

# **STAR WARS**

## **SHIP MODELS**



# Advance Revell's X-WING

Basic techniques improve  
a *Star Wars* fighter

BY AARON SKINNER



During the climatic battle at the end of *Star Wars*, Luke Skywalker used the call sign *Red Five*. The term became synonymous with the fighter he piloted.

With the possible exception of the *Millennium Falcon*, the most iconic spacecraft in the *Star Wars* universe is the X-wing. The preferred mount of Luke Skywalker, the snubfighter officially known as the Incom T-65B helped the Rebel Alliance to victories at the Scarif, Yavin, and Endor — battles that lead ultimately to the defeat of the Galactic Empire.

Revell reboxed Fine Mold's 1/48 scale X-wing as part of its *Star Wars* Master Series brand. Good shapes and terrific engineering combine to make a first-rate replica out of the box. But, as with all kits, it can be made better with a few extra details, masking, painting, and a combination of paint and pastel weathering. All of the paints used are Testors Model Master enamels.



**1** The cockpit's nicely molded details benefit from careful painting. After airbrushing the cockpit tub dark ghost gray, I hand-painted the boxes behind the seat gunship gray with black details. The side consoles received a base coat of aluminum before I picked out details with chrome silver, schwarzgrau, and black.



**2** On the starboard side of the long instrument panel shroud is a half-round molding to represent some piece of equipment. I planned to replace it with styrene rod because the item should be cylindrical, so I shaved it off with a micro chisel.



**3** Exhaustive research — repeated viewings of the original *Star Wars* (I love my job!) — showed the kit omits distinctive coil hoses behind the pilot. To create those hoses, I looped 24-gauge wire around 18-gauge solder and secured it with super glue.



**4** The glue prevented the wire from spinning as I wrapped it around the solder. The winding needed to be pretty tight, so after 10 or so turns I pushed it down against the previous section.



**5** After attaching the seat, I drilled four holes into the deck behind the equipment with a No. 55 bit in a pin vise.



**6** The hoses run from the rear of the equipment deck to the floor alongside the pilot seat. Inserting one end in the hole, I determined the path each hose would follow and trimmed them to length.



**7** Then I painted the hoses flat black and dry-brushed them dark ghost gray.



**8** The kit's design provides optional open or closed landing gear bays that can be changed easily thanks to polycaps. I planned to display the ship in flight, but the closed doors aren't quite flush with the surrounding surface.



**9** I fixed the fit by sanding the inner lip that meets the ceiling of the recess. Checking the work frequently ensured I didn't sand off too much plastic.



**10** The rear upper fuselage insert refused to sit down all the way. I snipped off the rear locating pin to decrease resistance and applied a little liquid cement inside the gap to soften the plastic.



**11** I appreciated the open proton-torpedo tubes, but they reveal a wall of plastic inside. To hide it, I hand-painted both the panel inside the fuselage and the interior of the tube sections (parts A16 and A17) flat black.



**12** Mold seams run the length of the laser cannons. I scraped them off with a hobby knife. Take special care around the thin, delicate tips and flashback suppressors.

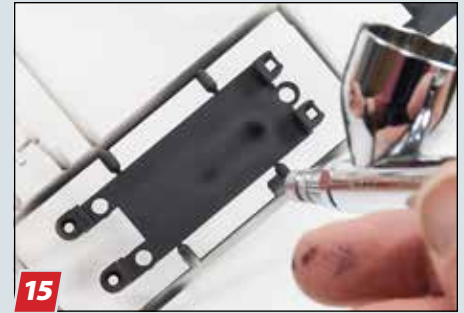




**13** I drilled open the muzzles of the laser cannons with a fine bit in a pin vise. The hole doesn't need to be deep, but keep an eye on the alignment of the bit to avoid deforming the barrel.



**14** Before painting the exterior, I airbrushed flat black inside the rear fuselage where the mechanism for the strike-foils (S-foils) sits. I wasn't sure what would be visible on the model, so I felt it best to cover the area.



**15** I painted the brackets for the S-foils black at the same time for the same reason.



**16** Pinning down the "correct" color for X-wings is challenging. The filming miniatures appear to have been painted white, but onscreen they look light gray. I sprayed the subassemblies with camouflage gray.



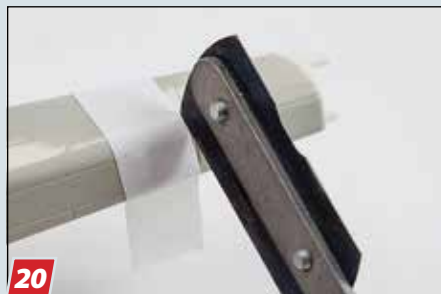
**17** Then I discovered that the kit is missing some distinctive panels seen on the forward fuselage of *Red Five*, the marking option provided in the kit. To make way for sheet styrene, I sanded off the paint.



**18** The bottom engraved panel lines below the cockpit shouldn't be there, so I filled them with super glue and sanded the area smooth.



**19** I repaired surrounding panel lines partially obscured by sanding with a scribe guided by tape. Don't press hard when scribing panel lines; let the tool's weight do most of the work.



**20** Using a razor saw, I added a couple of missing lines under the fuselage. A few passes are enough to mark the surface.



**21** Referring to stills taken from *Star Wars*, I cut .020-inch styrene strip to match *Red Five*'s raised panels. The tip of a No. 11 blade positioned each strip as I secured them with a little liquid cement.



**22** These panels are based on a wealth of good images I found of the port side of the X-wing. In the absence of similar references for the starboard side, I mirrored the panels.



**23** Before respraying the fuselage camouflage gray, I lightly sanded to smooth rough, raised edges on the styrene panels.



**24** I started detail painting with the fusial thrust engines, airbrushing the centers flint gray and the front and rear sections dark gray. The tapered section at the front and the base of the exhaust nozzle are schwarzgrau.



**25** The exposed engines inside the S-foils received a coat of medium gray, ...



**26** ... but the intakes were painted dark gray.



**27** I applied gunship gray to the dorsal deck where the astromech droid and deflector-shield generator are located.



**28** Gunship gray on the sections where the S-foils meet will help hide the interior mechanism later.



**29** I prepped the parts by masking several panels. Most will be shades of gray: I painted them in a single session, flushing the brush with clean thinner between colors.



**30** I painted the panels around the cockpit flint gray; the panels near the nose are light gray. The fuselage is held together with screws but not glued at this stage, so I can install the foils after painting.



**31** Inside the lower starboard S-foil I sprayed two panels light ghost gray. The kit provided decals for those areas, but they looked too dark.



**32** I airbrushed gunship gray over the cooling fins and actuators on the laser cannons.



**33** The sharply molded canopy's straight lines make masking the clear part easy. I applied Tamiya tape and burnished it into the frames, then carefully trimmed around them with a new, sharp No. 11 blade.



**34** I taped the canopy to scrap sprue and airbrushed light ghost gray.



**35** The area surrounding the cockpit was also painted light ghost gray.



**36** Most of the ribbed section on the engine sections on the S-foils were painted dark ghost gray, but I sprayed the front of the upper port section with a mix of equal parts insignia yellow and gull gray.





**37** For the intake rings, I masked and painted a mix of equal parts intermediate blue and gull gray.



**38** I misted thin camouflage gray over the model to soften the contrast between panels.



**39** Holding the airbrush so the spray pattern was nearly parallel to the dorsal deck, I sprayed thin camouflage gray. The color caught salient points and added highlights; the effect is similar to dry-brushing.



**40** The kit decals provide markings, stencils, and a few panels. I liberally applied Microscale Micro Sol decal solution, using the brush to bend the decals around corners.



**41** Decals supply the instrument panel, but the equipment on the shroud must be painted. I started by carefully outlining the molded panels with aluminum on a fine brush.



**42** After painting the panels flat black, I added details with insignia red, chrome silver, aluminum, white, and light ghost gray.



**43** Images of *Red Five* show the paint chipped in a few places, including the intake ring of one engine and the spirals on a couple of the laser cannons. I painted those chips with dots of camouflage gray applied with a fine brush.



**44** The decal spirals were too dark, so I faded them with mist coats of thin camouflage gray.



**45** After spraying the pilot with white primer, I painted the flight suit orange, boots black, and chest pack gunship gray with black straps and a gray hose. Tamiya clear orange over flesh looks like the tinted visors seen in the movie. A burnt umber artist's oil wash added shadows.



**46** I used a thin wash of lamp black artist's oils and Turpenoid to enhance details and panel lines on the gray spacecraft.



**47** A clean brush swept in the direction of airflow — X-wings *are* transatmospheric, after all — removed excess wash and created streaks.



**48** George Lucas' vision of a used universe produced beaten X-wings. I started weathering with thin schwarzgrau in the airbrush. After painting the areas around engine mounts ...



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... I applied thin streaks to the S-foils. Keep the spray pattern fine and move the brush quickly in only one direction to build up faint lines. If you think it needs a couple more passes, stop — it's easy to overdo this effect.



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A few splashes of schwarzgrau laid the foundation for engine dirt and grime to come.



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Lightly dry-brushed steel imparted a worn mechanical appearance to the engine nozzles.



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Red Five showed heavy chipping on and between the S-foils. Using a fine brush and schwarzgrau, I hand-painted those blemishes to match photos and stills. Keeping the bristles moist with thinner improves paint flow and control.



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After airbrushing the S-foils and fuselage with Dullcote to even out the sheen, I moved on to pastels for final weathering. Using a hobby knife, I scraped black, dark gray, light gray, burnt umber, raw umber, and burnt sienna chalk pastel sticks over a coffee-can lid.



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I picked up a little dark brown powder on an old brush and then dabbed it over the model, focusing on the painted chips and around panels. After blowing the excess powder from the surface, I streaked the color lightly aft to create streaks.



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Parts of the S-foils are difficult to reach once they are in the fuselage. So I weathered them first, with soot around the vents and muzzles on the lasers, and brown and black on the engines.



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Before installing the S-foils, I brushed dark brown pastels around the opening for them on the fuselage.



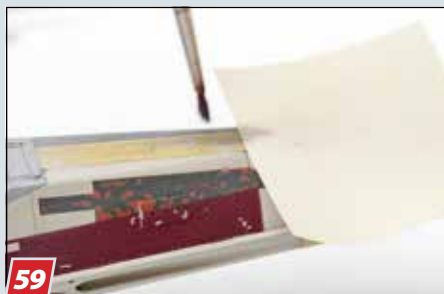
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Screws join the major subassemblies, but I closed gaps with liquid cement. Rubber bands snugged the parts as the glue dried.



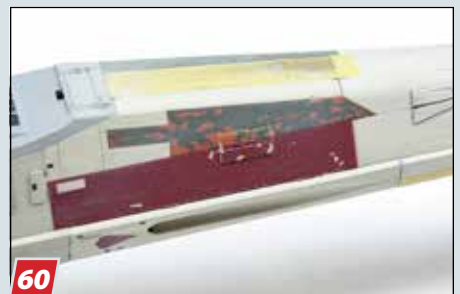
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I finished weathering with pastels. Dark brown shades deepened shadows behind the nose cap and the sensor window up front.



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To mimic streaking from panel lines, I masked the edge with a Post-it note, then brushed dark gray and black powders back across the edge of the paper.



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Removing the Post-it revealed a sharp edge at the start of the streak.





61

I brushed black pastel powders to depict scorching in the proton-torpedo channel on the forward fuselage. Aft of the launchers, I applied dark gray powder and swept it aft.



62

To distinguish dark gray machinery in the dorsal recess, I applied spots of burnt sienna, raw umber, light gray, and black pastels. Feathering the colors over the edges blends the equipment into the fuselage.



63

I used Post-it notes to mask the pastels under the ship. The darkest colors — raw umber and black — went on first at the back. Moving forward, I used lighter shades with the streaks overlapping the previous layers.



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The final cockpit detail replaced the molded item scraped off at the beginning. It's styrene rod painted black and detailed with aluminum and red paint.



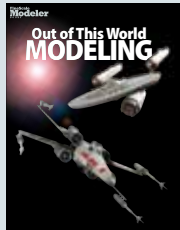
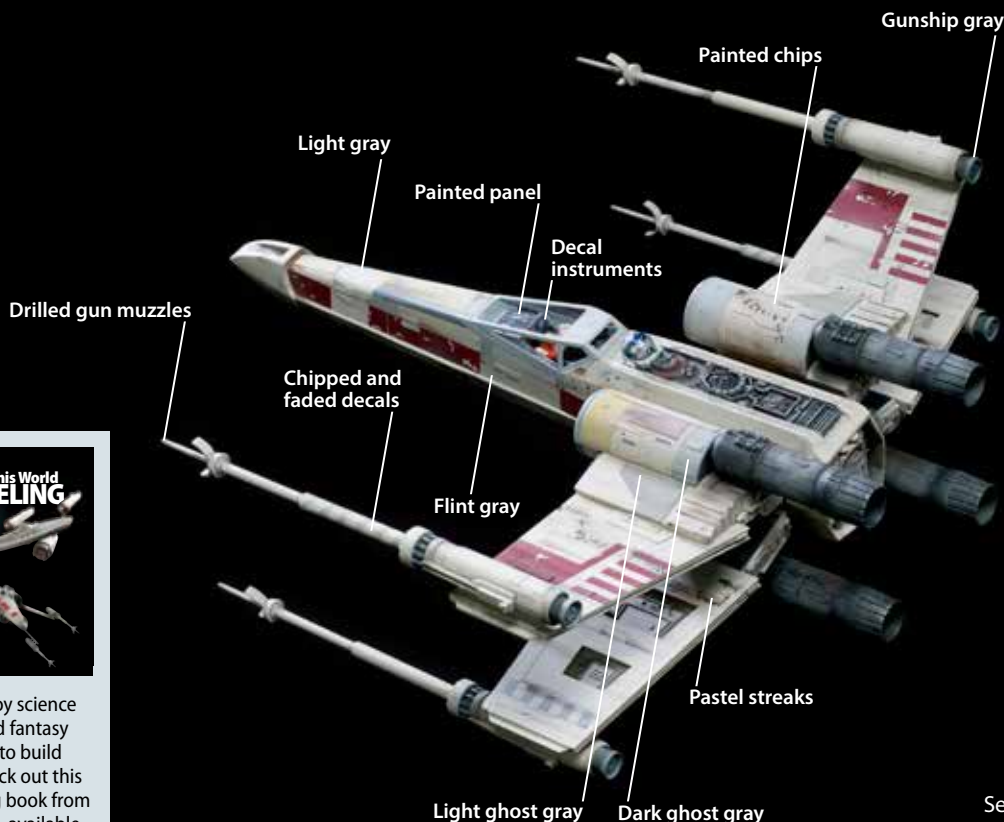
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Standing the ship on the engines, I attached the canopy with Deluxe Materials Glue 'n' Glaze. A clamp ensured a tight fit as the adhesive dried.



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Finally, I painted fluorescent red-orange in the recesses at the center of each exhaust. The color hints at the power of the snubfighter on its way to destroy the Death Star.



If you enjoy science fiction and fantasy and want to build more, check out this upcoming book from Kalmbach, available in November 2017.

Set in an attack pose, the finished fighter looks ready to start its run. **FSM**



# "Used future" through

Vintage "Star Wars" kit shines with careful masking and weathering • BY AARON SKINNER

George Lucas wanted "Star Wars" to look different from previous sci-fi films. Instead of gleaming spaceships and cities, everything would have a past, looked lived in, stripped down, rebuilt, and repurposed. Pat Villarreal replicated that look on MPC's 1/43 scale X-wing, a kit he got for \$8 from a vendor at a show, but says the real reward was building and painting the iconic fighter to match the onscreen ships.

After adding and correcting details, he base-coated wings and fuselage separately with a mix of Testors Model Master light gray and flat gull gray. Then, he lightly post-shaded panel lines with black. Knowing this model would be handled during the rest of the painting process, he protected it with a hand-brushed layer of Pledge FloorCare Multi-Surface Finish.

Pat masked panels with Tamiya tape backed with blue painter's tape to protect against overspray. He says the trick to painting nice, straight panel lines lies in using faster-drying flat paints and airbrushing past the tape edge at a low angle. This keeps bleeding to a minimum because the paint is being blown away from the tape edge.

Colors included Testors Model Master RLM 04 *rot* (red) for the stripes, panzer interior buff for the yellowish fuselage panels, and Testors light blue for the canopy frame. All of these colors were mixed with equal parts thinner and sprayed in thin layers, gradually building up to the desired opacity.

The engines were painted with Alclad II aluminum, then post-shaded with Alclad II jet exhaust and thin black enamel. To give the engines an illusion of power, Pat painted them with fluorescent red and yellow.

He mixed black and brown enamels, thinned them more than usual, and airbrushed shadows and recesses. The grid panels next to the engine covers were masked and sprayed repeatedly to get the correct density.

Pat applied ground pastel chalks with a soft paintbrush over a sealing layer of Testors Model Master clear flat lacquer. Colors included black for shading, exhaust, and soot, white to lighten or highlight areas, and sienna for rust or stains. Mixing these colors created different shades of gray and sienna.

Final assembly of Pat's X-wing brought the two-month build to a close. **FSM**

## Spaceship construction

To read details of how Pat tackled the challenges of the 37-year-old kit, visit [www.FineScale.com/OnlineExtras](http://www.FineScale.com/OnlineExtras).



**Markings:** There are no decals on the model; Pat airbrushed all of the stripes and insignia to model an X-wing flown by Biggs Darklighter at the Battle of Yavin.

## **Engine glow:**

To power up the engines, Pat airbrushed the inside of the exhausts Testors Model Master fluorescent red. Dry-brushed flat yellow highlighted details.

# layers of color



**Pastels:** The chalk is ground up on fine sandpaper and applied with a soft brush.

**Masking:** For crisp panels and markings, Pat masked with Tamiya tape. Then, at a low angle, he sprayed paint from behind the line, minimizing the chance that paint under pressure would be forced under the edge.

**Panel lines:** Rather than using a wash to darken panel lines, Pat loaded soft HB lead in a mechanical pencil and dragged it gently along the recesses. He formed a chiseled edge on the pencil's point by rubbing it on scratch paper.

**Shading:** After the base coat, but before painting any panels, Pat airbrushed thin black paint along the X-wing's panel lines. The post-shading gave the finish depth and pre-shaded the colors to come.

Pat says his X-wing brings back memories of 1977, when "Star Wars" came out, but he's glad he didn't attempt to build the challenging kit as a youngster.

## Meet Pat Villarreal

### PAT'S FIRST

model was a Revell 1/32 scale Ju 87 that he built in elementary school with help from an older cousin. From then on he was hooked, developing a love for aviation that steered him into a degree in aerospace engineering and a career with an aerospace defense contractor. "One of the neat things about my job is I am allowed to build models during my lunch break," Pat says. "That's where I met IPMS member, Mike Quan, who introduced me to the world of aftermarket products. From there, my modeling horizon exploded. New tools, decals, photo etched, resin, and foreign kits expanded my modeling universe." Pat, a member of IPMS-North Central Texas chapter, will build just about anything but prefers aircraft and sci-fi. He lives in Rowlett, Texas, with his wife of 25 years, Tracey, and daughters Celeste and Kathryn.





# Catch a wave

Build a one-of-a-kind *Star Wars* maritime patroller

BY KYLE WILLIAMS

For sci-fi buffs like me, it's common knowledge that the T-47 airspeeder was modified in *The Empire Strikes Back* into a quick short-range attack craft that could handle the

extreme cold on the ice planet, Hoth. But how would it function on a water planet?

To answer my own question, I constructed a modified variant with lighter armament, wing extensions, and larger fuel reserves to handle longer ranges across a fictional sea. Bandai's excellent 1/48 scale snowspeeder was easy and fun to turn into a unique seaspeeder.



Bandai's 1/48 scale Rebel snowspeeder, adapted for a sea surrounding.

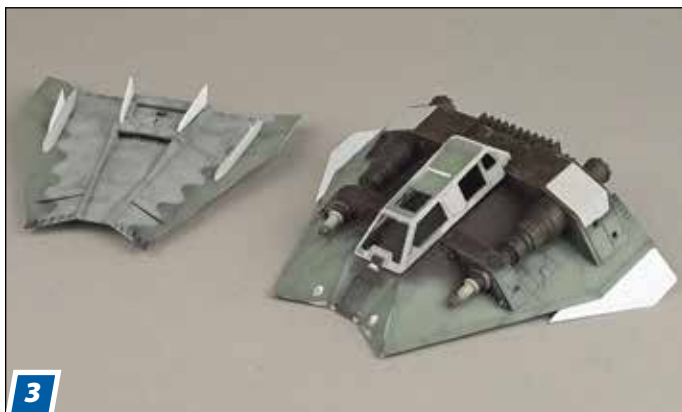




**1** Eschewing the long gun barrels, I cut them where the straight section starts. Then I glued the separate muzzles onto the remaining section.



**2** This design reminds me of the outer wing panels used on McDonnell Douglas Phantoms.



**3** In the canopy, I filled the middle panes with .010-inch sheet styrene and removed the rear gun because it looked out of place.



**4** The cockpit is filled with detail, including intricate mechanics on the sidewalls and control panels at the front and back.



**5** A Monogram A-10 pilot donated his arms to this speeder's pilot. I left the other figure alone because he's hard to see in the covered cockpit.



**6** The interior was painted dark gray. To make the screens glow, I embedded tiny, shiny red sequins into the panels.

## Modifications

First, the long gun barrels were removed and just the barrel ends were attached ahead of the front supports to give them a more snub-nosed look, **1**. I also used rod and tube styrene to add additional gunports to the front section of the speeder. I hollowed out the ends to scale, carefully drilled matching holes in the front facets of the speeder, and attached them with super glue.

To experiment with wing shapes, I cut up pieces of card stock, searching for a believable design. I settled on an angular dog tooth design much like the outer wing panels of our earthly F-4 Phantom II, **2**. I transferred the design to .020-inch sheet styrene, then scored the plastic to include rivet detail and panel lines.

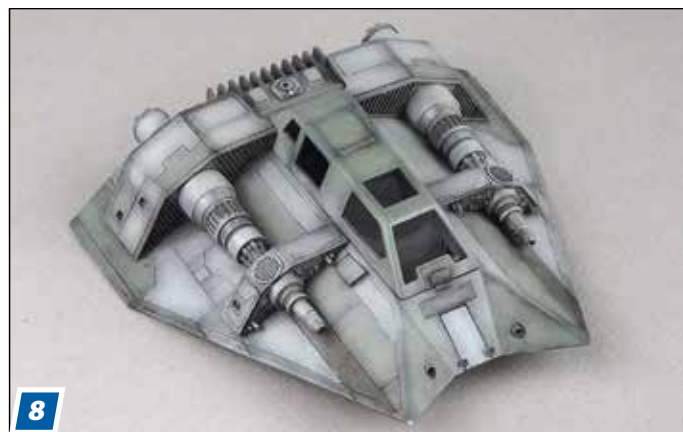
Then I raided my spares box for bits and pieces that would fit the scale and look of the existing kit. Much like the model builders at Industrial Light and Magic, my idea here was to incorporate random parts in a seamless way, making them one with the kit.

I added slim, underwing fuel bulges made from air-to-air missiles in an old Su-17 kit and sheet styrene winglets underneath, **3**.

It's a shame that much of the cockpit is hidden from view on the finished model, because it's a beaut inside, **4**! Wanting to improve the front pilot, I replaced his arms with those from a Monogram A-10 pilot, **5**. I also cut and repositioned the crew's heads so they look as though they are talking to each other about something they've spotted on patrol.



To ease painting, I partially built the top and bottom, then painted and weathered them separately before sandwiching the sections together.



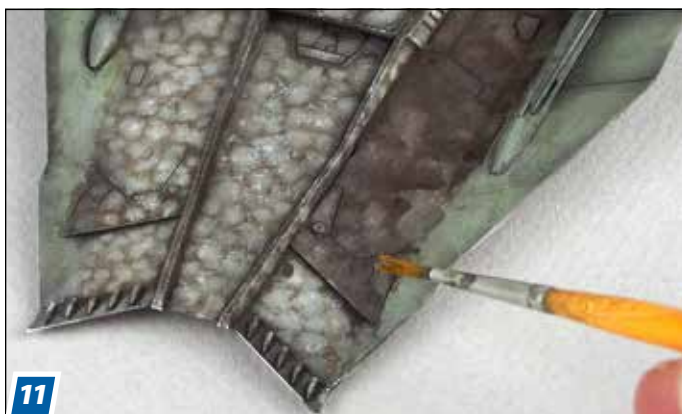
Thinned gray and gray-green paint applied to random panels created a subtle sea-green camouflage.



As seen on the finished model, many of the low-visibility markings came from a 1/48 scale Academy F-22 decal sheet.



When working with a sponge as small as this one, a pair of tweezers is just the tool needed.



Pressing a damp round brush into the dried wash lifted it up in a way that created unexpected, scale-like circles.



To subdue the brown circular pattern, I oversprayed with a thinned version of the dark gray base color.

## Painting and decaling

I painted the cockpit with a combination of dark grays. Details were highlighted silver and black. I then added metallic red sequins found at craft stores to the displays — now I had powered-up sensors, **6**.

I primed the outer surfaces with Krylon plastic primer in dark gray and then built up panels of gray and gray-green with Ceramcoat acrylics, going for an ocean-going scheme, **7**. The paint was thinned with water and Pledge Floor Gloss (PFG) to the consistency of milk and applied in thin layers with my airbrush. I varied the placement of the two colors to add to the modified, pieced-together look, **8**.

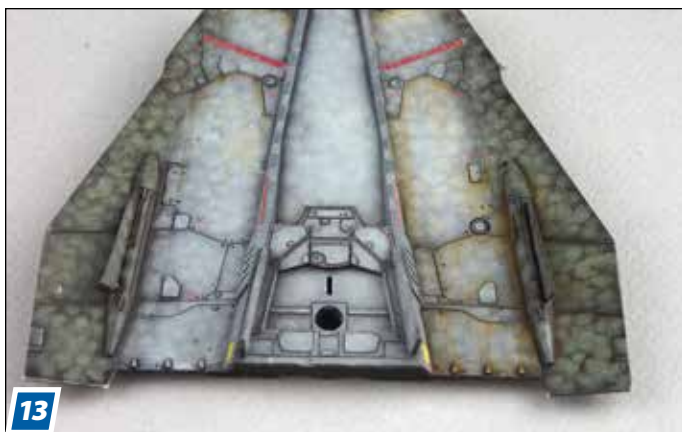
Again, I raided the spares bin for low-visibility decals from a number of modern jet aircraft kits. Many of the gray markings were stolen from a 1/48 scale Academy F-22 decal sheet, **9**. I was careful to avoid any that looked too familiar and made sure that the markings did not include lettering — the *Stars Wars* universe uses its own written language known as Aurebesh.

## Happy surprises

Wanting a textured look, I dipped a small sponge in light gray paint and dabbed it across flat panels, **10**.

Then, to protect the paint and decals applied thus far, I sprayed a thick coat of PFG.





**13** After adding rust and oil streaks, red accents helped define intakes on both the top and bottom.



**14** I protected the weathering with a second coat of Krylon satin finish.



**15** I layered pieces of pink foam insulation and used a foam cutter to make the crowning shape.



**16** Dark blue water effects followed by lighter colored water effects gave the wave a realistic shimmery depth.

Weathering began with a wash of raw umber and black Winsor & Newton Artisan water-soluble oils across the whole speeder.

I let the wash dry. Then, looking to refine the effect, I started to wipe the model with a damp, round 10/0 brush. I noticed that I could lift the wash up in a pattern. After a couple of attempts, I created a cool, rounded pattern that looked less like a weathering wash and more like scales on a fish, **11**. It seem appropriate for a seaspeeder, so I incorporated it on many of the topside panels.

Once complete, I oversprayed the pattern with a thinned version of the dark gray base color to blend the layers, **12**.

I sealed the work with Krylon satin varnish out of the can. I let this dry for a couple of days before adding rust and fluid streaks with traditional artist's oils to weather and age the speeder, **13**. Another coat of Krylon satin clear topped off the model, **14**.

### Adding the wave

To place my unique seaspeeder in its natural habitat, I had to create water — a process I was fairly new at. On my first attempt, I built a little flat base with Woodland water and rocks made of foam insulation. This looked OK but lacked the wow factor — this is a *Star Wars* model after all!

I went back to the drawing board and came up with a large cresting wave, made by layering pieces of pink foam insulation, **15**. To texturize the water, I took crinkled heavy aluminum foil and applied it to the wave with diluted white glue.

Once dry, I painted the whole thing with Rust-Oleum black primer. Next came a dark blue acrylic from Ceramcoat. Then I added a mixture of blue, green, and dark gray to Woodland's realistic water, and applied this with a broad flat brush to build up the



This one-of-a-kind Seaspeeder is ready for long missions across the vast seas on my fictional water planet.

color. I loaded the brush up and allowed the paint to pool in places, adding to the wave's variation. It took a couple of layers of this to add depth.

I left this to dry for 24 hours, then added highlights with a slightly lighter version of the original mixture, which made it look more like transparent water, **16**. I added the kit's post to the wave with white glue. To finish, all I had to do was attach the seaspeeder.

Bandai kits are great fun to build and you can easily create a great replica, or in this case, something totally your own. **FSM**