-consuming, but the result is a surface that leaves little doubt about the cape's material.



11

I removed the detail from a Bandai 1/144 scale pilot and added a pair of fairy wings made from sheet styrene. The newly finished smoke fairy was attached to the of the smoke from the dwarf's pipe with two-part epoxy putty.

By painting the cape with colors like those used on the hat, it ties the elements together. Rather than repeating the knit pattern, I used a fine brush to add crosshatched lines slightly lighter than the base to make the cape look like a fine woven fabric, ***10***.

I'm not a big fan of figures that have overly detailed cast textures because, at the extreme, that sculpted detail dictates how the figure must be painted. For example, a flowing cape, like this one, can become anything you imagine, but a cape sculpted to look as if it is made from dragon skin with scales locks the painter into a particular look.

Less detail allows the painter's creativity to take control and is what makes a project fun for me. The freehand pattern at the bottom of the cape is based on research of dwarven tattoos.

With most of the color applied, we can assemble all the painted pieces and the figure starts to take shape.

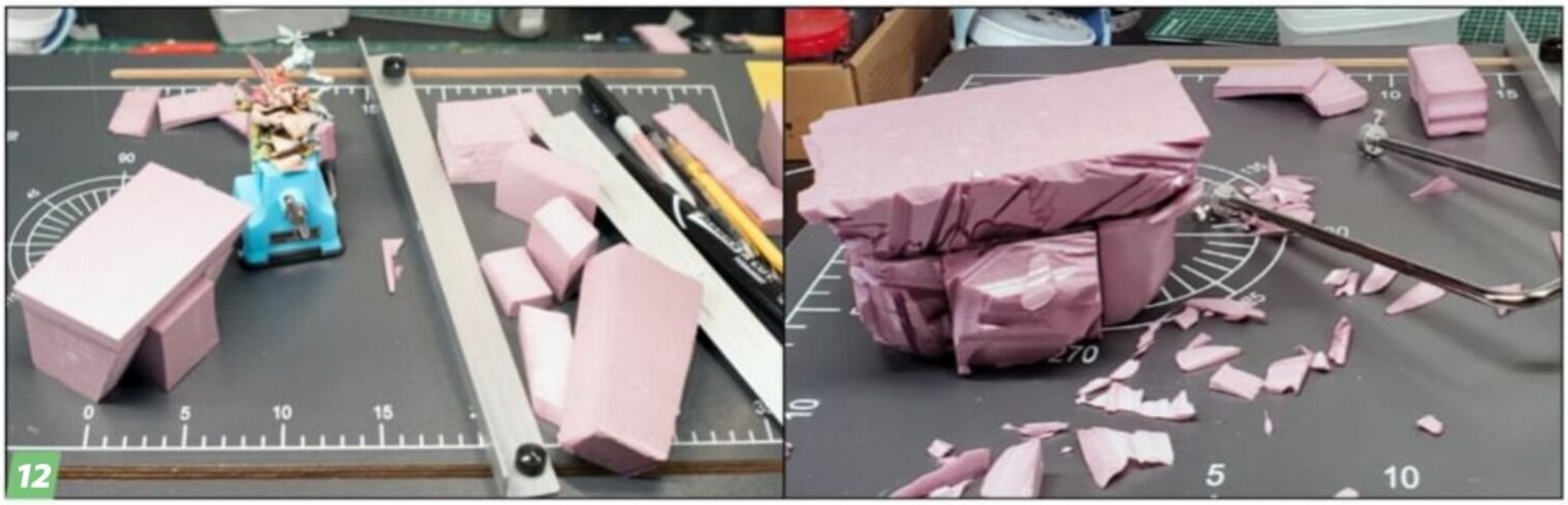
Modifications

Another way to make a project uniquely yours is to modify it. Generally, I prefer to retain the original sculpt and design as much as I can. Here, I introduced an additional character, a smoke fairy, instead of modifying the sculpt, ***11***.

The base

There is a ton of ready-made bases that can be purchased, but what can be more fun than making your own? There are a million-and-one ways to build a custom base, and it will be all your own!

For the dwarf, I started with insulation foam, cutting it with a hot-wire cutter and knife until I had something resembling a rocky platform, ***12***. The final touch was several crystal shapes cut from foam and joined with white glue to add several crystal clusters to the rocky outcropping, ***13***. Happy with the shape, I airbrushed the base black and added a little white on upper surfaces for highlights, ***14***.



Creating the platform with overhangs around the edges makes the scene and the figure more dramatic. Insulation foam is easy to work with, cut and carve, is very forgiving, and readily available in sheets of various thicknesses.

These additions look vaguely crystalline right now, but once painted, they'll appear to have an otherworldly glow — fitting for a fantasy setting.

Placing the finished figure on the primed base helps give a sense of what the composition will look like.

While the scenic cement is still wet, I sprinkled on sand and small stone chips to add texture and make the structure more convincingly rock-like. Another layer of primer followed.

16

The final touch on the crystals is highlighting the edges with nearly pure white to give a sense that the crystals are glowing. Dry-brushing green around the base of the crystals enhances that illusion.

17

Restricting moss to corners and crevices keeps its appearance realistic. It is easily attached with a little scenic cement.

18

One of the benefits of using foam for the base is that it is relatively easy to manipulate the material and make changes on the fly. It is perfectly OK to make mistakes, and it is also fine to change your mind halfway through a project.

At this stage the insulation foam has a gritty appearance that looks, unsurprisingly, like foam. To smooth the surface and make it look like rocks, I painted the entire base with Woodland Scenics Scenic Cement thinned with water, ***15***.

In addition to giving the insulation a rockier appearance, the glue seals the surface, making it much easier to paint. Anyone who has tried to paint a porous material like foam or plaster will tell you how daunting it is to put color on the spongy and absorbent surface.

I painted the rocks several shades of gray and dry-brushing highlighted the carved striations and texture.

The crystal clusters will be light sources producing a green glow, because fantasy and why not?

Using techniques similar to NMM, I painted them shades of bluish green, exaggerating the illusion of reflection so the surfaces look like glass, ***16***.

I am imagining the setting is a dark, humid cave as sunlight would diminish the glow from the crystals. To make the diorama more visually interesting, I've introduced some moss using Woodland Scenics foliage, ***17***.

After testing the placement of the figure a couple of times, I decided the base was too big and overwhelmed the little guy. To keep the focus on our dwarf friend, I started trimming the base to reduce its volume, ***18***.

Do not be afraid to go back and make changes if something about your model bothers you. Fixing something is not going backward; it is progress. Trust your gut feelings and instincts. If a detail or other aspect of your model give you pause, it may do the same to others who view your creation, and not in a positive way.

My original plan was to pour resin and have water at the base with the rocky bottom partly submerged. Instead, I used AK Interactive Still Water Effect over the flat base to hint at a watery surface.

Final thoughts

It is totally possible to get carried away and try too hard with basing work and take focus away from the main subject rather than complementing and improving it. Proper restraint is a virtue. That said, a nicely done base will make your figure stand out from the crowd. **FSM**

At the

WATER'S EDGE

Blend colors and fine lines to depict realistic hair on 1/35 scale figs

BY ROBERT RAVER

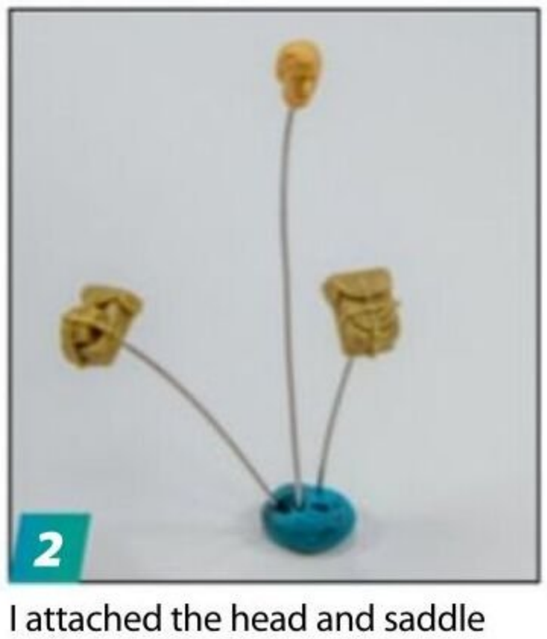
Sitting down to write this story, I knew I'd have to rein in the puns or else I'd stirrup trouble. Really, no horsing around. Sorry! No more, I promise.

Seriously, painting a convincing horse, or any mammal covered in hair, presents a challenge. In small scales the hair is too fine to represent in actual surface texture on the model. Visually, there needs to be an appearance of texture but that needs to be accomplished in the painting.

With this challenge in mind, I dusted off a 1/35 scale piece from Verlinden Productions, Double Trouble — German SS with horse (No. 674) that had been kicking around in my stash for so many years I didn't remember when or where I acquired it. The one thing I did remember was a beautifully sculpted horse that I'd longed to paint. I could have passed it up for another model, but neigh, it was a good time to trot this one out.

Sorry! This time, I really do promise, no more puns.

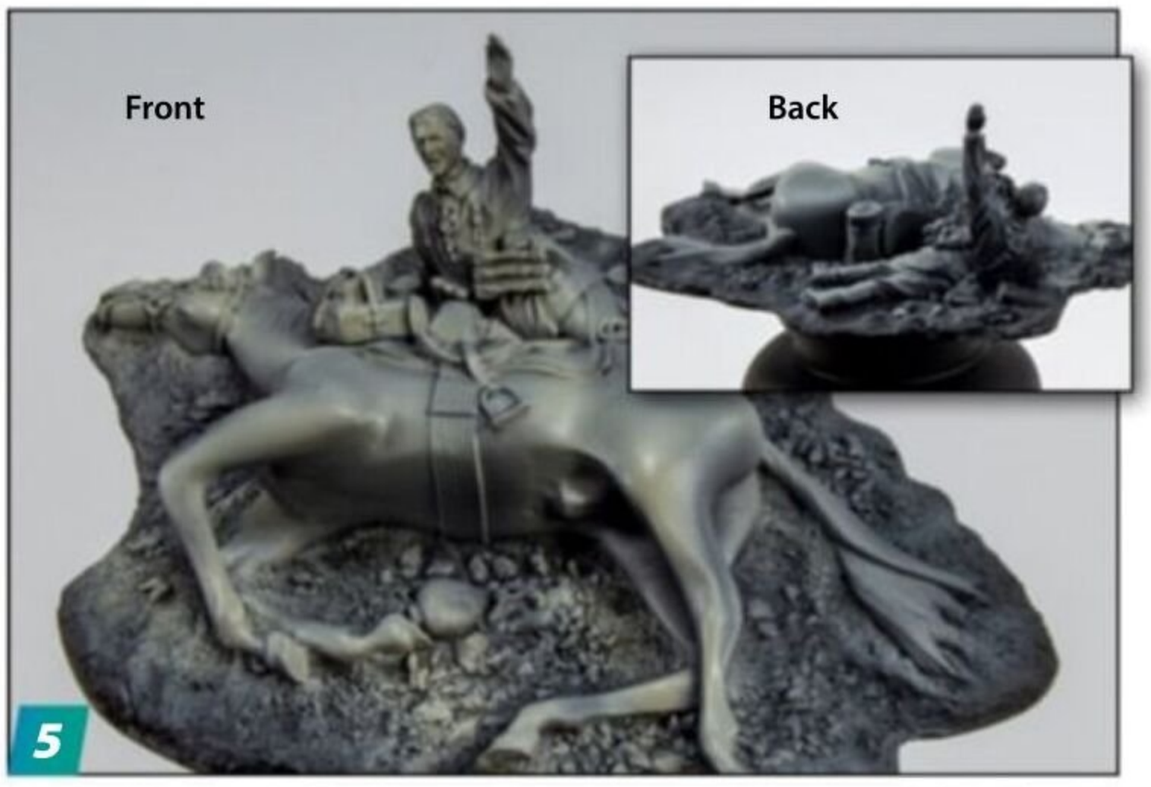
The resin parts needed cleaning up with a hobby knife, files, and fine-grit, flexible sandpaper. Then I superglued the rider's arm and washed all the parts with water and a toothbrush to remove all sanding debris. When dry, I swabbed it with isopropyl alcohol to ensure any mold-release agent and skin oils from handling were gone.



I attached the head and saddle bags to pieces of wire with white glue. The main part of the sculpture was attached to the top of a plastic bottle with superglue. These make the parts easier to handle and give you excellent access for painting.

Citadel Chaos Black Primer from the spray can does a great job of covering resin evenly and serves as the darkest shadow color getting down into all the recesses.

Once the black primer coat was dry, I airbrushed Tamiya Deck Tan (No. XF-55) mixed with a small amount of Flat White (No. XF-1) for highlights from the direction of the light source. An Iwata HP-M1 single-action airbrush makes quick work of simple applications like this.



The result of this initial "light mapping" sets the direction of the light and where the highlights and shadows will appear without worrying about color. Subsequent paint will be applied in thin layers allowing highlights and shadows to show thorough and eliminating guesswork.

Technique and color selection

Before painting, I considered color selections. I wanted to depict a springtime scene at the edge of a pond or slow-moving stream with vibrant green groundwork and vegetation. To keep the figures aligned with the overall tones, I would stay with warmer colors. This influenced the camo pattern for the soldier and kept the horse's coloration light.

Adding a pattern to the horse's coat and visually represent texture required a lot of time with a fine-tipped brush painting short, thin lines that would blend together. I used Vallejo Retarder Medium (No. 73.597), mixed at 1:4 with water, in places I needed to keep the tip of the brush sharp and extend the drying time of the paint so the lines would blend.

I also used Vallejo Glaze Medium (No. 73.596) throughout the project where I wanted thin layers of paint for transitions. Glaze medium helps thin and make the paint flow better without leaving water marks or chalky finishes. A bit on the tip of the brush mixed into the colors on a wet palette is all you need.

I like to make color swatches on my wet palette and create mixes for initial highlights and shadows. Use of green for skin shadow colors provides a warmer shade. In 1/35 scale this might not make much difference, but I prefer to mix my own skin tones anyway.

Paints used for the face and hands

Base Colors
Scalecolor Golden Flesh (No. SART-08), Olive Green (No. SART-35), Crimson (No. SART-10), Dark Brown Ocher (No. SART-41), Vanilla White (No. SART-43)

Shades
Scalecolor Burnt Umber (No. SART-38); Scalecolor Inktense Chestnut (No. SC-81)

Brush
Windsor & Newton Series 7 size 0

Thin layers let the primer shadow and highlights show through the end result. Glazing medium is the key to reduce water marks and a chalky appearance. I use the mixes on my palette to create a baseline of color and define features that catch light and are shadowed.

For a sunburned appearance, I mixed crimson into the lighter tone and applied it in areas that would be exposed to more sunlight. The result is a bit intense, but the next steps will tone it down, so it is better to make the color stronger so it still shows through subsequent layers.

To tone down and unify the colors, especially in the parts that are more in shadow, I used the Inktense Chestnut. This was diluted heavily as the ink is very strong. The ink not only helps blend but makes the underlying colors a bit more vibrant.

At this point, I introduced burnt umber to vary color mixes for the hair and work in some final shading of the face. I also made any final adjustments to the hands, which I have painted using the same colors as the face. You can see the evolution of the colors on the palette.

11

In this scale, it's better to keep faces simple, focusing on color and contrast, and then moving on. The figure looks like its squinting, so trying to paint the eyes runs the risk of creating a bug-eyed appearance, and even if done correctly, would be practically microscopic.

Paints used for the horse

Base Color
Vallejo Burnt Umber (No. 70.941), Flat Earth (No. 70.983), Medium Flesh (No. 70.860)
Andrea Miniatures Black Paint Set Color No. 6 Shadow
Scalecolor Burnt Umber (No. SART-38), Burnt Skin (No. SART-12)

Highlights
Vallejo Orange Brown (No. 70.981; filter to change color value)
Scalecolor Golden Flesh, Vanilla White

Shadows
Scalecolor Inktense Black (No. SC-79), Inktense Wood (No. SC-80)
Vallejo S.S. Cam. Black Brown (No. 70.150)
Andrea Miniatures Black Paint Set Color No. 6 Shadow

Brush
Windsor & Newton Series 7 size 2

12

For smooth initial paint layer, I airbrushed the horse with Vallejo Burnt Umber, Flat Earth, and Medium Flesh, all thinned 3:1 with Vallejo Thinner Medium — so very thin. I airbrushed them at 5 psi, adjusting the pressure as needed to avoid spidering, starting with shadows, then highlights.

13

Going back in with the base colors and Scalecolor Burnt Umber and Burnt Skin for slightly different tones, I painted fine lines for hair texture where the color transitions. The brushstrokes follow the contours of the horse's body: horizontal on the body and neck; vertical on the legs.

14

I applied a filter made of Vallejo Orange Brown (80% water and a bit of glaze medium) and brushed it over the horse to blend the brushstrokes. Then I used golden flesh and vanilla white for highlights and reapplied the filter as needed. White hair and teeth are vanilla white.

I made a filter of Vallejo S.S. Cam. Black Brown for the lower legs and added a bit of Andrea Black No. 6 to the mix to paint the transitions to the darkest shadows. Then I brushed on a filter of Inktense Wood to blend everything together and deepen the overall colors.

Horses have areas of skin where there is little hair coverage, particularly around the mouth, nose, and eyes. I mixed a dark grey color to paint these spots and then used a wash of the Andrea Black to deepen the shadow in these areas, too.

I set the shadows on the mane and tail with Inktense Black, blending from the mane to the neck with mixes of black and black brown, and retouching highlights with flat earth. I painted the hooves gray, mixed in some brown, and added many fine, overlapping lines.

Paints used for the rider's uniform

Tunic
Vallejo Brown Violet (No. 70.887), German Cam. Bright Green (No. 70.833), S.S. Cam. Black Brown, USA Tan-Earth (No. 70.874), Black Green (No. 70.980), Refractive Green 70.890

Pants
Vallejo Dark Sea Green (No. 70.868), German Field Grey (No. 70.830), Green Grey (No. 70.886)

Brush
Windsor & Newton Series 7 size 0

For the rider, a "palm-tree" camo suited my overall vision best. Breaking up the complex pattern into a few steps makes it easier to paint. First, I applied thin layers of black brown, brown violet, and tan earth for initial shadows and highlights to allow the primer to show through.

Then I refined the transitions between light and dark to the point where the tunic looked good with just the brown tones. Glaze medium kept the paint thin so I could take advantage of the primer color underneath to map highlights and shadows.

Next came green splotches of camo bright green and refractive green. Black green made the darker line pattern. Consult references to help replicate the pattern and make sure to use a quality, fine-tipped brush with a small amount of retarder to keep the lines fine and paint flowing.

The pants, saddle blanket, and bedroll required only dark sea green for the shadows, German field grey for the midtone, and green grey for the highlights. A light stippling of the green grey along the edges of the bedroll and saddle blanket give the appearance of fabric wear.

The saddle, harness, and straps received a cavalry brown base coat. I made mixes with black brown for the shadows and buff for the highlights. Remember, thin layers!

With the leather now painted, I used buff to apply fine lines to simulate scratches. I also painted buff around the edges to show wear on the leather. It looks a bit too stark now, but it's easily fixed.

A thin coat of smoke, thinned almost to a filter, toned down the scratches and wear and gave the leather a bit of a sheen.

Paint used for the saddle and leather

Vallejo Cavalry Brown (No. 70.982), S.S. Cam. Black Brown, Smoke (No. 70.939)
Scalecolor Buff (No. SART-13)

Brush
Windsor & Newton Series 7 size 0

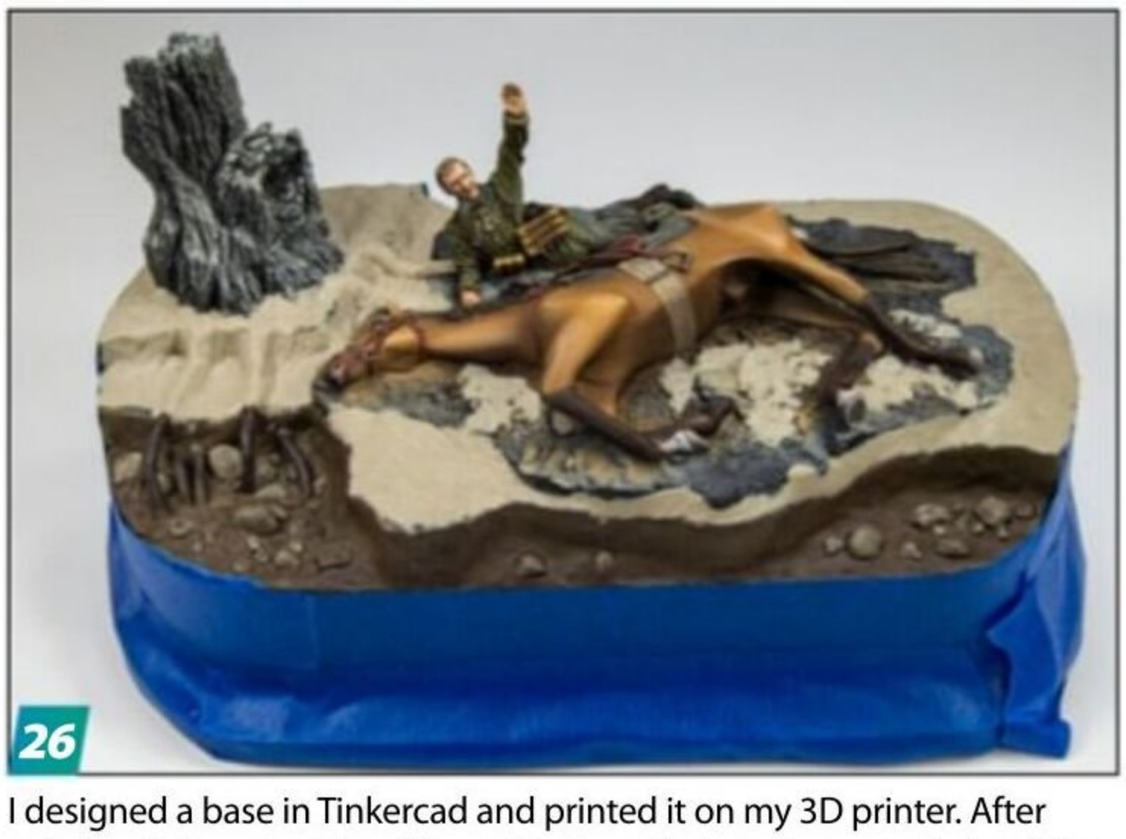
Paints used to unify the figure and base

Vallejo Brown Violet, Burnt Umber, Flat Earth

Groundwork
AK Interactive Splatter Effects Wet Ground (No. AK8029)

Brushes
Utility brush size 2 or 3
Trashed brush with frayed bristles size 1 or 2

For the pistol holster and boots, I used black brown with strong, flat black shadows. I then mixed a hint of buff into the black brown to catch the highest highlights. The last step was to brush on a filter of smoke to unify the appearance.



I designed a base in Tinkercad and printed it on my 3D printer. After painting it, I masked the sides, added a resin tree stump, and glued the figure in place. I used epoxy putty to sculpt the ground to incorporate the Verlinden vignette with rest of the base.

I base-coated areas that would be covered with water brown violet and everything above the waterline burnt umber. Keep a clean brush handy when painting around figures in case you need to quickly wash away any of the ground color that accidentally gets on them.

AK Interactive Splatter Effects Wet Ground simulates wet mud, and I applied it to portions of the base with an old paint brush. It can be a bit sad to see some of the painting, in this case the hooves, get covered up, but it is part of the process.

I also applied just a bit of the wet ground to the rider's boots, but not too much because he would have been riding the horse and not walking on the ground. I dry-brushed flat earth for a bit of color and additional weathering on the boots.

FINAL THOUGHTS

SEE? I DID GET THROUGH IT without anymore puns. Obviously, after painting the figures and base, I wasn't finished with the scene, needing to add vegetation and water. But getting the colors to contrast correctly, conveying a sense of danger in an otherwise tranquil setting, was the goal. That and painting a horse, of course.

Admit it. You thought I was about to pun one last time, didn't you? Happy modeling! FSM